

U.S. Fish and Wildlife Service

City of Sacramento

Sutter County



Natomas Basin Habitat Conservation Plan Final Environmental Impact Report/ Environmental Impact Statement

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Cover Sheet

Title of Proposed Action: Issuance of Incidental Take Permits and Implementation of the Natomas Basin Habitat Conservation Plan

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Legal Authority: Endangered Species Act of 1973, as amended,
Section 10(a), as implemented by 50 CFR 17.32(b)(1).

Location of Proposed Action: Natomas Basin
Sacramento and Sutter Counties, California

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Abstract

This Final Environmental Impact Report/Environmental Impact Statement (Final EIR/EIS) describes the affected resources and evaluates the potential impacts to those resources in the Natomas Basin and Area B as a result of implementing the Proposed Action. The Proposed Action comprises: (1) applications for Section 10(a) and Section 2081 permits or permit modifications for each of the potential permittees; (2) approval of the revised Natomas Basin Habitat Conservation Plan (NBHCP) and issuance of permits by the United States Fish and Wildlife Service and the California Department of Fish and Game; (3) implementation of the NBHCP; (4) adoption of the Implementing Agreement(s); and (5) the issuance of incidental take permits (ITPs). The permittees are the City of Sacramento, Sutter County, and the Natomas Basin Conservancy. Potential future permittees are Reclamation District No. 1000 (RD 1000) and the Natomas Central Mutual Water Company.

The objective of the Proposed Action is to reconcile the needs of 22 special-status species with planned land development and water facility operations in the Natomas Basin. Issuance of the ITP would authorize the incidental take of several listed wildlife species resulting from urban development and other activities in the Natomas Basin. These species include the federally listed giant garter snake (*Thamnophis gigas*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), and several vernal pool fairy shrimp species (*Branchinecta* spp., *Lepidurus packardii*). In addition, several federally listed plant species, including Colusa grass (*Neostapfia colusana*), and Orcutt grasses (*Orcuttia* spp.) will be listed on the permit, although “take” is not one of the prohibitions applicable to plants under Section 9 of the Federal ESA and, therefore, a Section 10 incidental take permit does not authorize take of plant species. Plants are included on the permit in recognition of the conservation benefits provided for these species under the NBHCP, and they will receive federal “No Surprises” assurances. Other species covered by the permit include the California tiger salamander (*Ambystoma californiense*), a federal and state candidate species, and the state-listed Swainson’s hawk (*Buteo swainsoni*). The permits also list a suite of other wildlife species and will become effective to authorize the take of such species if they become listed in the future.

The NBHCP would establish a comprehensive program for the preservation and protection of habitat for threatened and endangered species potentially found on approximately 55,537 acres of undeveloped and agricultural land in northwestern Sacramento County and southern Sutter County (Natomas Basin and Area B). The acquisition of lands or conservation easements for the purpose of creating and managing permanent habitat reserves would be undertaken by the Natomas Basin Conservancy and would consist of managed marsh habitats, upland habitats, rice fields (which would typically be leased for use to rice farmers), and associated buffers and infrastructure. The NBHCP also includes management measures that are intended to avoid, minimize, and mitigate effects on species during activities by RD 1000 and Natomas Mutual and during urban development activities, if those agencies decide to apply for an ITP under the NBHCP in the future.

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Acronyms and Abbreviations

ALUC	Airport Land Use Commission
AOC	area of concern
BO	biological opinion
BRD	U.S.G.S. Biological Resources Division
CDFG	California Department of Fish and Game
CDP	North Natomas Comprehensive Drainage Plan
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
City	City of Sacramento, California
CVP	Central Valley Project
DA	development agreement
DWR	Department of Water Resources, California
EIR/EIS	environmental impact report/environmental impact statement
ESA	Endangered Species Act
FEMA	Federal Emergency Management Administration
GIS	Geographic Information System
HCP	Habitat Conservation Plan
IA	Implementation Agreement
IPM	integrated pest management
ITP	incidental take permit
Joint Vision	City/County Natomas Basin Joint Vision
LAFCO	Local Agency Formation Commission
MAP	Metro Air Park
MEP	maximum extent practicable
MOAs	Memoranda of Agreement

MOU	Memorandum of Understanding
MSCP	Multi-Species Conservation Program
Natomas Mutual	Natomas Mutual Water Company
NBHCP	Natomas Basin Habitat Conservation Plan
NEPA	National Environmental Policy Act
NOA	Notice of Availability
NOI	Notice of Intent
O&M	operations and maintenance
R&E	restoration and enhancement
RD 1000	Reclamation District No. 1000
ROD	Record of Decision
ROW	right-of-way
Sacramento County	County of Sacramento, California
SAFCA	Sacramento Area Flood Control Agency
SMUD	Sacramento Municipal Utility District
SOI	Sphere of Influence
SOPA	Society of Professional Archaeologists
Sutter County	County of Sutter, California
TAC	Technical Advisory Committee
TNBC	The Natomas Basin Conservancy
USACE	U.S. Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VELB	valley elderberry longhorn beetle

SECTION 1

Introduction to the Final EIR/EIS

This Final Environmental Impact Report/Environmental Impact Statement (Final EIR/EIS) addresses the potential environmental effects that could result from implementing the proposed Natomas Basin Habitat Conservation Plan (NBHCP). The Final EIR/EIS has been prepared in accordance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). The City of Sacramento, California, (City) and County of Sutter, California (Sutter County) are the co-lead agencies for the CEQA process. The United States Fish and Wildlife Service (USFWS) is the lead federal agency for the NEPA process. These agencies have independently evaluated, directed, and supervised the preparation of this document. The Natomas Basin Conservancy (TNBC), Reclamation District No. 1000 (RD 1000) and the Natomas Mutual Water Company (Natomas Mutual) have also participated in the NBHCP development process.

1.1 Format of the Final EIR/EIS

The Final EIR/EIS for the NBHCP has been prepared pursuant to the requirements of CEQA, which apply to the state and local actions, and to the requirements of NEPA, which apply to the federal actions. The abbreviated format used for this Final EIR/EIS complies with Council on Environmental Quality (CEQ) NEPA regulations (40 CFR 1503.4 (c)) and State CEQA guidelines, Section 15132.

This Final EIR/EIS comprises two volumes and contains an introduction, the identification of the NEPA Preferred Alternative, modifications and updates to the EIR/EIS and the NBHCP since the publication of the Draft EIR/EIS, a summary of consultation and coordination, major comment areas, copies of all public comments and letters received by the lead agencies (Attachment 1) and the responses to the comments (Attachment 2), and appendices containing additional information.

Each public comment or letter in Attachment 1 has numbered comments, with a corresponding response in Attachment 2 that answers the specific comments and issues raised in the letter. The comment letters and responses are preceded by an index (Section 3.2) that includes the document identification number for each letter and the name of the agency (federal, state, or local), organization, or individual that produced the letter of comment. To assist the reader in finding individual letters, the comments and responses are divided into three categories:

- Government – G (federal agencies, state agencies, local agencies)
- Organizations – O
- Individuals – I

Numerous references are made throughout the Final EIR/EIS to the Draft EIR/EIS and to the Draft EIR/EIS Appendices. These documents were previously circulated and are not being reproduced. Copies, however, are available for inspection at the public agency locations

noted on the cover sheet. The Draft EIR/EIS and supporting appendices, together with the Final EIR/EIS, constitute the full CEPA/NEPA documentation of the Proposed Action.

1.2 Summary of Public Review Process

1.2.1 Issuance of NOAs

Notices of Availability (NOAs) were published by both the USFWS and (jointly) by the City of Sacramento and Sutter County on August 16, 2002. The public review period was originally scheduled for 60 days from August 16, 2002 to October 16, 2002. An extension to the public review period was published by amended NOAs. The public review period was extended by 50 days, to December 5, 2002. The NOA for the Final EIS was published in the *Federal Register*. Additional notices on the Final EIR/EIS and Final NBHCP were published in *The Sacramento Bee* and the *Appeal-Democrat* newspapers.

1.2.2 Dates and Times of Public Meetings on the Draft EIR/EIS

The City, County, and USFWS conducted four public meetings to obtain input into the EIR/EIS on the following dates and at the following locations:

- September 23, 2002, First Session: 4:00 p.m. to 6:00 p.m.; Second Session: 7:00 p.m. to 9:00 p.m., Sacramento, California at 1231 I Street, First Floor.
- September 25, 2002, First Session: 4:00 p.m. to 6:00 p.m.; Second Session: 7:00 p.m. to 9:00 p.m., Yuba City, California at Whitaker Hall, 44 Second Street.

The meetings were conducted by the USFWS, City of Sacramento, and Sutter County in a workshop and meeting format.

Additional opportunities exist for public input on the Final EIR/EIS. For the City of Sacramento's and Sutter County's EIR, the public will have the opportunity to comment at the public hearings associated with the City of Sacramento City Council's and the Sutter County Board of Supervisors' consideration of the Final EIR. The public will have a 30-day cooling-off period to comment following the *Federal Register* publication noticing the USFWS's Final EIS. Following this period, the USFWS will issue its Record of Decision (ROD) for the Final EIR/EIS.

1.2.3 Number of Comments Received

Twenty-five comment letters were received during the 95-day public review period, comprising 450 separate comments addressed in this Final EIR/EIS. A summary table in Section 3.2 lists all of the individuals, agencies, and organizations that submitted comments on the NBHCP and Draft EIR/EIS.

1.2.4 NEPA Preferred Alternative

The USFWS did not identify a preferred alternative in the Draft EIR/EIS, in conformance with the CEQ regulations, and indicated that a preferred alternative would be identified after the public comments on the Draft EIR/EIS were available. After consideration of all comments received and the comments of cooperating agencies, the USFWS has determined

that the preferred alternative for the NBHCP is the Proposed Action. The Proposed Action includes all mitigation measures contained in the monitoring program in Appendix D and summarized in Table 1-1 at the end of this section.

1.3 Recirculation Analysis

1.3.1 NEPA and CEQA Consideration of Recirculation Issues

An important step in the preparation of this Final EIR/EIS is to review all comments, changes, and additions relative to the criteria under NEPA and CEQA regarding recirculation or supplementation of the EIR/EIS. Although NEPA and CEQA differ in their provisions regarding recirculation, the standards triggering recirculation under both statutes are similar. Thus, both CEQA and NEPA require republication or recirculation for public comment in instances when the EIR or EIS has been changed in a way that prevents review of and comment on “significant” new environmental information.

Under NEPA, the standards for a supplement to an EIS are covered in the Section 40 CFR 15029 (c) (1) and (2). Under these standards, changes to the project, new circumstances, or new information may require recirculation. NEPA is clear that the mere passage of time does not trigger the recirculation or supplementation of an EIS.

Under CEQA, recirculation of an EIR may be required in instances where significant new information is introduced, or there are basic or fundamental flaws in the analysis. Section 15088.5 of the CEQA Guidelines provides guidance on significant new information and includes the following:

1. A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
2. A substantial increase in the severity of an environmental impact would result, unless mitigation measures were adopted to reduce the impact to a level of insignificance.
3. A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project’s proponents decline to adopt it.
4. The draft EIR was so fundamentally inadequate and conclusory that it precluded meaningful public review and comment.

The CEQA Guidelines Section 15088.5 (b) further state that “Recirculation is not required where the new information added to the EIR merely clarifies or amplifies or makes insignificant modifications in an adequate EIR.”

1.3.2 Significance of Changes to the Proposed Action

Text changes to the proposed NBHCP and Implementing Agreements (IA) included as part of the Proposed Action, have been made to: (1) correct typographical or editorial errors; (2) clarify the text in response to public and agency comments received; or (3) strengthen the language of the text to represent or implement more fully the proposed mitigation measures. A summary of key changes to the NBHCP is provided on Section 2-2 of this Final EIR/EIS.

The basic framework, policies, conservation measures, and implementation elements of the NBHCP remain the same, including the Covered Species, the Covered Activities, the nature and extent of Planned Development, the mitigation measures, and the mitigation ratio. Some of the conservation measures described in the NBHCP that also will be included in the incidental take permits have been modified or further clarified in the Final NBHCP. These measures do not result in any new impacts. While minor modifications have been proposed to the NBHCP, each of these changes will either not change the impacts or will further reduce impacts anticipated from the original Proposed Action. None of these changes will create any new or more severe impacts. Since changes to the NBHCP (Proposed Action) are editorial or clarifying, recirculation is not required.

For example, the conservation strategy for vernal pool species has been refined and clarified to more clearly state the survey requirements to be employed to determine the presence of Covered Species. This section clarifies the use of the most recent and comprehensive USFWS survey guidelines, but it does not change the Proposed Action in such way that the new environmental impacts, significant changes, and new information presented would require recirculation.

Similarly, additional language regarding adaptive management, including connectivity of the Mitigation Lands, has been added to clarify the approach to connectivity in response to comments. These changes again clarify the approach, but do not significantly modify the approach such that additional environmental analysis or recirculation would be required.

1.3.3 New Information

New information has been added to the Biological Resources Technical Memorandum (Appendix H of the NBHCP) to explain and clarify in greater detail the basis of the impact analysis related to the Swainson's hawk foraging habitat. This information was prepared in the form of an Addendum to the Biological Resources Technical Memo, which is attached as Appendix K of the NBHCP. This additional information does not change the previous analysis or conclusions, but provides further clarification of the methods, assumptions, and background information used in developing the Biological Resources Technical Memorandum. This discussion of giant garter snake and Swainson's hawk is considered in the context of updated monitoring reports for the giant garter snake (Appendix E of this Final EIR/EIS) and the Swainson's hawk (Appendix F of this Final EIR/EIS).

The Economic and Planning Systems (EPS) updated Fee Study dated October 11, 2002 also has been added as Appendix B of the NBHCP. This updated fee study, containing updated estimates for the monitoring and adaptive management costs, previously was circulated for public review and comment. This information amplifies and clarifies the prior fee estimates in a manner consistent with the NBHCP. None of these changes to the fee estimates will create any new or more severe significant environmental impacts. Since the updated fee study previously was circulated for public review and the addition of this Appendix does not constitute new information nor does it result in any new or more severe environmental effects, recirculation is not required.

1.3.4 Significant New Impacts or Increase in Severity of Impact

None of the comments or the responses to comments demonstrate the existence of any new or more significant impacts than those discussed in the Draft EIR/EIS. No new significant or more severe impacts were identified that were not fully evaluated in the Draft EIR/EIS. Comments on the Draft EIR/EIS requested that the EIR/EIS be re-circulated for the following impacts:

- Some commentors requested additional information regarding “bird strikes” and the impact of such on operations of the Sacramento International Airport. This issue was covered in the Draft EIR/EIS, and the Final EIR/EIS contains further clarifying information. This new text does not identify a new impact or change in the severity of the impact, therefore, re-circulation is not required.
- Several persons commented that they do not agree with the findings in the EIR/EIS of a less-than-significant impact to Swainson’s hawk foraging habitat. These comments were reviewed in light of existing scientific information, and the EIR/EIS preparers determined that the analyses continue to support the determination that the Proposed Action would result in a less-than-significant effect under NEPA and CEQA. To further support the analysis and finding, an Addendum to the Biological Technical Memorandum clarifying the analysis of impacts has been added (Appendix K of the NBHCP).
- Several commentors indicated that they do not agree with the findings in the EIR/EIS of a less-than-significant impact to giant garter snake habitat. These comments were reviewed in light of existing scientific information, and the EIR/EIS preparers determined that the analyses continue to support the determination that the Proposed Action would result in a less-than-significant effect under NEPA and CEQA.
- Several commentors were also concerned that the execution of the Memorandum of Understanding regarding the City of Sacramento—Sacramento County Joint Vision planning effort, and information about other potential development activities constitutes new information regarding the potential for future development in the Basin. Commentors indicated that much of this information became available after the Draft EIR/EIS was released for public review, and that it represents new information regarding reasonably foreseeable development in the Basin that could result in new significant or more severe cumulative impacts not considered in the EIR/EIS. These comments were also reviewed extensively.

Master Responses 3 (Joint Vision) and 4 (Cumulative Impacts) provide a thorough evaluation of the validity of the cumulative assumptions used in the Draft EIR/EIS. Based on the findings and analysis included in the Draft EIR/EIS and further clarified in Master Responses 3 and 4, no new significant or substantially more severe cumulative impacts were identified. Thus, re-circulation is not required.

1.3.5 New Alternatives or Mitigation Measures

Both CEQA and NEPA require that an EIR/EIS study a range of alternatives. The EIR/EIS evaluates five alternatives, including the Proposed Action. Under CEQA, re-circulation may be required if a new alternative, which is substantially different from an alternative analyzed

in the environmental document, becomes available and reasonably meets the goals and objectives of the proposed project. Several commentors suggested a preference for one or another of the alternatives studied in the EIR/EIS. For example, several commentors prefer an NBHCP program that includes a mitigation ratio of 1:1. This alternative (Alternative 1, Increased Mitigation) was included in the Draft EIR/EIS analysis, and therefore, it is not a new alternative not previously analyzed. Other commentors expressed a preference for either reduced development (therefore, reduced impact) or an alternative that designates specific reserve zones. Both of these alternatives also were fully analyzed in the Draft EIR/EIS and, therefore, no new alternative analysis is required.

Regarding reduced development, the Draft EIR/EIS studied an alternative that reduced Planned Development from 17,500 to 12,000 acres. Further reductions of Planned Development were not considered to be within the reasonable realm of the purpose and need of the project, which is to extend incidental take coverage to allow the City of Sacramento and Sutter County to implement their adopted general plans.

One letter of comment presented a scenario that the commentor referred to as an "Acceptable HCP." This alternative covered land uses and mitigation throughout the entire Natomas Basin, including lands in the unincorporated portion of Sacramento County and privately owned agricultural lands. This scenario proposes that a detailed management prescriptions for all non-urban land in the Natomas Basin should be developed, including specifications regarding the type and proportion of private agricultural crops.

While this scenario provided a vision for the entire Natomas Basin, it also included elements that are outside the purpose and need or scope of the NBHCP and EIR/EIS. For example, the County of Sacramento would not be a permittee under the NBHCP, and none of the Applicants (City of Sacramento, Sutter County, or TNBC) or wildlife agencies (USFWS and CDFG) have land use control over the unincorporated areas of the County of Sacramento. Therefore, for purposes of the cumulative analysis and baseline conditions, the EIR/EIS must assume that development in the unincorporated area of the County of Sacramento would occur consistent with the existing land uses, General Plan designations, and zoning that govern the lands within the Basin.

The suggested "Acceptable HCP" would include 17,500 acres of acquired habitat based on a 1:1 mitigation ratio and retain 11,000 acres of agriculture or open space (Sacramento County Airport buffer lands and other lands outside of the Permit Areas). Regarding assumptions of the analysis for the type of land uses in the unincorporated portion of Sacramento County, Table 3-4, page 3-20 of the Draft EIR/EIS provides this information. Based on the adopted General Plan, non-urban uses in excess of 11,000 acres were assumed in the EIR/EIS analysis. The "Acceptable HCP" proposes a 1:1 mitigation ratio with acquisition of lands based on habitat value. This mitigation approach falls within the range of alternatives analyzed by the EIR/EIS, which includes an alternative at a 1:1 mitigation ratio, an alternative with identified reserve zones, and a habitat-based mitigation program. The "Acceptable HCP" therefore does not propose either a new alternative or an alternative that is significantly different from those analyzed in the EIR/EIS. Also, in its evaluation, the EIR/EIS concluded that each of these alternatives would be infeasible.

No new mitigation measures have been suggested or included in the EIR/EIS. Some text changes and additions to the mitigation policies of the NBHCP have been included for clarification (see Section 1.3.2 above).

1.3.6 Adequacy of the EIR/EIS

Based on the standards included in CEQA and NEPA for adequacy of analysis, the Lead Agencies have determined that with the clarifications, corrections, and supportive information included in this Final EIR/EIS and the proposed Final NBHCP, the Final EIR/EIS complies with CEQA and NEPA. For purposes of NEPA, the federal lead agency (i.e., USFWS) is responsible for the final determination of adequacy.

The U.S. Environmental Protection Agency (USEPA) is authorized under Section 309 of the Clean Air Act to review and comment on any matter subject to NEPA and to determine or rate the adequacy of an EIS. The USEPA rated the Draft EIR/EIS as Environmental Concerns (EC), which indicates that the USEPA has identified environmental impacts that should be avoided to fully protect the environment, and Category 2, which indicates that additional information, data, analysis, or discussion should be included in the Final EIS. The report preparers have given considerable attention in responding to the comments of the USEPA and providing, where necessary, clarifying information to respond to any concerns raised by the USEPA. Each of the USEPA's comments has been addressed in this Final EIR/EIS.

1.4 Summary of Potential Environmental Impacts of Proposed Action and Alternatives

Table 1-1 is reproduced from the Draft EIR/EIS that summarizes the potential impacts associated with the Proposed Action and alternatives.

TABLE 1-1
Summary of Potential Environmental Impacts Associated with Proposed Action and Alternatives

Proposed Action	Alternative 1: Increased Mitigation	Alternative 2: Habitat-Based Mitigation	Alternative 3: Reserve Zones	Alternative 4: Reduced Potential for Incidental Take	Alternative 5: No Action
4.2 Geology and Soils					
<u>Impact:</u> Less-than-significant increases in erosion resulting from development of habitat reserves.	<u>Impact:</u> Greater impacts than the Proposed Action, but less than significant.	<u>Impact:</u> Greater impacts than the Proposed Action, but less than significant.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Similar effects are expected with case-by-case mitigation.
4.3 Water Resources					
<u>Impact:</u> Less-than-significant increases in flood potential resulting from management of habitat reserves.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Similar effects are expected with case-by-case mitigation.
<u>Impact:</u> Potentially significant decreases in stormwater quality resulting from development of habitat reserves. Can be mitigated to a less-than-significant level. <u>EIR/EIS Mitigation Measure:</u> Construction of habitat reserves shall adhere to the requirements of the State Water Resources Control Board's General Permit for Stormwater Discharges Associated with Construction Activity, as amended from time to time, by filing an Notice of Intent (NOI) with the Central Valley Regional Water Quality Control Board. For development activities on each reserve site, the Conservancy shall prepare a Stormwater Pollution Prevention Plan that includes best management practices consistent with the City's Administrative and Technical Procedures for Grading and Erosion and Sediment Control and Sacramento County's Erosion and Sediment Control Standards and Specifications, regardless of whether the reserves are located in Sacramento or Sutter County. Best management practices shall focus on the control of sediment discharge into local drains (e.g., through installation of barriers such as silt fences and through tracking controls) and the release of hazardous materials from construction operations (e.g., through the use of designated staging areas with onsite controls).	<u>Impact:</u> Greater impacts than the Proposed Action. Can be mitigated to a less-than-significant level with mitigation. <u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.	<u>Impact:</u> Greater impacts than the Proposed Action. Can be mitigated to a less-than-significant level with mitigation. <u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.	<u>Impact:</u> Same as Proposed Action. <u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.	<u>Impact:</u> Similar to Proposed Action. <u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.	<u>Impact:</u> Similar effects are expected with case-by-case mitigation.
<u>Impact:</u> Less-than-significant impacts associated with future water availability in the Natomas Basin.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Similar effects are expected with case-by-case mitigation.

TABLE 1-1
Summary of Potential Environmental Impacts Associated with Proposed Action and Alternatives

Proposed Action	Alternative 1: Increased Mitigation	Alternative 2: Habitat-Based Mitigation	Alternative 3: Reserve Zones	Alternative 4: Reduced Potential for Incidental Take	Alternative 5: No Action
4.4 Biological Resources					
<p><u>Impact:</u> Marsh habitat as measured by rice fields, canals and drains, and ponds and seasonally wet areas would decline in the Natomas Basin by 8,087 acres (35 percent), 404 acres (23 percent), and 21 acres (22 percent), respectively, because of authorized development. Permanent reserves would be established, including 2,187.5 acres of managed marsh and 4,350 acres of rice.</p> <p><u>EIR/EIS Mitigation Measure:</u> As part of the process for development review, the City and Sutter County will include a provision that public or private development projects that could support jurisdictional wetlands will result in no net loss of wetlands and will ensure that that wetlands functions and values will be maintained.</p>	<p><u>Impact:</u> Impacts to marsh habitat associated with authorized development would be the same as under the Proposed Action. Permanent reserves would be established, including 4,350 acres of managed marsh and 8,750 acres of rice.</p> <p><u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.</p>	<p><u>Impact:</u> Impacts to marsh habitat associated with authorized development would be the same as under the Proposed Action. Permanent reserves would be established, including a combined rice/managed marsh reserve acreage of 9,687 acres.</p> <p><u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action</p>	<p><u>Impact:</u> Same as Proposed Action.</p> <p><u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.</p>	<p><u>Impact:</u> Marsh habitat as measured by rice fields, canals and drains, and ponds and seasonally wet areas would decline in the Natomas Basin by 5,752 acres (25 percent), 277 acres (16 percent), and 15 acres (15 percent), respectively because of authorized development. Permanent reserves would be established, including 1,500 acres of managed marsh and 3,000 acres of rice.</p> <p><u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.</p>	<p><u>Impact:</u> Marsh habitat is expected to decrease by approximately the same acreage as under the Proposed Action because of urban development. Unknown benefits associated with habitat creation.</p>

TABLE 1-1
Summary of Potential Environmental Impacts Associated with Proposed Action and Alternatives

Proposed Action	Alternative 1: Increased Mitigation	Alternative 2: Habitat-Based Mitigation	Alternative 3: Reserve Zones	Alternative 4: Reduced Potential for Incidental Take	Alternative 5: No Action
<u>Impact:</u> Upland habitat in the Natomas Basin would decrease by 9,188 acres (42 percent) because of authorized development. Permanent reserves would be established, including 2,187.5 acres of uplands.	<u>Impact:</u> Impacts to upland habitat associated with authorized development would be the same as under the Proposed Action. Permanent reserves would be established, including 4,350 acres of uplands.	<u>Impact:</u> Impacts to upland habitat associated with authorized development would be the same as under the Proposed Action. Permanent reserves would be established, including 8,074 acres of uplands.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Upland habitat in the Natomas Basin would decrease by 6,063 acres (28 percent) because of authorized development. Permanent reserves would be established, including 1,500 acres of uplands.	<u>Impact:</u> Upland habitat is expected to decrease by approximately the same acreage as under the Proposed Action because of urban development. Unknown benefits associated with habitat creation.
<u>Impact:</u> Loss of riparian habitat in the Natomas Basin generally would not occur.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Same as Proposed Action.
<u>Impact:</u> Up to 8 acres (8 percent) of oak groves in the Natomas Basin would potentially be removed because of urban development.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Expected to be approximately the same as Proposed Action.	<u>Impact:</u> Expected to be approximately the same as Proposed Action.
<u>Impact:</u> Vernal pools could be affected in North Natomas and potentially in other areas of the Natomas Basin.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Expected to be approximately the same as Proposed Action.	<u>Impact:</u> Expected to be approximately the same as Proposed Action.
<u>Impact:</u> Approximately 8,512 acres of potential habitat for the giant garter snake would be affected by authorized development in the Natomas Basin. Preservation of wetland habitat and creation and management of reserves that support 6,562 acres of giant garter snake habitat mitigates the impacts of the covered activities on giant garter snakes to a less-than-significant level.	<u>Impact:</u> Impacts to giant garter snake habitat would be the same as under the Proposed Action. Approximately 13,125 acres of giant garter snake habitat would be supported by the system of habitat reserves.	<u>Impact:</u> Impacts to giant garter snake habitat would be the same as under the Proposed Action. Approximately 9,687 acres of giant garter snake habitat would be supported by the system of habitat reserves.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Approximately 6,044 acres of potential habitat for the giant garter snake would be affected by authorized development in the Natomas Basin. Approximately 4,500 acres of giant garter snake habitat would be supported by the system of habitat reserves.	<u>Impact:</u> Giant garter snake habitat is expected to decrease by approximately the same acreage as under the Proposed Action because of urban development. Unknown benefits associated with habitat creation.

TABLE 1-1
Summary of Potential Environmental Impacts Associated with Proposed Action and Alternatives

Proposed Action	Alternative 1: Increased Mitigation	Alternative 2: Habitat-Based Mitigation	Alternative 3: Reserve Zones	Alternative 4: Reduced Potential for Incidental Take	Alternative 5: No Action
<u>Impact:</u> Two Swainson's hawk nesting territories with remaining nest trees (NB-3 and NB-6) have the potential to be abandoned because of authorized development.	<u>Impact:</u> Same as the Proposed Action.	<u>Impact:</u> Same as the Proposed Action.	<u>Impact:</u> Same as the Proposed Action.	<u>Impact:</u> Expected to be approximately the same as the Proposed Action.	<u>Impact:</u> Expected to be approximately the same as the Proposed Action.
<u>Impact:</u> Swainson's hawk foraging habitat in the Natomas Basin would decrease by 9,188 acres (42 percent) because of authorized development. Permanent reserves would be established, including 2,187.5 acres of uplands that would be managed for Swainson's hawk foraging habitat value.	<u>Impact:</u> Impacts to Swainson's hawk foraging habitat associated with authorized development would be the same as under the Proposed Action. Permanent reserves would be established, including 4,350 acres of uplands.	<u>Impact:</u> Impacts to Swainson's hawk foraging habitat associated with authorized development would be the same as under the Proposed Action. Permanent reserves would be established, including 8,074 acres of uplands.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Swainson's hawk foraging habitat in the Natomas Basin would decrease by 6,063 acres (28 percent) because of authorized development. Permanent reserves would be established including 1,500 acres of uplands.	<u>Impact:</u> Swainson's hawk foraging habitat is expected to decrease by approximately the same acreage as under the Proposed Action because of urban development. Unknown benefits associated with habitat creation.
<u>Impact:</u> Overall effects to other covered species associated with habitat loss and creation would be less than significant.	<u>Impact:</u> Similar to Proposed Action.	<u>Impact:</u> Similar to Proposed Action.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Expected to be approximately the same as Proposed Action.	<u>Impact:</u> Expected to be approximately the same as Proposed Action.

TABLE 1-1
Summary of Potential Environmental Impacts Associated with Proposed Action and Alternatives

Proposed Action	Alternative 1: Increased Mitigation	Alternative 2: Habitat-Based Mitigation	Alternative 3: Reserve Zones	Alternative 4: Reduced Potential for Incidental Take	Alternative 5: No Action
<p><u>Impact:</u> Potentially significant effects to some other special-status species (e.g., dwarf downingia, rose mallow, Cooper's hawk, American bittern, black tern, lark sparrow, white-tailed kite, Pacific-slope flycatcher, Bewick's wren) can be mitigated to a less-than-significant level.</p> <p><u>EIR/EIS Mitigation Measure:</u> Preconstruction surveys required pursuant to Section V.A.1 of the HCP shall encompass the habitat areas that could support dwarf downingia or rose mallow. If dwarf downingia or rose mallow are found during the habitat surveys, mitigation shall conform to the mitigation requirements for Delta tule pea and Sanford's arrowhead as described in the HCP and in accordance with the California Native Plant Protection Act.</p> <p>Preconstruction surveys required pursuant to Section V.A.1 of the HCP shall encompass the habitat areas where nesting birds could occur. In accordance with the requirements of the Migratory Bird Treaty Act, vegetation containing an occupied nest and an appropriate-sized buffer around the nests of Cooper's hawks, American bitterns, black terns, lark sparrows, white-tailed kites, Pacific-slope flycatchers, and Bewick's wrens shall not be removed until the nest has been abandoned by the nesting pair or the young have fledged.</p>	<p><u>Impact:</u> Same as Proposed Action.</p> <p><u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.</p>	<p><u>Impact:</u> Same as Proposed Action.</p> <p><u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.</p>	<p><u>Impact:</u> Same as Proposed Action.</p> <p><u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.</p>	<p><u>Impact:</u> Expected to be approximately the same as Proposed Action.</p> <p><u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.</p>	<p><u>Impact:</u> Expected to be approximately the same as Proposed Action.</p>
<p><u>Impact:</u> No impact to fish species of concern would occur.</p>	<p><u>Impact:</u> Same as Proposed Action.</p>	<p><u>Impact:</u> Same as Proposed Action.</p>	<p><u>Impact:</u> Same as Proposed Action.</p>	<p><u>Impact:</u> Same as Proposed Action.</p>	<p><u>Impact:</u> Same as Proposed Action.</p>
<p><u>Impact:</u> Net reduction in waterfowl habitat would be less than significant.</p>	<p><u>Impact:</u> Similar to the Proposed Action.</p>	<p><u>Impact:</u> Similar to the Proposed Action.</p>	<p><u>Impact:</u> Similar to the Proposed Action.</p>	<p><u>Impact:</u> Similar to the Proposed Action.</p>	<p><u>Impact:</u> Similar to the Proposed Action.</p>

TABLE 1-1
Summary of Potential Environmental Impacts Associated with Proposed Action and Alternatives

Proposed Action	Alternative 1: Increased Mitigation	Alternative 2: Habitat-Based Mitigation	Alternative 3: Reserve Zones	Alternative 4: Reduced Potential for Incidental Take	Alternative 5: No Action
4.5 Cultural Resources					
<p><u>Impact:</u> Potentially significant increase in the potential to disturb unknown, subsurface cultural resources resulting from development of habitat reserves. Can be mitigated to a less-than-significant level. <u>EIR/EIS Mitigation Measure:</u> Parcels being considered for habitat reserves shall undergo preconstruction literature review and/or field surveys, based on the discretion of a qualified archaeologist. Based on the findings of the cultural resource review and the potential for land disturbance to occur on the reserve, the Natomas Basin Conservancy could be required to complete an archaeological report and implement site-specific mitigation measures as a condition for restoration.</p> <p>and</p> <p>In the event that any historic or archaeological features (surface or subsurface) or deposits, including locally darkened soil (“midden”) that could conceal cultural deposits, animal bone, shell, obsidian, mortars, or human remains are uncovered during construction, work within 100 feet of the find shall cease. A qualified archaeologist and a representative of the Native American Heritage Commission shall be consulted to develop, if necessary, further mitigation measures to reduce any archaeological impacts to a less-than-significant level before construction continues.</p> <p>and</p> <p>When Native American archaeological, ethnographic, or spiritual resources are involved, all identification and treatment shall be conducted by qualified archaeologists who are either certified by the Society of Professional Archaeologists (SOPA) or who meet the federal standards as stated in the <i>Code of Federal Regulations</i> (36 <i>CFR</i> 61), and Native American representatives who are approved by the local Native American community</p>	<p><u>Impact:</u> Greater impacts than the Proposed Action. Can be mitigated to a less-than-significant level. <u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.</p>	<p><u>Impact:</u> Greater impacts than the Proposed Action. Can be mitigated to a less-than-significant level. <u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.</p>	<p><u>Impact:</u> Same as Proposed Action. <u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.</p>	<p><u>Impact:</u> Similar to Proposed Action. <u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.</p>	<p><u>Impact:</u> Similar effects are expected with case-by-case mitigation.</p>

TABLE 1-1
 Summary of Potential Environmental Impacts Associated with Proposed Action and Alternatives

Proposed Action	Alternative 1: Increased Mitigation	Alternative 2: Habitat-Based Mitigation	Alternative 3: Reserve Zones	Alternative 4: Reduced Potential for Incidental Take	Alternative 5: No Action
<p>as scholars of their cultural traditions. If no such Native American is available, persons who represent tribal governments and/or organizations in the locale in which resources could be affected shall be consulted. When historic archaeological sites or historic architectural features are involved, all identification and treatment are to be carried out by historical archaeologists or architectural historians. These individuals shall meet either SOPA or 36 <i>CFR</i> 61 requirements.</p> <p>and</p> <p>If human bone of unknown origin is found during construction, all work shall stop in the vicinity of the find and the County Coroner shall be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission, who shall notify the person it believes to be the most likely descendant. The most likely descendant shall work with the contractor to develop a program for re-internment of the human remains and any associated artifacts. No additional work is to take place within the immediate vicinity of the find until the identified appropriate actions have been carried out.</p>					

TABLE 1-1
Summary of Potential Environmental Impacts Associated with Proposed Action and Alternatives

Proposed Action	Alternative 1: Increased Mitigation	Alternative 2: Habitat-Based Mitigation	Alternative 3: Reserve Zones	Alternative 4: Reduced Potential for Incidental Take	Alternative 5: No Action
4.6 Land Use/Consistency With Adopted Plans and Policies					
<u>Impact:</u> Less-than-significant land use compatibility/plan inconsistency impacts.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Similar effects are expected with case-by-case mitigation.
<u>Impact:</u> Significant loss of farmland. Not likely to be mitigated to a less-than-significant level. <u>EIR/EIS Mitigation Measure:</u> To the extent practicable (and to the extent that biological goals are not compromised), development of site-specific management plans will incorporate provisions that consider farmlands and agricultural use.	<u>Impact:</u> Greater impacts than the Proposed Action. <u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.	<u>Impact:</u> Greater impacts than the Proposed Action. <u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.	<u>Impact:</u> Same as Proposed Action. <u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.	<u>Impact:</u> Similar to the Proposed Action. <u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.	<u>Impact:</u> Similar effects are expected with case-by-case mitigation.
4.7 Social and Economic Conditions					
<u>Impact:</u> Less-than-significant changes in local employment and tax revenues to Sacramento and Sutter counties.	<u>Impact:</u> Greater impacts than the Proposed Action, but less than significant.	<u>Impact:</u> Greater impacts than the Proposed Action, but less than significant.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Same as Proposed Action.	<u>Impact:</u> Similar effects are expected with case-by-case mitigation.
4.8 Traffic					
<u>Impact:</u> Potentially significant increase in the potential for traffic safety conflicts resulting from development of habitat reserves. Can be mitigated to a less-than-significant level. <u>EIR/EIS Mitigation Measure:</u> Prior to commencing substantial habitat reserve development activities, the Conservancy shall evaluate traffic levels on any adjacent rural roadways that would provide construction access. Where potential traffic-safety impacts are identified, the Conservancy and/or its contractor shall prepare a Traffic Control Plan that addresses potential impacts to public safety and other construction-related nuisances. The Traffic Control Plan shall be reviewed and approved by the City of Sacramento and/or Sutter County, and should be submitted for review by Sacramento County for projects located within the unincorporated portion of Sacramento County. Traffic management measures to be included in the Traffic Control Plan include, but are not limited to, the following:	<u>Impact:</u> Greater impacts than the Proposed Action. Can be mitigated to a less-than-significant level. <u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.	<u>Impact:</u> Greater impacts than the Proposed Action. Can be mitigated to a less-than-significant level. <u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.	<u>Impact:</u> Same as Proposed Action. <u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.	<u>Impact:</u> Similar to Proposed Action. <u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.	<u>Impact:</u> Similar effects are expected with case-by-case mitigation.

TABLE 1-1
Summary of Potential Environmental Impacts Associated with Proposed Action and Alternatives

Proposed Action	Alternative 1: Increased Mitigation	Alternative 2: Habitat-Based Mitigation	Alternative 3: Reserve Zones	Alternative 4: Reduced Potential for Incidental Take	Alternative 5: No Action
<ul style="list-style-type: none"> • Provide adequate warning to users of the roadway in the vicinity of the construction, using signs or other means visible from the roadway • Provide adequate assistance to the public in navigating the construction site through the use of flagmen • Install adequate signage for construction zones and detours • If traffic and circulation would be interrupted for an extended period, provide for the opportunity for public input from affected residents 					
4.9 Noise					
<p><u>Impact:</u> Potentially significant increase in noise-related nuisances resulting from development of habitat reserves. Can be mitigated to a less-than-significant level.</p> <p><u>EIR/EIS Mitigation Measure:</u> Prior to commencing substantial habitat reserve development activities, the Conservancy shall determine if residences or other sensitive receptors are located within 1,000 feet of the construction site. If sensitive receptors are located within 1,000 feet of the construction site, operation of construction equipment and vehicles would occur between the hours of 7:00 a.m. and 6:00 p.m., Monday through Saturday, and between 9:00 a.m. and 6:00 p.m. on Sunday.</p>	<p><u>Impact:</u> Greater impacts than the Proposed Action. Can be mitigated to a less-than-significant level.</p> <p><u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.</p>	<p><u>Impact:</u> Greater impacts than the Proposed Action. Can be mitigated to a less-than-significant level.</p> <p><u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.</p>	<p><u>Impact:</u> Same as Proposed Action.</p> <p><u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.</p>	<p><u>Impact:</u> Similar to Proposed Action.</p> <p><u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.</p>	<p><u>Impact:</u> Similar effects are expected with case-by-case mitigation.</p>

TABLE 1-1
Summary of Potential Environmental Impacts Associated with Proposed Action and Alternatives

Proposed Action	Alternative 1: Increased Mitigation	Alternative 2: Habitat-Based Mitigation	Alternative 3: Reserve Zones	Alternative 4: Reduced Potential for Incidental Take	Alternative 5: No Action
4.10 Air Quality					
<p><u>Impact:</u> Potentially significant increase in NO_x and PM₁₀ resulting from development of habitat reserves. Can be mitigated to a less-than-significant level. <u>EIR/EIS Mitigation Measure:</u> The following measures shall be implemented to reduce emissions of ozone precursors during construction activities on the habitat reserves:</p> <ul style="list-style-type: none"> • To the extent feasible, the Natomas Basin Conservancy shall work with contractors that use low-NO_x, heavy-duty construction vehicles. • Construction activities shall be phased to reduce the simultaneous operation of construction equipment. • The contractor shall perform routine tuning and maintenance of construction equipment. • The contractor shall use existing on-site electric power sources in place of diesel generators to the extent that these sources are available. <p style="text-align: center;">and</p> <p>The following measures shall be implemented to reduce construction-related emissions of fugitive dust (PM₁₀).</p> <ul style="list-style-type: none"> • The contractor shall reduce or suspend grading and excavation activity during windy periods (i.e., winds in excess of 15 miles per hour). • The contractor shall post and enforce speed limits on unpaved driving areas. • The contractor shall apply water twice daily to disturbed areas and active construction sites. • The contractor shall treat completed sites with soil binders or vegetation. 	<p><u>Impact:</u> Greater impacts than the Proposed Action. Can be mitigated to a less-than-significant level. <u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.</p>	<p><u>Impact:</u> Greater impacts than the Proposed Action. Can be mitigated to a less-than-significant level. <u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.</p>	<p><u>Impact:</u> Same as Proposed Action. <u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.</p>	<p><u>Impact:</u> Similar to Proposed Action. <u>EIR/EIS Mitigation Measure:</u> Same as Proposed Action.</p>	<p><u>Impact:</u> Similar effects are expected with case-by-case mitigation.</p>

TABLE 1-1
 Summary of Potential Environmental Impacts Associated with Proposed Action and Alternatives

Proposed Action	Alternative 1: Increased Mitigation	Alternative 2: Habitat-Based Mitigation	Alternative 3: Reserve Zones	Alternative 4: Reduced Potential for Incidental Take	Alternative 5: No Action
<ul style="list-style-type: none"> Dirt shall be washed off trucks and other equipment before leaving the construction site. 					
4.11 Public Health and Safety					
<p><u>Impact:</u> Less-than-significant public health and safety impacts resulting from the creation of habitat reserves within the bird-strike zones of Sacramento International Airport.</p>	<p><u>Impact:</u> Greater impacts than the Proposed Action, but less than significant.</p>	<p><u>Impact:</u> Greater impacts than the Proposed Action, but less than significant.</p>	<p><u>Impact:</u> Same as Proposed Action.</p>	<p><u>Impact:</u> Similar to Proposed Action.</p>	<p><u>Impact:</u> Similar effects are expected with case-by-case mitigation.</p>

SECTION 2

Modifications and Updates to the Draft EIR/EIS

This section presents the changes to the Draft EIR/EIS in this Final EIR/EIS (Section 2.1). It also summarizes the revisions to the Draft NBHCP (Section 2.2). For specific text changes to the NBHCP, the reader is referred to the Final NBHCP for a complete reading of the text changes.

2.1 Changes to the Draft EIR/EIS

This section identifies changes to the EIR/EIS made as a result of comments on the Draft EIR/EIS. Additional text is presented as underlined text and deleted text is presented as ~~striketrough text~~. Each noted change is introduced in this section using *italicized text* that is provided as context for the reader—the *italicized text*, however, is not a change to the Draft EIR/EIS.

As discussed in Section 1.3 of this Final EIR/EIS, these revisions do not alter the conclusions in the Draft EIR/EIS.

Changes to Section 1.1.1, Summary of Key Issues

The following sentence is added after the first sentence in the second paragraph on page 1-1 of the Draft EIR/EIS:

The term “permittees” is also used to describe certain entities—RD 1000 and Natomas Mutual—which have not submitted applications for permits at this time based on the NBHCP, but may choose to become Applicants, and, if incidental take permits are granted, may choose to become permittees in the future.

Changes to Section 1.5, Regulatory Framework

The following text has been added to Section 1.5 of the EIR/EIS to describe more fully CDFG’s requirements for protected species:

1.5.8. California Fully Protected Species Provisions. Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code prohibit the taking of fully protected birds, mammals, amphibians, and fish, respectively. In the Natomas Basin, fully protected species include the white-tailed kite, greater sandhill crane, and American peregrine falcon.

Changes to Section 2.2.4, Reclamation District No. 1000 and Section 2.5.5, Natomas Mutual.

Figure 2-4 has been edited to label key canals and drains.

Changes to Section 2.3.4, Activities not Covered by Incidental Take Permits

The description of activities not covered by the incidental take permits in Section 2.3.4 of the EIR/EIS has been revised as follows:

- Additional Regulations.** In addition to the Section 10(a)(1)(b) and Section 2081 permits, the permittees also would comply with all other applicable local, state, and federal regulations, laws, or ordinances. These include, but are not limited to, the following: U.S. Army Corps of Engineers Clean Water Act Section 404 permits; State Water Quality Control Board/Regional Water Quality Control Board Section 401 water quality certification and/or waste discharge requirements; ~~and~~ CDFG Streambed Alteration Agreements pursuant to Fish and Game Code Division 2, Chapter 6, Section 1600 et seq.; and State Reclamation Board Encroachment Permits pursuant to Section 8710 of the California Water Code.

Changes to Section 2.4.6.3, Water Agencies' Conservation Measures

The following text changes have been made to the Section 2.4.6.3, on page 2-43, first paragraph:

RD 1000's and Natomas Mutual's primary management efforts focus on keeping the canal systems functioning in a manner that ensures timely movement of irrigation water for agricultural purposes, and ensures drainage of agricultural water and storm flows from lands within the Natomas Basin. RD 1000 and Natomas Mutual carry out these activities to provide agricultural water to irrigated lands, address public health and safety concerns, and minimize damage to planted crops and other property from flooding.

Changes to Table 3.1, Description of Land Use/Habitat Categories

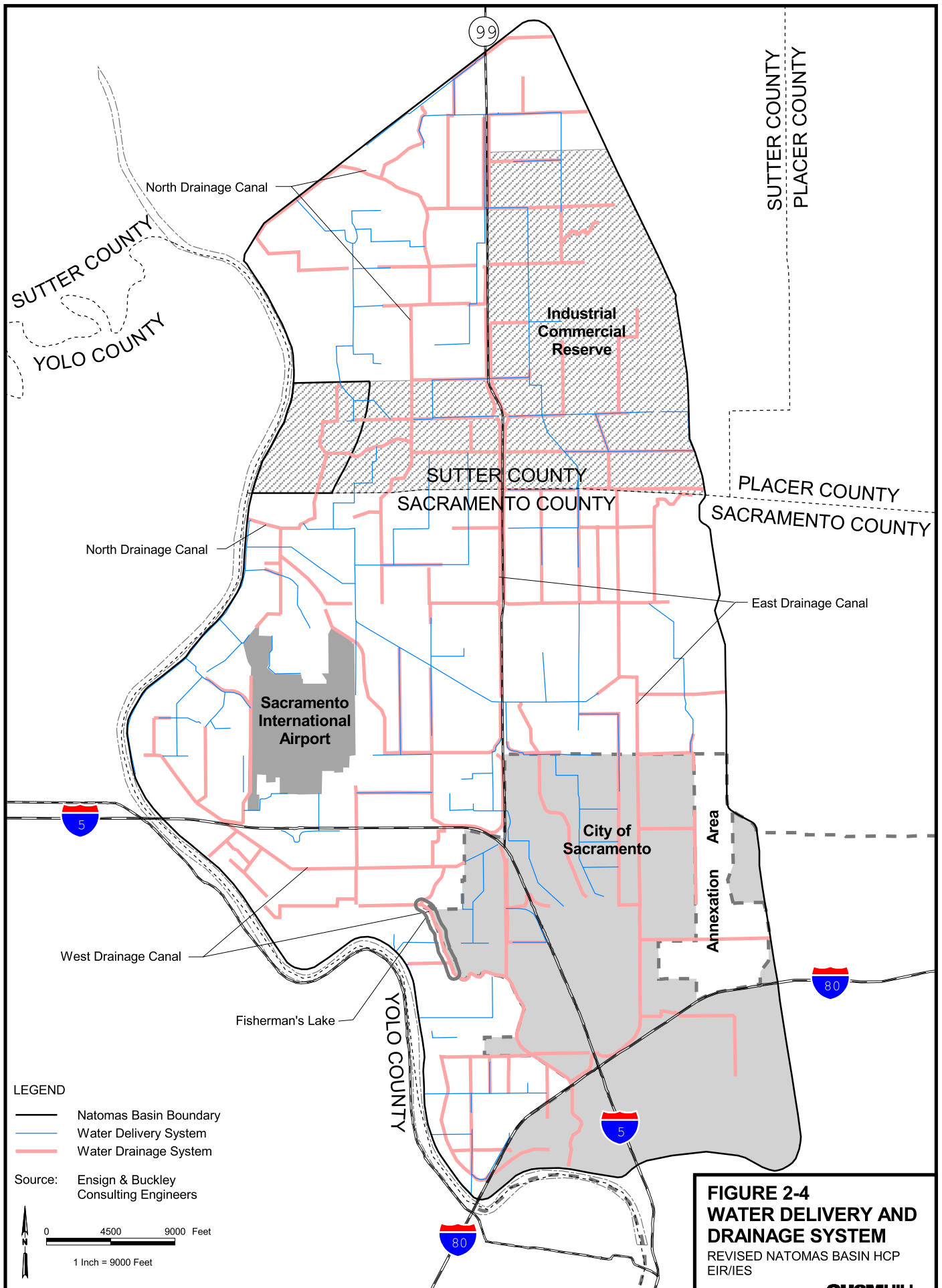
The following change has been made to Table 3.1 of the Draft EIR/EIS, which has been edited to clarify a location:

Ponds and Seasonally Wet Areas	Wetland/marsh areas, including Richard's Lake <u>the area around the North Drain (near RD 1000 Pumping Plant #2)</u> and several isolated locations throughout the Natomas Basin. Based on DWR's "water surface" land use category and some "riparian vegetation" categories, with additional information provided by May & Associates data and aerial photo interpretation.
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Changes to Section 3.3.3, Water Supply

The following changes have been made to Section 3.3.3 (page 3-8, first paragraph) to clarify RD 1000's irrigation operation and Natomas Mutual's water supply contracts:

Irrigation water also includes return flows from rice fields, which is ~~conveyed to downstream users through the RD 1000 drainage system.~~ held within a "closed system" that re-uses the water within the basin without release to the Sacramento River. The closed system is maintained from April through August. Natomas Mutual manages the consolidated and appropriative water rights in the area, and serves approximately 238 landowners covering approximately 36,000 acres. ~~Following the development of the federal Central Valley Project (CVP), Natomas Mutual entered into a contract with the Bureau of Reclamation to establish water~~



~~delivery requirements in a river system now substantially affected by the CVP. This “settlement contract” quantifies base supply diversions of 98,200 acre-feet per year and provides of up 22,000 acre-feet of CVP water per year. The Natomas farming community began operations after installation of the river levees between 1916 and 1919. The landowners secured senior water rights. Nearly 30 years later, the Central Valley Project (CVP) was built and in 1946 Natomas Mutual entered into a contract with the Bureau of Reclamation for certain water supplies under a settlement contract. This settlement contract does not replace the amounts of water Natomas Mutual is entitled to divert under its pre-existing rights, licenses, and permits.~~

On page 3-8, second paragraph, the following text revisions have been made:

Although the average historical diversions from these five plants is approximately 80,000 acre-feet per year, Natomas Mutual delivers approximately 110,000 acre-feet on average. The “closed system” enables Natomas Mutual to re-use water, effectively reducing its diversions by an average of 30,000 acre-feet per year. The State Water Resources Control Board has ruled that Natomas Mutual should be credited for that effort.

On page 3-9, first full paragraph (following bullet at top of page), the following text revisions have been made:

~~Although the pumping facility descriptions above list localized areas for each plant, the closed system is so interconnected that it actually re-circulates water throughout the entire system. Recent improvements in the drainwater recirculation system have contributed to a substantial improvement in water management by providing a more flexible matching of supply and demand throughout Natomas Mutual’s service area. Conservation efforts begun in 1986 have contributed to long-term, substantial improvements in the drain water system. The re-circulation improvements have provided a more flexible matching of supply, and demand and have reduced the impacts on the Sacramento River.~~

On page 3-9, the following text has been deleted from the middle of the second full paragraph, starting on line 8 of that paragraph:

~~Natomas Mutual owns two small groundwater wells, producing less than 200 acre-feet per year to supplement surface water supplies.~~

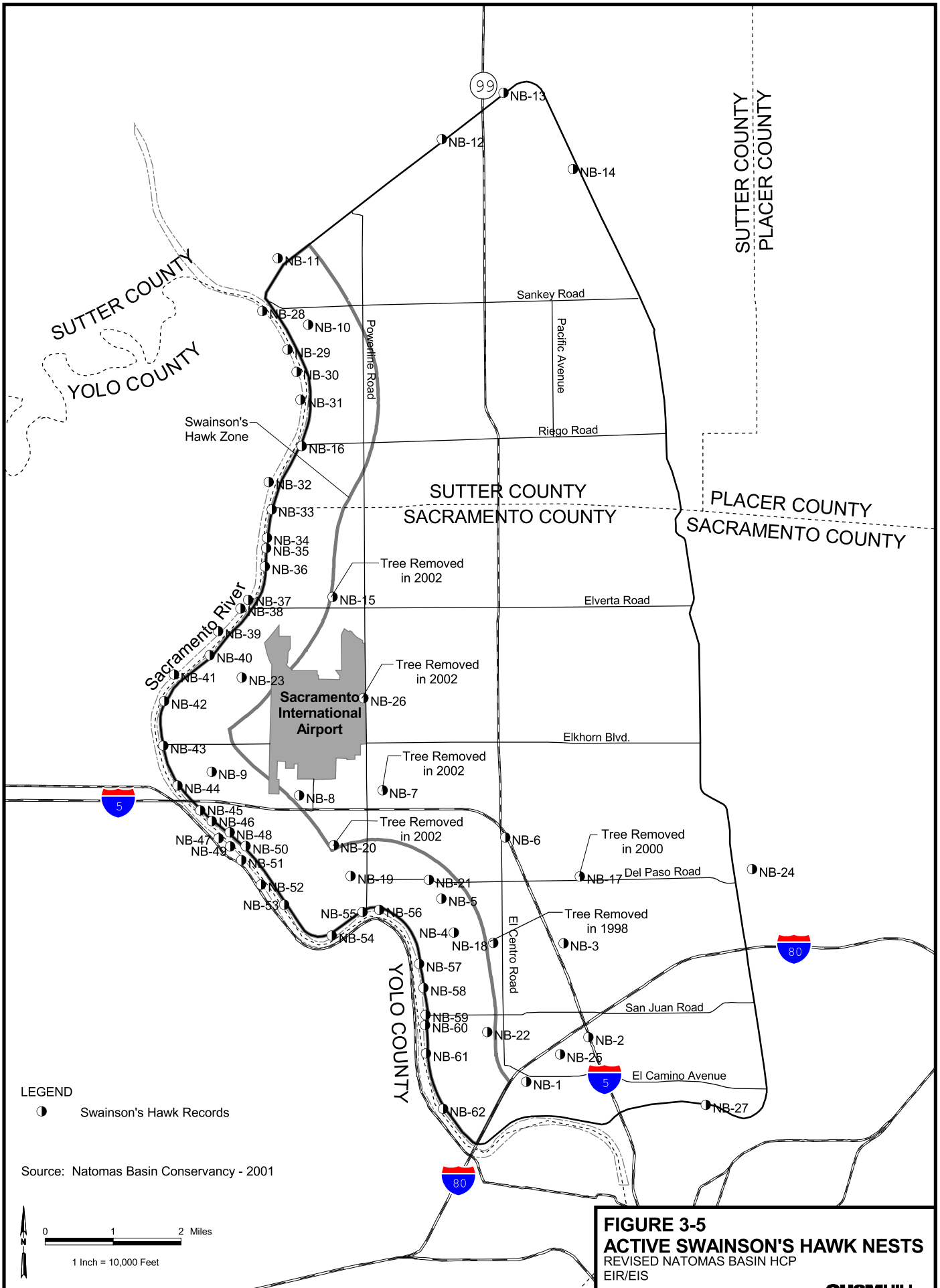
Changes to Section 3.4.1, Land Use and Habitats in the Natomas Basin

Section 3.4.1, page 3-11, first full paragraph, starting on line 4, has been revised to clarify the drainage pattern in the Natomas Basin.

The drainage pattern of the Basin has been altered so that during the spring and summer months, agricultural runoff is pumped into the RD 1000 system of drains and re-circulated until August. At that point, runoff is pumped into the RD-1000 system of drains and into the Sacramento River at several places.

Changes to Section 3.4.2.1, Species to be Covered Under the ITPs.

Figure 3-5 has been edited to reflect that Swainson’s hawk nest tree NB-18 was removed in 1998.



LEGEND

● Swainson's Hawk Records

Source: Natomas Basin Conservancy - 2001

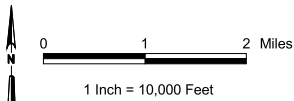


FIGURE 3-5
ACTIVE SWAINSON'S HAWK NESTS
 REVISED NATOMAS BASIN HCP
 EIR/EIS

Changes to Section 4.1.2.2, Actions Included in the Cumulative Impacts Analysis

The following text revisions are inserted before the first paragraph in Section 4.1.2.2, page 4-7, to clarify for the reader the approach to cumulative impacts analysis:

The EIR/EIS evaluates the cumulative effects of past, present, and reasonably foreseeable development in the Basin. With respect to past development, development that occurred prior to 1997 when the USFWS approved the original NBHCP is included in the baseline conditions for purposes of evaluating the effects of, implementing the NBHCP on Covered Species. To account for the effects of present development, the development that occurred between 1997 and 2002 (the time between adoption of the original NBHCP by the City and preparation of the revised NBHCP) is included in the evaluation of the combined effects of the 17,500 acres of authorized development. To account for the effects of future development, the EIR/EIS relies on the adopted general plans and community plans of the City, and Sutter and Sacramento Counties as a reasonable basis for predicting the extent, amount, and location of future development. Based on these adopted plans, the Draft NBHCP contemplates the development of up to 17,500 acres of reasonably foreseeable development in the Basin as further described below, and development in the Natomas Basin in excess of this acreage is not reasonably foreseeable.

The following text has been added to Section 4.1.2.2 to clarify the rationale for defining reasonably foreseeable actions relevant to the cumulative impact analysis of the Proposed Action.

This EIR/EIS includes past, present, and reasonably foreseeable actions that have the potential, in combination with the effects of the Proposed Action, to result in cumulative impacts. Such actions include those that:

- involve the submission of an urban development permit or other permit application to a federal or non-federal agency with approval authority;¹
- are related to the types of impacts attributable to those that would result from implementing the Proposed Action; or
- are based on a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document that has been adopted or certified, and that described or evaluated regional or area-wide conditions contributing to the cumulative impact.

On the basis of these criteria, the actions identified for consideration in the cumulative impacts analysis are described below. The discussion of cumulative development is contained in Section 4.1.2.3 of this EIR/EIS and is based on available information regarding permit applications and long-range planning documents adopted by the City of Sacramento, Sacramento County, and Sutter County.

Generally, the analysis of cumulative effects, as summarized below and evaluated throughout this EIR/EIS, includes actions that could affect the management of covered species in the Natomas Basin or in other parts of their range. This broad scope helps provide an understanding of the relative importance of the Proposed

Action to overall population conditions. These other management actions include federal and state wildlife refuges, as prescribed by other state and federal programs, and in other HCPs. The management included in the analysis of cumulative effects is as follows.

The following text has been added to the third paragraph on page 4-8 in Section 4.1.2.3. of the EIR/EIS to address comments raised regarding consistency with the NBHCP.

Specific land use plans have not been prepared for future development of this 10,000-acre area as part of this long-range planning effort to guide future annexations (i.e., the Joint Vision). No specific land uses or projects have been proposed for development under the Joint Vision at this time. Until the Joint Vision planning effort is completed, the status of landowner requests for development entitlements to authorize urban development outside the City's sphere of influence and County's urban services boundary remain uncertain. These requests include, specifically, any development proposals for the West Lakeside and Greenbriar Farms that may not be approved by the City under the prior NBHCP settlement agreement until the Joint Vision effort is completed. To control further the potential for development in the Natomas Basin in excess of 17,500 acres, the NBHCP states that future annexation and development requests in unincorporated portions of the Basin, such as the West Lakeside and Greenbriar Farms properties, may not seek take authorizations under the NBHCP by annexing to the City.

Changes to Section 4.1.2.3, Other Potential Actions in the Natomas Basin

The following text in Section 4.1.2.3, page 4-9 has been changed to clarify Natomas Mutual's operation:

Natomas Mutual pumping plant consolidation. Natomas Mutual operates three pumping plants along the Sacramento River, ~~and is currently studying the potential for consolidating these pumping stations into one unit and installing state-of-the-art fish screens. This project would likely include additional canal improvements along the western boundary of the Natomas Basin. Detailed engineering plans and environmental review of this project have not been initiated at this time, and two~~ pumping plants in the Cross Canal. Natomas Mutual has studied the consolidation of all five pumping plants into only two diversions from the Sacramento River, complete with state-of-the-art positive fish barriers. The consolidation project is beginning in the final design stage and construction is slated for 2003-2005. CEQA compliance will be completed by 2003. The project will create improvements to habitat in the Cross Canal and some sections of the internal delivery system will also be modified to improve habitat and connectivity.

Changes to Section 4.11, Public Health and Safety

Text has been added to the introduction in Section 4.11(Public Health and Safety) to clarify the likelihood of birds at the Sacramento International Airport. The new text is added to the end of the last paragraph of the introduction section on page 4-159.

Adverse health and safety effects from urban development are unlikely because aircraft/bird strikes are attributed primarily to large waterfowl rather than the small

passerine birds that are typically associated with urban development (e.g., scrub jays, mockingbirds, house sparrows).

Changes to Appendix C, Summary of Previous Environmental Review of Planned Urban Development

The Draft EIR/EIS inadvertently omitted the following discussion from Appendix C. The following text has been added to Tables C-5 and C-8 (in Appendix C of the EIR/EIS) to summarize prior evaluation of airport/land use encroachment issues relevant to the NBHCP Covered Activity of Planned Development:

TABLE C-5
Prior Analysis of Land Use Impacts from Planned Urban Development in the Natomas Basin

Impact	Level of Significance	Mitigation	Level of Significance with Mitigation	Action
City of Sacramento General Plan EIR				
<u>No impacts identified for land use conflicts between Sacramento International Airport and authorized development.</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
North Natomas Community Plan EIR				
<u>Impact 4.6-2(A). No impacts identified for land use conflicts between Sacramento International Airport and authorized development.</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
South Natomas Community Plan EIR				
<u>No impacts identified for land use conflicts between Sacramento International Airport and authorized development.</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Sutter County General Plan EIR				
<u>Impact 4.1.2. The proposed General Plan has the potential to conflict with adjacent land uses or cause a substantial adverse change in the types or intensity of existing land use patterns.</u>	<u>Significant</u>	<u>Implement General Plan Goals 1.C, 1.E, 1.F, and 9.C; Policies 1.C-4, 1.E-1, 1.E-2, 1.E-3, 1.F-1, 1.F-2, 1.F-3, 1.F-4, 9.C-1, 9.C-2, 9.C-3, 9.C-4, and 9.C-5; and Implementation Programs 1.4 and 1.7.</u> <u>Mitigation Measure 4.1.2. To ensure that new development in the South County in the vicinity of the Sacramento International</u>	<u>Less than Significant</u>	<u>No further action necessary.</u>

TABLE C-5

Prior Analysis of Land Use Impacts from Planned Urban Development in the Natomas Basin

Impact	Level of Significance	Mitigation	Level of Significance with Mitigation	Action
		<u>Airport does not create a conflict in terms of land use compatibility. South County shall review all new development projects within the overflight zones for consistency with the applicable airport comprehensive land use plan.</u>		

TABLE C-8

Prior Analysis of Noise Impacts from Planned Urban Development in the Natomas Basin

Impact	Level of Significance	Mitigation	Level of Significance with Mitigation	Action
City of Sacramento General Plan EIR				
<u>North Natomas residences in the vicinity of Sacramento International Airport would be exposed to noise levels in excess of that considered normally acceptable. Note that the General Plan was under consideration prior to the North Natomas Community Plan Update (see impacts below).</u>	<u>Significant</u>	<u>Full mitigation would require amending local noise control standards, amending the 1986 North Natomas Community Plan, and rerouting air traffic. The City Council determined that full mitigation was not feasible, and adopted partial mitigation to request the County Division of Airports to make operational and flight modifications.</u>	<u>Significant</u>	<u>The City Council determined that economic, social, and other considerations make it infeasible to mitigate the impacts to below-significant levels.</u>
North Natomas Community Plan EIR				
<u>Aircraft noise exposures will not affect land-use compatibility in the Update Area because the areas will lie outside the 60 dB CNEL contour.</u>	<u>Less than Significant</u>	<u>N/A</u>	<u>Less than Significant</u>	<u>None required</u>
South Natomas Community Plan EIR				
<u>No noise impacts identified between Sacramento</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

TABLE C-8
Prior Analysis of Noise Impacts from Planned Urban Development in the Natomas Basin

Impact	Level of Significance	Mitigation	Level of Significance with Mitigation	Action
<u>International Airport and authorized development.</u>				
Sutter County General Plan EIR				
<u>No noise impacts identified between Sacramento International Airport and authorized development.</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

2.2 Changes to the Draft NBHCP

This section summarizes the key changes to the NBHCP. Specific text revisions are in the Final NBHCP, and the corresponding clarifications have been made to the IA.

- The conservation strategy for covered vernal pool species has been refined and clarified to more clearly state that the most recent and comprehensive USFWS survey guidelines must be used to determine the presence of covered species.
- Additional language regarding connectivity of the Mitigation Lands has been added to clarify the approach to connectivity. This new language adds a provision for TNBC to purchase lands that could potentially be targeted by the Water Agencies for closure, adds specificity to the review process under the ESA and CESA that would be required if such a closure were to occur, and adds text on the review requirements relevant to the giant garter snake in the 1-mile Swainson's Hawk Zone.
- Additional changes to the text on the East Drainage Canal and the North Drainage Canal within Sutter County's Permit Area include construction of fences along the shared boundary of urban development and the canals. Sutter County will consult with the Wildlife Agencies to determine design strategies that would enhance conditions for giant garter snake movement through the North and East Drainage Canals. The additional text also presents possible strategies including expanded buffer areas and modified canal cross sections as Sutter County and the Water Agencies determine that such measures are feasible.
- Additional information was prepared to explain and clarify in greater detail the basis for the analysis of impacts to Swainson's hawk foraging habitat. This information is included as Appendix K of the NBHCP (Addendum to the Biological Resources Technical Memorandum). The Addendum provides additional information to clarify habitat conditions (baseline and future) for the Swainson's hawk, specifically the quantity and availability of foraging opportunities, and also updates the discussion of potential effects of removal of nest trees. Further clarification also has been provided in

the NBHCP text regarding adjustments that may be made as part of the adaptive management program to address changes in foraging habitat that could occur during the permit term.

- An updated fee study has been added as Appendix B of the NBHCP. This updated fee study contains updated estimates for monitoring and adaptive management costs.
- Clarification has been added regarding TNBC's ability to "trade-out" Mitigation Lands (i.e., to sell Mitigation Lands in exchange for higher quality lands).
- Text has been added clarifying that conservation easement will be secured on all Mitigation Lands acquired in fee title by the Plan Operator after the Plan Operator has confirmed: (1) the final location of each of the reserves, and (2) management and/or restoration and enhancement measures are being implemented on the final reserve site.
- Text has been added to clarify the process for including non-listed Covered Species in the 2081 permits should these species be listed in the future.
- Clarification has been added regarding the geographic scope of monitoring activities for Covered Species in the Natomas Basin.

Responses to Comments

This section presents the responses to comments. It includes a set of five Master Responses to issues raised in the comment letters (Section 3.1) and it also includes individual responses to comments (Section 3.2 and Attachment 2).

3.1 Summary of Major Comment Responses

In reviewing the comments received on the Draft EIR/EIS, it was apparent that many commentors raised similar and overlapping issues. Consequently, to aid the decisionmakers and the reviewing public, the following Master Responses have been developed to address key comments raised. The intent of the Master Responses is to provide background and concise responses on each of the commonly raised issues to support the more specific responses included in the response to individual comments (Section 3.2 of the Final EIR/EIS). These Master Responses are intended to supplement, but not replace, specific responses to individual comments submitted. The responses are not intended to address every issue raised. The comments fall into the following general categories:

- Mitigation Ratio (Section 3.1.1)
- Connectivity (Section 3.1.2)
- Joint Vision (Section 3.1.3)
- Cumulative Impacts (Section 3.1.4)
- Swainson's Hawk Foraging Habitat (Section 3.1.5)

3.1.1 Master Response 1: Mitigation Ratio

Several commentors have raised questions or concerns regarding the proposed 0.5:1 mitigation ratio included in the NBHCP, including:

- Derivation and analysis of mitigation ratio;
- Differing mitigation ratios for NBHCP and other HCPs;
- Biological effectiveness of the NBHCP mitigation ratio developed for the Covered Species (also see Addendum to the Biological Resources Technical Memorandum, Appendix K of the Final NBHCP);
- Derivation of the economic feasibility of the mitigation ratio.

As discussed below and consistent with the USFWS's HCP Handbook, the mitigation ratio selected for the NBHCP is designed to mitigate for the loss of species and habitat values specific to the Plan Area as demonstrated by the NBHCP Biological Resources Technical Memorandum (see Appendix H of the NBHCP) and the Addendum to the Biological Resources Technical Memorandum (see Appendix K of the Final NBHCP).

3.1.1.1 Types of Mitigation Measures that HCPs Should Include

Many commentors have focused on the mitigation ratio as a measure of the adequacy of the NBHCP's mitigation program. Commentors have suggested that the 0.5:1 mitigation ratio is inadequate for purposes of mitigating the effects of incidental take of the covered activities. It is important to note that the validity and effectiveness of an HCP's mitigation program is not determined exclusively on the mitigation ratio for acquisition of mitigation lands. For example, Chapter 3 of the HCP Handbook notes that:

Mitigation actions under HCPs usually take one of the following forms:
(1) avoiding the impact (to the extent practicable); (2) minimizing the impact;
(3) rectifying the impact; (4) reducing or eliminating the impact over time;
or (5) compensating for the impact. For example, project effects can be
(1) avoided by relocating project facilities within the project area;
(2) minimized through timing restrictions and buffer zones; (3) rectified by
restoration and revegetation of disturbed project areas; (4) reduced or
eliminated over time by proper management, monitoring, and adaptive
management; and (5) compensated by habitat restoration or protection at an
onsite or offsite location. In practice, HCPs often use several of these
strategies simultaneously or consecutively.

The NBHCP's Operating Conservation Program includes each and every one of these mitigation actions. To understand the full mitigation program of the HCP, the mitigation ratio, the enhancement and management of reserve lands, and the avoidance, minimization, and mitigation requirements need to be viewed in concert. For example, the NBHCP includes substantial avoidance policies to prevent disturbance of snakes during hibernation or birds during nesting activities (avoidance and minimization through timing restrictions and buffers).

Another example of avoidance is the designation of the Swainson's Hawk Zone. In Sutter County, this results in the removal of 1,015 acres of lands in the Sutter County Industrial/Commercial Reserve from the Permit Area. A third example of mitigation is the nesting tree mitigation requirements designed to rectify the loss of older nest trees over time. Yet another mitigation program is the creation and enhancement of Mitigation Lands. Finally, substantial consideration has been given to reserve management, monitoring, and adaptive management in the NBHCP. Chapter IV of the NBHCP includes reserve management criteria and Chapter V includes species specific avoidance, minimization, and mitigation measures. The NBHCP, therefore, does not rely exclusively on creation of new habitat reserves to mitigate for the impacts of development and the adequacy of the NBHCP cannot be judged by looking at the mitigation ratio in isolation from the other components of the Operating Conservation Program. Thus, the NBHCP utilizes all of the mitigation strategies listed above to create a comprehensive conservation program.

3.1.1.2 Derivation and Analysis of Mitigation Ratio

In considering the issuance of a Section 10(a) Permit, the USFWS must find that: (1) to the maximum extent practicable, the permittee has minimized and mitigated for the impacts of incidental take; (2) adequate funding is provided for the conservation plan and that the Plan specifies procedures to deal with unforeseen circumstances; (3) the taking will not appreciably reduce the likelihood of survival and recovery of the species in the wild; and

(4) conservation measures required by the USFWS will be met (50 CFR §§ 17.22(b)(2)), 17.32). Consistent with the Section 10(a) permit issuance criteria, the USFWS is required to find that the proposed incidental take will not appreciably reduce the likelihood of survival and recovery of the species in the wild. Based on the information included in the Biological Resources Technical Memorandum (Appendix H of the NBHCP), the Addendum thereto (Appendix K of the Final NBHCP), and the EIS/EIR, the Lead Agencies have presented information to support the determination that the NBHCP's Operating Conservation Program will be successful in meeting Section 10 requirements. Thus, the NBHCP and the mitigation ratio seek to address the biological needs of the Covered Species in a manner that is commensurate with the impacts to the species, and that preserves the economic feasibility of compatible development in the Natomas Basin while also presenting mitigation programs that ensure that the impacts of Planned Development will not jeopardize the continued existence of any of the species.

A key component of the Operating Conservation Program is the acquisition and permanent preservation of Mitigation Lands at a mitigation ratio of 0.5 acre of Mitigation Lands acquired and preserved for each 1 acre of Planned Development. Based on scientific information and analysis contained in the Biological Resources Technical Memorandum and the EIS/EIR, as further described below, the Applicants believe the 0.5:1 mitigation ratio is adequate in mitigating for the effects of the incidental take resulting from Planned Development in the Basin.

In addition, in determining whether to issue the incidental take permits, the USFWS must find that the NBHCP minimizes and mitigates impacts to the maximum extent practicable and ensure that adequate funding will be available to fund the costs of the NBHCP's Operating Conservation Program. An Economic Analysis was conducted to evaluate the costs and feasibility of the NBHCP in consideration of the habitat, species, and efforts to assure that the NBHCP, to the maximum extent practicable, minimizes and mitigates the effects of incidental take resulting from covered activities. The Applicants conducted this analysis and reviewed a range of mitigation ratios for reserves, and different reserve acquisition approaches within the Basin (e.g., acquisition of site-specific areas). The Economic Analysis (Economic Planning Systems, 2002) also analyzed the economic feasibility of reducing the amount of development. The Economic Analysis is included in Appendix A of the NBHCP. Also see Section 3.1.1.5 and Responses to Comment O1-42 through O1-60 of this Final EIR/EIS (Section 3.2)

The Applicants considered the benefits of several replacement habitat approaches. The HCP Handbook provides guidance on the approach and location of replacement habitat:

Generally, the location of replacement habitats should be as close as possible to the area of impact; it must also include similar habitat types and support the same species affected by the HCP. However, there may be good reason to accept Mitigation Lands that are distant from the impact area – e.g., if a large habitat block, as opposed to fragmented blocks can be protected, or if the Mitigation Lands are obtained through a mitigation fund. Ultimately, the location of mitigation habitat must be based on individual circumstances and good judgment.

The NBHCP first considered biological needs of the Covered Species in the development of the habitat mitigation. Given the specific biology of the Natomas Basin and needs of many

of the species, the preparers specifically targeted the location of Mitigation Lands within the Natomas Basin. This supports important needs of the species. For example, the USFWS recognizes 13 separate populations of giant garter snakes within California, and identifies the Natomas Basin as the largest single element of the American Basin's population of the giant garter snake that has been studied. Thus, the Applicants determined that the highest priority should be to locate reserves within the Natomas Basin to the maximum extent possible because of the unique biological and habitat needs of the giant garter snake population and other Covered Species.

The decision to locate Mitigation Lands within the Natomas Basin is not without practical challenges. For example, extensive parcels of land in the Natomas Basin exist, and this makes acquisition of consolidated habitat more challenging because multiple owners and real estate transactions must occur to achieve the minimum reserve size of 400 acres. Similarly, the cost of land in the Natomas Basin is relatively high because of the area's proximity to the Sacramento Central City, the Sacramento International Airport, Interstate 5, and State Highway 99. All of these factors have influenced the parcelization and land values of the Natomas Basin. A number of mitigation programs and mitigation banks are located in more rural areas of the Sacramento Valley (Butte County foraging areas) and Central Valley areas (San Joaquin Delta areas). The large parcel sizes and lower cost per acre of these sites was considered, but the NBHCP biology team determined that this type of mitigation would not, in all cases, clearly support the Covered Species.

Enhancement and management of Mitigation Lands, as proposed by the NBHCP, is also consistent with the guidance of the USFWS HCP Handbook. Chapter 3, states:

In some cases, acquisition of high quality existing habitat will be the best approach--for example, where the habitat type takes years to develop (e.g., old-growth forest). In other cases, restoring degraded habitat or creating new ones is the best strategy--for example, where the habitat type is relatively easy to manipulate (e.g., grasslands). Where affected species depend on natural disturbance regimes that can be replicated through management regimes (e.g., prescribed fire or flooding), prescriptive management may be preferable to habitat acquisition or protection alone.

In accordance with this guidance, the NBHCP requires restoration and enhancement of Mitigation Lands and requires management practices specifically to support the Covered Species. The enhancement programs have been designed to ensure that each reserve offers substantial benefits to the Covered Species associated with the habitat enhanced or created on the reserve. Additionally, the Applicants, in consultation with the Wildlife Agencies, included numerous requirements for the enhancement of Mitigation Lands to ensure that habitat preserved or replaced would have higher value than the current habitat in the Basin.

The NBHCP preparers reviewed the needs of the Covered Species in establishing reserve development and management guidelines. Of the species present in the Basin, many use common elements of habitat. For example, the giant garter snake uses the upland areas of rice fields and canals (levees) for basking and hibernacula. Similarly, the Swainson's hawk may use these same upland areas for perching while foraging in fallow rice fields. Thus, a balance of enhanced habitat types is included in the NBHCP to represent the multiple needs of the species. The NBHCP calls for 25 percent of the Mitigation Lands to be enhanced

managed marsh; 25 percent to be upland areas; and 50 percent to be rice reserves specifically managed by TNBC to support the Covered Species.

For example, the enhanced rice reserves are designed to continue an element of rice landscape in the Basin that has proven to support the species. In addition to maintaining rice habitat through the Mitigation Lands, each reserve has a Site Specific Management Plan that includes best practices to support the species. For example, sections of TNBC rice reserves are fallowed each year such that at approximately 10 percent of all TNBC rice reserves are fallow, creating prime foraging lands for birds of prey such as the Swainson's hawk. Additionally, as a section of reserve is fallowed, a primary system of canals is maintained within the preserve to support connectivity and mobility of the giant garter snake. Thus, substantial biological research and enhancement is invested in each reserve to create substantially higher-value habitat than the affected habitat.

The NBHCP mitigation program, which emphasizes restoration and enhancement of habitat, has been proposed because substantial biological analysis was conducted to identify the best mitigation support for the needs of the species. Thus, while a 1:1 mitigation ratio (without enhancement and restoration) similar to the San Joaquin MSCP could also be considered in the Natomas Basin, this same approach would not provide the same increase in quality and value of habitat for the species using the Basin. A 1:1 ratio without enhancement and mitigation would, for example, not produce the same increase in managed marsh reserves, nor produce upland areas with nesting trees specifically designed to support the species covered by the NBHCP.

3.1.1.3 Differing Mitigation Ratios for HCPs

Several commentors noted that the NBHCP mitigation ratio is different from the ratio used in other HCPs. Each HCP is crafted to address the specific impacts and to identify measures which will, to the maximum extent practicable, minimize and mitigate the impacts of incidental take-given the particular biology, habitat, and other characteristics of the HCP planning area. Chapter 3 of the USFWS HCP Handbook, for instance, states:

Mitigation programs under HCPs and Section 10 permits are as varied as the projects they address. Consequently, this handbook does not establish specific "rules" for developing mitigation programs that would limit the creative potential inherent in any good HCP effort. On the other hand, the standards used in developing HCPs must be adequate and consistent regardless of which Service office happens to work with a permit applicant. Mitigation programs should be based on sound biological rationale; they should also be practicable and commensurate with the impacts they address.

The San Joaquin Multi-Species Conservation Program (MSCP) differs from the NBHCP in several ways. It was prepared to address the incidental take of 97 species associated with the conversion of 109,302 acres consisting of agricultural lands, natural lands – non-wetlands (e.g., oak woodlands), natural lands – vernal pools, and wetlands other than vernal pools. Incidental take authorization was provided to approximately 44 of the 97 species addressed in the MSCP. Under the San Joaquin MSCP, the loss of 109,302 acres, of which approximately 75,000 acres are considered habitat for the Covered Species, is mitigated by 100,841 acres of preserved lands. Moreover, the San Joaquin MSCP provides that if a project is designed to avoid all impacts to MSCP covered species and all habitats, the project is not subject to the

MSCP compensation requirements. Thus, certain lands that do not provide habitat may be converted to urban development without triggering the requirement to purchase mitigation lands. Additionally, although the giant garter snake is addressed in the San Joaquin MSCP, the MSCP did not grant incidental take authorization for conversion of occupied habitat.

By contrast, the NBHCP was prepared to address 22 Covered Species within a 17,500-acre Plan Area. Unlike the San Joaquin MSCP, the NBHCP provides for incidental take coverage of giant garter snake, including occupied and unoccupied habitat. The NBHCP also applies the 0.5:1 mitigation ratio to all lands within the Permit Areas, whether or not they provide habitat for any of the Covered Species. In addition, even if developers avoid impacts to habitat or Covered Species, they must nonetheless pay the mitigation fees. The NBHCP covers species and habitat types and quality that are not coextensive with those in the San Joaquin MSCP; therefore, simply importing a mitigation ratio applied in the San Joaquin MSCP to the Natomas Basin is inappropriate. Finally, the mitigation program of the San Joaquin County MSCP is based largely on conservation easements for existing agricultural lands and does not include the types of habitat restoration and enhancements included in the NBHCP.

Similar to the above description of the San Joaquin County MSCP, the Metropolitan Bakersfield HCP differs from the NBHCP in several important ways. The Metropolitan Bakersfield HCP estimates that approximately 10,370 acres of land will be developed in the Bakersfield region during the Plan's 20-year permit term, out of a possible 47,600 acres of undeveloped land designated for urban use in the City of Bakersfield and Kern County General Plans. Contrary to the strict designation of Permit Areas in the NBHCP, the Metropolitan Bakersfield HCP addresses only 10,370 acres of development that could occur anywhere within a 47,600-acre area. In the Metropolitan Bakersfield HCP, mitigation lands could be purchased in target areas in the southern San Joaquin Valley (from east of Bakersfield, west across I-5, and into the Coast Ranges).

Considering that the target areas are not subject to substantial urban development pressure, the USFWS expects that land acquisition will be much easier than in the Natomas Basin (in 1994, the Metropolitan Bakersfield HCP fee was set at \$1,250 per acre, including \$600 per acre for land acquisition). This presents a substantially different basis for a finding of "maximum extent practicable" than the NBHCP, which requires the permittees to acquire most of the Mitigation Lands in a confined area (i.e., the Natomas Basin) within a limited portion of the Sacramento Valley. The Metropolitan Bakersfield HCP's conservation strategy is appropriate given its covered species include the San Joaquin kit fox, but the kit fox does not inhabit the Natomas Basin. In contrast, the biological goals and objectives of the NBHCP (Section I.C) focus on the habitat needs of the giant garter snake (e.g., wetland habitat with nearby uplands) and Swainson's hawk (protected nest trees with nearby foraging habitat).

The Yolo County and South Sacramento County HCPs also were noted as HCPs to which the NBHCP should be compared. Because the conservation strategies for the Yolo County and South Sacramento County HCPs are under development and have not been confirmed, it is not reasonable to make a comparison to these efforts.

3.1.1.4 Biological Effectiveness of the NBHCP Mitigation Ratio

This section summarizes the effectiveness of the NBHCP mitigation ratio in protecting covered species.

The NBHCP analysis, conducted in support of the mitigation ratio, considered the following:

- Type, quality, and extent of habitat impacted in the Basin;
- Type of species using the habitat in the Basin;
- Range of avoidance, minimization, and mitigation measures available to avoid or lessen impacts;
- Potential for enhancement of habitat areas (specifically reserves); and
- Economic feasibility of mitigation options available to minimize and mitigate, to the maximum extent practicable, impacts related to incidental take associated with the authorized development.

Each of these factors is discussed below.

Type, Quality, and Extent of Habitat in the Basin. The Natomas Basin is already a significantly altered area. Historic land reclamation activities and agricultural activities over the past century have substantially modified the system of grasslands and wet areas that formerly characterized the Basin (See also NBHCP Figure 5 of the NBHCP: 1919 Land Cover). Thus, very little high-quality native habitat remains in the Basin. A biology team from May & Associates and CH2M HILL conducted extensive field, GIS, and literature searches to identify native habitat and other existing habitat in the Basin. Native habitat is shown in Figure 8 of the NBHCP and represents approximately 5 percent or less of the Basin. The remaining habitat is largely disturbed through either existing urban uses (roadways, airports, and urban development) or agricultural uses.

Given the relatively uniform and disturbed condition of the habitat in the Basin, the HCP preparers decided to consider all undeveloped lands of relatively equal habitat value; therefore, all lands, regardless of habitat value in the Permit Areas, are required to participate in the mitigation fee program. Additionally, the NBHCP includes a list of species-specific avoidance, minimization, and mitigation requirements that must be undertaken if any of the Covered Species are present on a development site. This two-tiered mitigation approach allows for mitigation of both larger landscape impacts of general habitat loss, as well as species and site-specific avoidance and mitigation measures.

Using the GIS mapping with field-truthing by a team of wildlife biologists, the types of habitat in the Basin were mapped and the precise amount of acreage that would be impacted by habitat or land-use type was assessed and mapped. The impacts by habitat type, species, and acreage are included in the Biological Resources Technical Memorandum included as Appendix H to the NBHCP. This information identified the type and extent of impacts and forms the basis for development of the mitigation program.

A worst-case assessment of impacts was undertaken in developing the land use impact tables included for each species in Chapter VII of the NBHCP. Any lands (regardless of value or known presence of species) that could provide some support to the Covered Species was included in the impact assessment. Again, this was done because there is so little remaining native or high-value habitat in the Natomas Basin.

Species Using the Basin and their Needs. Twenty-two Covered Species were fully analyzed relative to their use of the Basin and their habitat needs. A number of the covered bird species are not permanent residents but rather are seasonal visitors to the Natomas Basin.

Additionally, several species are rarely occurring species. In the analysis of species, three general types of associated habitat and species became evident: wetland area species, upland habitat species, and vernal pool complex-related species.

Wetland Species and their Presence in and Use of the Basin. Several wetland species initially used the native marsh lands of the Basin. As the land was modified through reclamation, the construction of levees, and agricultural activities, many of these species adapted to use of the seasonally inundated rice fields and canals. Thus, despite substantial changes to the habitat in the Basin, several species have adapted to the new landscape. The giant garter snake, for example, may prefer marshlands; however, absent this type of higher quality habitat, the giant garter snake has adapted to a modified landscape of rice fields and irrigation and drainage canals. Therefore, the NBHCP mitigation program includes enhanced rice and marsh habitat to support the giant garter snake and related wetland species. At the 0.5:1 mitigation ratio, 25 percent of the reserves will be managed marshlands. Thus, the amount of marshlands in the Basin would be increased from the current 96 acres to over 2,100 acres. In addition to the substantial increase in marsh habitat to support the snake and related marsh species, the NBHCP also includes a substantial portion of rice reserves (4,375 acres) specifically managed to support the species.

Several species use marsh and wet areas, as well as vernal pool areas. These species may also require upland areas that are associated with wet areas. The associated wetland species covered by the NBHCP include:

- Aleutian Canada goose
- tricolored blackbird
- white-faced ibis
- northwestern pond turtle
- California tiger salamander
- western spadefoot toad
- delta tule pea
- Sanford's arrowhead

The Aleutian Canada goose is a winter visitor to the Natomas Basin and forages and rests in the area, but it is not known to breed or nest in the Basin. The Aleutian Canada goose has been observed using rice fields and open agricultural areas in Sutter County for winter foraging. Although, there are no known occurrences of the Aleutian Canada goose in the Natomas Basin, the NBHCP includes policies to support resting and foraging for this species in the Mitigation Lands. Thus, preservation of the rice landscape included in the mitigation plan will also support winter foraging and resting areas for the Aleutian Canada goose.

The white-faced ibis uses rice fields, ditches, and other wet areas for foraging, and it prefers extensive marsh areas for nesting. Because there is so little native marsh in the Natomas Basin, there are no known nesting sites of the white faced ibis in the Plan Area, although the species might use the Basin for resting and foraging in the winter. Under the 0.5:1 mitigation ratio with 25 percent of the Mitigation Lands in managed marsh, a substantial increase in marsh will be created (from 96 acres to 2,187 acres) thereby providing substantial habitat benefit to this species.

Tricolored blackbird uses marshes, rice fields, and meadows for foraging and nesting. Again, because of the limited amount of native marsh remaining in the Plan Area, breeding populations of this species have declined over the past several decades. TNBC has, however, had success in stabilizing and enhancing nesting and foraging habitat for this species. One of the few known nesting colonies in the Basin is located on the Betts-Kismat-Silva reserve. This species has already benefited from the mitigation ratio and plan. As more reserves, particularly managed marsh reserves, are created, this species is expected to have additional benefits for nesting and foraging.

The northwestern pond turtle, California tiger salamander, and western spadefoot toad are all species that use wetland areas with associated uplands as habitat. The pond turtle prefers marshlands and other slow-moving waters, but also uses upland areas for basking, egg-laying, and overwintering. Similarly, the western spadefoot toad requires shallow, seasonal wetlands for breeding. Finally, the California tiger salamander is an aquatic breeder and therefore requires ponds, marsh, or other shallow or slow-moving waters for breeding. The juvenile and adult salamanders use upland grass areas for habitat once metamorphosis has occurred. Thus, all three of these species require marsh or wetland areas with associated uplands. There are no known occurrences of the western spadefoot toad or California tiger salamander in the Natomas Basin, although pond turtles have been observed in the Natomas Main Drain. These species will benefit by the substantial increase in managed marsh habitat under the 0.5:1 mitigation ratio. As previously noted, under the 0.5:1 mitigation ratio, 25 percent of Mitigation Lands will be managed marsh, thereby increasing the amount of marsh habitat from 96 areas to 2,187 acres. Vernal pool avoidance policies included in the NBHCP will further protect habitat for these species.

Two plant species, the delta tule pea and Sanford's arrowhead, are associated with wetland and marsh areas. Neither species has known occurrences in the Natomas Basin, largely because of the lack of marsh and wetlands remaining in the area. These species are, however, known to occur in other locations in Sacramento and Sutter Counties. Thus, under the 0.5:1 mitigation ratio, a substantial increase in marsh reserves will be realized, which may assist in the restoration of these species to the Natomas Basin.

Upland Species and their Presence in and Use of the Basin. Nearly all covered bird and animal species (except certain vernal pool species) need some upland areas for basking, hibernacula, cover, or foraging. Thus, the Applicants and the Wildlife Agencies assessed the needs and uses of upland areas by species.

The Swainson's hawk primarily uses the Natomas Basin for nesting and foraging during the nesting season and over winters in South America. Thus, the NBHCP first considered areas with nest trees or areas that could support nest trees, and assigned high value to suitable foraging areas near active nest trees (See Figure 3-5, page 3-45, of the Draft EIS/EIR). Currently, the greatest concentration of nest trees is along the Sacramento River. In this area, larger mature trees remain undisturbed by agricultural practices. For this reason, the NBHCP placed a high value on avoidance of development along the Sacramento River and within the Permit Areas. As such, the NBHCP identifies a Swainson's Hawk Zone extending 1 mile inland from the Sacramento River. Secondly, the NBHCP gives priority for upland reserve acquisition to areas within the Swainson's Hawk Zone. In this manner, the foundational strategy of the NBHCP is to avoid development in and preserve areas with known concentrations of nesting activity.

Secondly, the NBHCP seeks to create new, high-quality habitat for the Swainson's hawk and other upland species. While 25 percent of the Mitigation Lands will be exclusively dedicated to upland areas, upland portions of marsh area reserves will also be managed for a multi-species approach. Finally, rice reserves, which may be only seasonally used by some species, can be managed year round to support multiple species. Thus, the NBHCP calls for 10 percent of the rice reserves to be left fallow to support foraging by upland species during the critical nesting and breeding summer months. Thus, the 0.5:1 mitigation ratio in combination with the acquisition and management criteria of the NBHCP results in significant foraging and nesting reserve lands for the Swainson's hawk and other upland species. Table 3-1 briefly summarizes the total uplands that will be available as a result of biologically based reserve management strategies.

TABLE 3-1
Uplands Available in Mitigation Lands

Reserve Habitat Type	Acreage	Percent Upland Area	Upland Acreage
25% upland areas	2187.5	100	2,187.5
25% managed marsh, of which 20-30% is upland edges	2187.5	25	546.9
Metro Air Park Nest and Foraging Mitigation	200	100	200
Fallow rice reserves	437.5	100	437.5
Total upland foraging acreage			3,371.9

The above table does not include the additional 1,015 acres of lands preserved from urban development in the Swainson's Hawk Zone. The table also does not include approximately 1,000 acres of the upland edges and levees that are included in the rice reserves that may also be used by the Swainson's hawk and other upland species for foraging.

By planting trees in all upland areas, the NBHCP seeks to create new nesting sites in the Mitigation Lands in proximity to foraging habitat to benefit a number of bird species. In the upland reserves, the NBHCP also calls for tree planting and vegetation specifically designed to support the Covered Species, including planting of tree species preferred by the Swainson's hawk and other raptors for nesting. The TNBC has already established an aggressive tree planting program, including 368 trees planted on reserves to date. The plantings include a variety of species: valley oak, sycamore, and other larger trees preferred by the Swainson's hawk for nesting; and smaller trees and shrubs preferred by species such as the tricolored blackbird for nesting. The NBHCP also requires the advance planting of 60 additional trees of specific species in upland areas preferred by the Swainson's hawk. TNBC's vegetation plan results in benefits to multiple species that require coverage to ensure protection.

A number of bird species also benefit from upland areas for foraging and from vegetation along the upland edges of marshlands. These include burrowing owl, loggerhead shrike, and bank swallow. Open upland areas that remain relatively undisturbed by agricultural cultivation will provide a sustained habitat for the burrowing owl. Similarly, the bank swallow and shrike will benefit from the same upland foraging areas, including those

associated with marsh reserves. Species like the bank swallow will particularly benefit from the creation of enhanced marsh habitat with upland areas (20 percent to 30 percent of the marsh component), which is a type of habitat nearly non-existent in the Natomas Basin.

Vernal Pool Species. Vernal pool species are the most difficult to develop for mitigation because none of the vernal pool Covered Species are known to be present in the Natomas Basin. There are, however, limited vernal pools on the eastern edge of the Natomas Basin that may support these species. The approach to mitigation for these species is based on species presence. If species are present (through USFWS survey protocols) then minimization and mitigation would occur: (1) avoidance and onsite preservation; or (2) payment into a USFWS Mitigation Bank. The USFWS sponsors Vernal Pool Mitigation Banks in areas where vernal pools can most successfully maintain or support the establishment of vernal pool species. As such, mitigation for vernal pool species in areas like Natomas Basin that may have more marginal habitat often occurs through payment into an approved USFWS Mitigation Bank. Although restoration and creation of vernal pools on Mitigation Lands are not precluded by the NBHCP, such an approach would be limited to a reserve where proper soils, under soils, and hydrological conditions exist. In the Natomas Basin, there is currently very limited vernal pool habitat along the eastern edge of the Basin. Covered Species that may use vernal pool habitat include the mid-valley fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp, Boggs Lake hedge-hyssop, Colusa Grass, legenera, Sacramento Orcutt grass, and slender Orcutt grass. Although there are no known occurrences of these species in the Natomas Basin, these species are granted coverage and mitigation protections in the event the existing vernal pool complexes on the eastern side of the Basin or in other areas are found to support these species.

3.1.1.5 Economic Feasibility of the Mitigation for Impacts Related to the Planned Development

Under the ESA, the findings regarding effects on biological resources primarily determine the applicable mitigation requirements for the Plan. After the biological requirements are determined, the USFWS evaluates whether the mitigation requirements are the maximum that can be practically implemented by the applicant. As Chapter VII of the NBHCP and the Biological Resources Technical Memorandum indicates, the NBHCP conservation strategy, including a 0.5:1 mitigation ratio, proposed restoration, enhancement, adaptive management, and monitoring programs on reserve sites, as well as the take avoidance and minimization measures specified in the NBHCP, represent the maximum mitigation requirements that can be practically implemented. A mitigation ratio greater than 0.5:1 would compromise the feasibility of Planned Development in the Basin and is not necessary to minimize and mitigate the impacts of take. This study concluded that habitat reserve levels at a 1:1, for example, would substantially compromise the feasibility of Planned Development. As noted above, the purpose of the NBHCP and related incidental take permits is to develop a conservation plan that minimizes and mitigates impacts to the maximum extent possible, while still allowing compatible development to proceed feasibly.

As part of this analysis, the Applicants evaluated whether the level of mitigation and mitigation fees are appropriate for the project. Data provided by Economic and Planning Systems (EPS) was used to define the costs and benefits of implementing additional mitigation, the amount of mitigation provided by other applicants in similar situations, and the abilities of the permittees under the NBHCP. Based on this analysis, the Applicants determined that additional mitigation costs associated with a 1:1 mitigation ratio would

exceed the benefit to be derived from the NBHCP's Operating Conservation Program because, in most instances, the combined effect of the 0.5:1 mitigation ratio in conjunction with the NBHCP's proposed restoration, enhancement, adaptive management, and monitoring programs on the Mitigation Lands, as well as the take avoidance and minimization measures, results in substantially greater mitigation than a mitigation program based on Mitigation Lands at a 1:1 mitigation ratio alone without the avoidance, minimization, and mitigation measures provided by the NBHCP. The Draft EIR/EIS evaluated an alternative that included a mitigation ratio of 1:1 coupled with all other avoidance, minimization, and mitigation measures. In many cases, the environmental effects of a 1:1 ratio are similar to the 0.5:1 ratio. For example, page 4-98 of the Draft EIR/EIS notes that the proposed 1:1 ratio using the 25/50/25 habitat ratios would provide 4,375 acres of managed marsh, which would be substantially in excess of the impact related to the loss of 76 acres of marsh as a result of Planned Development. Thus, in this instance, 1:1 mitigation would provide a substantial excess of one type of habitat far beyond that which would be required to mitigate the impacts of development. In addition, the costs of additional mitigation, including the costs of enhancement, were determined to not be feasible or practicable in the Economic Analysis. Similarly, page 4-99 concludes that impacts to the Swainson's hawk would be generally the same under Alternative 1 (1:1) ratio as those of the NBHCP. The environmental impacts to the Swainson's hawk are less than significant under both the Proposed Action (0.5:1 mitigation ratio) and Alternative 1 (1:1) mitigation ratio.

In identifying the maximum mitigation practicable, the effectiveness of mitigation measures and the feasibility and costs must be considered. Thus, the Economic Analysis compared a variety of scenarios, including a 1:1 mitigation scenario, to determine if the costs of such a mitigation program would be feasible and practicable. The Economic Analysis demonstrated that, as a result of the high cost burden (resulting in part from other development impact fees and infrastructure costs), the costs associated with a 1:1 mitigation ratio in combination with all of other conservation measures included in the NBHCP's Operating Conservation Program could not be feasibly funded by the developers of Planned Development. It is important to note that a substantial proportion of the cost burden associated with the NBHCP scenario for the 1:1 mitigation ratio specifically relates to higher levels of enhancement, restoration, and adaptive management. Many HCPs with a 1:1 mitigation ratio do not include restoration and enhancement; in the Natomas Basin however, restoration of lands in the Basin is biologically preferred to acquisition of Mitigation Lands outside of the Basin (which might be more affordable) or conservation easements on lands in the Basin without restoration and management to support the Covered Species.

Additionally, the Applicants are constrained in their ability to impose mitigation obligations that exceed constitutional and statutory nexus requirements, as further explained on page VII-68 of the NBHCP. Those legal constraints require that mitigation imposed on development bear a rational relationship to the impacts caused by such development on existing habitat, and that it be roughly proportional to the impacts caused by this development. Consequently, the City and Sutter County are limited in their ability to require more mitigation than necessary to mitigate the impacts of incidental take. This additional legal requirement further impacts the feasibility of requiring mitigation at a 1:1 or higher mitigation ratio. For the reasons set forth above as supported by the Economic Analysis and the Biological Resources Technical Memorandum, the Applicants believe that

the NBHCP's Operating Conservation Program represents the mitigation that is the maximum extent practicable that may be imposed.

3.1.2 Master Response 2: Connectivity

Various comments have been received addressing the issue of biological connectivity relative to the giant garter snake. These comments generally focused on the importance of drainage canals and ditches to allow giant garter snake to move between Mitigation Lands and other portions of the Natomas Basin. The primary opportunity for in-Basin connectivity for giant garter snake is the system of canals and ditches that are operated and maintained by RD 1000 and Natomas Mutual (collectively referred to as the Water Agencies). Comments have been received questioning the impact on Basin connectivity of the Water Agencies' decision not to pursue permits under the NBHCP as currently drafted. To respond to these comments, this master response is organized in the following way:

- Overview of NBHCP Requirements for Biological Connectivity;
- Relationship of Planned Development to Mitigation Lands;
- Drainage Canals to be Retained;
- Irrigation Channels to be Retained;
- Effects of Water Agency Participation in the NBHCP;
- Regulatory Restrictions on Canal Closures and Modifications.

In addition to clarifying the NBHCP's approach to ensuring connectivity between Mitigation Lands, text changes have been made to clarify this commitment. The text of these changes is in the Final NBHCP.

3.1.2.1 Overview of NBHCP Requirements for Biological Connectivity

The Draft NBHCP acknowledges the importance of biological connectivity by including specific biological goals and objectives in the NBHCP relevant to providing connectivity. Page I-15 of the Draft NBHCP includes the following as Objective 3:

Ensure connectivity between TNBC reserves to minimize fragmentation and isolation. Annual evaluations of the success of the NBHCP will focus on TNBC's success in achieving the Plan's goals and objectives, and monitoring data will be collected to facilitate this evaluation.

The NBHCP's emphasis on connectivity between reserves is further defined in Section IV.C.1.d of the NBHCP, which provides various mechanisms for maintaining connectivity measures.

The NBHCP also establishes monitoring requirements to ensure that the goals and objectives of the NBHCP will be achieved. Section VI.E.2.b of the NBHCP establishes that the following analysis will be conducted:

- (4) Annual assessment and identification of canals and ditches which provide GGS habitat connectivity within and between reserves.

3.1.2.2 Relationship of Planned Development to Mitigation Lands

Closing of canals within the Permit Areas of the City and Sutter County is anticipated to occur as Planned Development occurs, and is a Covered Activity for the City and Sutter County. Such closures would reduce connectivity within the planned development areas of the City and Sutter County. The canals and ditches located outside the City and County Permit Areas, however, are those that are the most critical to connectivity between reserves because the Mitigation Lands are located almost exclusively outside the City and County Permit Areas.

The NBHCP includes acquisition guidelines that specify that Mitigation Lands should be separated from urban development. While these guidelines are flexible and TNBC may, with the concurrence of the wildlife agencies, acquire land adjacent to existing and future development, the majority of Mitigation Lands will be acquired in areas well separated from development authorized under the NBHCP. As a result, the impacts of Planned Development on the canals that provide connectivity to Mitigation Lands will be substantially reduced from what would occur in the absence of the provision to separate Mitigation Lands from the areas of Planned Development. The system of both drainage and irrigation channels within the Basin is extensive, and there is no evidence (either in documented plans of the water agencies or in development proposals submitted to the land use agencies) to suggest that canals in the immediate vicinity of Mitigation Lands would be closed either as a result of Planned Development or for any other reason.

Closing of the canals that are located outside the City and County Permit Areas, which are the canals most critical to ensuring connectivity between the Mitigation Lands, is not a circumstance that is likely to occur and there is no indication at this time that the Water Agencies intend to close these canals. Although there is no indication that the Water Agencies will seek to close canals serving the Mitigation Lands, such actions have the potential to occur in the future. If a canal were to be proposed for closure, the Water Agency (or project sponsor for canal closure) would likely be required to comply with the ESA and mitigate impacts under either Section 10 of the ESA. This could be an amendment to the NBHCP if the Water Agencies choose at some future date to seek coverage under the NBHCP, or it could require preparation of a separate HCP or Section 7 Consultation, if federal funds or federal approval is required (as in the case of Section 404 Clean Water Act permits). Under such circumstances, it is expected that the Wildlife Agencies would require appropriate mitigation to maintain the biological viability of the NBHCP (and possibly require MOAs or Memoranda of Understanding [MOUs] with the water agencies) to: (1) preserve key canals; (2) transfer land; or (3) place easements on canals to TNBC. In the event that closure of canals critical to ensuring connectivity is proposed and no such mitigation is required, then TNBC would attempt to acquire the key canal in fee title or secure a conservation easement on the canal, subject to Section IV.C.1.d of the NBHCP.

3.1.2.3 Drainage Canals to be Retained

Existing drainage canals in the Natomas Basin will continue to provide connectivity for the giant garter snake. Figure 17 of the NBHCP identifies drainage channels within the Natomas Basin that are considered likely to be retained for flood control purposes for both existing agricultural uses and for Planned Development. Regardless of the type of uses within the Basin, whether agricultural or urban, major flood control channels are required to convey water through the Basin. As shown on Figure 17 of the NBHCP, major drainage channels

provide connectivity between Sutter County and Sacramento County, with direct connection to major Mitigation Lands within Sutter County's northwest portion of the Basin. In addition to the major flood control channels, Figure 17 also depicts the extensive system of lesser channels that are operated and maintained by the Water Agencies. An additional opportunity for Basin connectivity is the 1-mile Swainson's Hawk Zone that has been excluded from Sutter County's Permit Area. This corridor of land contains numerous drainage and irrigation canals that provide connectivity between Sacramento County and the Mitigation Lands located in Sutter County.

3.1.2.4 Irrigation Channels to be Retained

Similar to the drainage channels, the irrigation channels operated by Natomas Mutual are required to support the existing agricultural uses within the Basin and will be required to serve Mitigation Lands as the reserves continue to develop. Unlike RD 1000, Natomas Mutual is a privately held water company comprised of landowner stockholders. As TNBC acquires Mitigation Lands within the Basin, it will become a major stockholder in Natomas Mutual. TNBC is anticipated to be in a position to encourage practices that enhance canal maintenance and operations that support the biological goals and objectives of the NBHCP, and that favor biological values within the Basin.

Regardless of its direct role in Natomas Mutual, TNBC will require the delivery of water granted under the water rights associated with Mitigation Lands that it acquires. As such, the canal system will continue to provide direct linkages to TNBC as long as surface water is used on Mitigation Lands. In addition to serving Mitigation Lands, Natomas Mutual will continue to provide agricultural irrigation water, thus providing further connectivity between the Mitigation Lands and the surrounding agricultural lands within the Basin.

Another important consideration in evaluating the effects of the Water Agencies' ditch/canal maintenance on connectivity and the continued viability of giant garter snakes within the Natomas Basin is the historic nature of the Water Agencies' operators. Specifically, despite years of canal management in the Natomas Basin by the water agencies, the giant garter snake has adapted to the management practices of the water agencies. There is no evidence that the continuation of regular and historic canal management practices within the Basin will adversely affect the success of the NBHCP Operating Conservation Plan.

3.1.2.5 Effects of Water Agency Participation in the NBHCP

This section responds to comments raised about the following issues:

- The effect on the Applicants' ability to implement the NBHCP's Operation Conservation program if the Water Agencies do not participate; and
- Whether the Water Agencies will choose to participate in the NBHCP in the future.

It is important to note that, as currently proposed, the NBHCP includes provisions for the Water Agencies to receive permits for take resulting from normal canal maintenance practices (see Section V.C of the NBHCP), and these provisions have been analyzed in the EIR/EIS (see Section 1.2.1 of the EIR/EIS and Comment Letter I3 for a discussion of the historical involvement of the Water Agencies in this NBHCP, and their decision not to seek ITPs at this time).

Effect on NBHCP of Water Agencies' Nonparticipation

As noted above, the Water Agencies have decided not to participate in the NBHCP at this time. Non-participation of the Water Agencies would result in neither closure of key canals or the inability to implement the NBHCP (see the discussion of Independent Implementation throughout Chapter 4 of the EIR/EIS). The Water Agencies' decision not to participate in the NBHCP would not adversely affect the ability to maintain connectivity between Mitigation Lands (see Section 3.1.2.3 and Section 3.1.2.4 of this Final EIR/EIS). Canal closure by the Water Agencies is not a Covered Activity under the NBHCP and, as such, no take coverage is granted by the NBHCP for such an activity. As a result, any canal closures by the Water Agencies that affect giant garter snake or other species would be subject to separate review and mitigation under the ESA and CESA.

The canal maintenance guidelines in the NBHCP generally reflect current maintenance practices used by the Water Agencies and would not result in substantial changes to water agencies' practices, such as reconfiguring canals or guaranteeing that canals remain in service. As such, participation of the Water Agencies in the NBHCP, under the provisions as currently proposed, would not substantially affect the Water Agencies existing operations and maintenance activities and, therefore, the likelihood that connectivity within the Basin will be maintained is not compromised by the Water Agencies' decision not to participate in the NBHCP at this time.

In addition, the EIR/EIS contains an analysis of the effects of independent implementation of the NBHCP (see discussion throughout Chapter 4 of the EIR/EIS) that concludes that the Water Agencies' decision not to participate at this time in the NBHCP would not result in either: (1) a significant effect to giant garter snake from closure of canals and ditches important to maintaining connectivity; or (2) an inability of the remaining Applicants to implement the NBHCP in a way that meets the biological goals and objectives in Section I.C of the NBHCP.

Water Agencies' Possible Future Participation in NBHCP

The NBHCP provides a framework through which the Water Agencies may seek incidental take permits (Section I.K). Although the Water Agencies have chosen not to participate in the NBHCP, as currently drafted, the NBHCP has provided a framework for the Water Agencies to participate in the future. This framework includes the definition of various activities that could be covered, which are primarily activities related to take of Covered Species resulting from canal management. To receive consideration for take coverage, the NBHCP would require the water agencies to follow guidelines for canal maintenance. Additionally, substantial analysis of the effects of the Water Agencies' management activities has been completed through the NBHCP and the associated EIR/EIS (see Chapter VII of the NBHCVP and Chapter 4 of the EIR/EIS). This framework provides the Water Agencies the opportunity to move forward expeditiously if they choose to participate in the future. Also see Responses to Comments I3-1 and I3-2.

3.1.2.6 Regulatory Restrictions on Canal Closures and Modifications

As noted above, the NBHCP would not authorize the Water Agencies to dewater and/or close ditches or canals within the Natomas Basin. As such, the Water Agencies would likely be required to address the impacts of canal closure under a CEQA and/or NEPA analysis, and would likely be required to secure permits from regulatory agencies including, but not

limited to, CDFG and the U.S. Army Corps of Engineers. Any impacts of canal closure on either listed species in general or on the viability of NBHCP Mitigation Lands would be analyzed and mitigated through such consultations.

3.1.2.7 Revisions to the NBHCP

In addition to the analysis conducted in the NBHCP and the EIR/EIS relevant to the Water Agencies' decision not to participate, several revisions have been made to the NBHCP relevant to clarification of the water agencies' role in connectivity of Mitigation Lands. These changes are in the Final NBHCP and are summarized in Section 2.1 of this Final EIR/EIS. For the complete text of the change, the reader is referred to the cited sections of the Final NBHCP.

3.1.3 Master Response 3: Joint Vision

Several commentors have requested further clarification regarding the City of Sacramento/Sacramento County Joint Vision. Commentors assert that the City of Sacramento recently released the proposed "Joint Vision for Natomas," which establishes a process for expanding the City's Sphere of Influence (SOI) to include up to 10,000 acres for future annexation and urban growth north of Elkhorn to the Sacramento County line, and between MAP and the NEMDC. Commentors believe this Joint Vision effort would result in the urban development of up to 10,000 additional acres in the Basin. Commentors suggest that the cumulative impacts of the potential Joint Vision development should be considered in conjunction with the 17,500 acres of Planned Development covered by the NBHCP.

Commentors are referred to Master Response 4 (Cumulative Impacts) for an overview of NEPA, CEQA, ESA, and CESA requirements related to the treatment of probable future projects and planning efforts for purposes of evaluating cumulative impacts.

3.1.3.1 History of Joint Vision

The Joint Vision is a collaborative, regional growth approach for the area north and west of the City's North Natomas Community Plan Area in the Natomas Basin being undertaken by the City and County of Sacramento. Over the last several decades, both the City and Sacramento County have received requests to allow urban development in the Natomas Basin. Some of these requests resulted in the City's and Sacramento County's review and approval of several development plans within the Natomas Basin. In 1986, the City adopted the North Natomas Community Plan, and in 1988, it updated the South Natomas Community Plan. The northern edge of the North Natomas Community Plan, co-terminus with the City's Sphere of Influence, is Elkhorn Boulevard. The western edge of the North and South Natomas Community Plans, co-terminus with the City's SOI, is the City limit line. The City limit line generally follows Interstate 80 in South Natomas and the West Drain in North Natomas. Also, in the early 1990s, the County of Sacramento updated its General Plan and established an Urban Services Boundary, which limits the areas which may obtain utilities and services. The Urban Services Boundary prohibits urban development within a roughly 6,500-acre area in northwestern Sacramento County. The Urban Services Boundary is generally co-terminus with the City limit line and the City's SOI.

The local land use agencies extensively evaluated the potential for development in the Natomas Basin, both before and after the community and general plans were adopted for

the following reasons: (1) a flood in 1987 tested the flood protection in the Basin and raised concerns about the wisdom of allowing development (people and property) in the Basin; (2) several threatened and endangered species inhabit the Basin; and (3) many citizens in Sacramento desired permanent protection of Open Space in the Basin to provide for quality of life for the region's residents. The flood resulted in a revision to the region's Federal Emergency Management Administration's (FEMA's) flood zone designation, including a Special Legislation for the area. Once the flood zone was downgraded, the City and the region worked hard to improve the flood protection in the Basin and elsewhere in the Sacramento area. As part of this effort, the Sacramento Area Flood Control Agency (SAFCA) implemented the Local Area Project, designed to strengthen the levees along the Sacramento River and enhance flood protection in the Natomas Basin. This flood control project required approvals from the U.S. Army Corps of Engineers pursuant to Section 404 of the Clean Water Act. One of the conditions of the Corps 404 Permit for the Local Area Project required that a Habitat Mitigation Plan be approved.

Also, drainage facilities were designed to remove the development area from the internal floodplain-overtopping of the internal drains within the Basin. To fund the implementation of these flood control improvements, the City formed Community Facilities District No. 97-01 and bonds were issued to build the needed improvements. In addition to the public improvements, developers within the Basin were required to provide their own stormwater drainage improvements to convey runoff from their developed area to the drains and out to the river. To enable urban development to proceed, basins and year-round lakes providing flood protection and storm drainage were designed to mimic the lakes and marshes that were located in the Basin prior to reclamation efforts in the 1910s.

To comply with the conditions of the Corps Section 404 permit, SAFCA initially embarked on a consensus-building approach to drafting a Habitat Conservation Plan. Eventually, the land use agency permittees completed the process, and on December 31, 1997, a Habitat Conservation Plan was approved and an Incidental Take Permit was issued to the City of Sacramento, the first of several future permittees.

During the preparation of the 1997 NBHCP, several developers proposed specific development projects outside of the City's SOI and the County's Urban Services Boundary, to facilitate development to the north and west of the City's urban limits. A discussion of these efforts is described below in Master Response 4 (Cumulative Impacts).

Neither the 1997 NBHCP nor the revised NBHCP contemplates incidental take coverage for any of these development proposals outside of the City's SOI and County's Urban Services Boundary. To provide a comprehensive response to the specific development requests identified below, and other future development requests that may arise, the County of Sacramento commenced a comprehensive annexation study. As part of this process, Sacramento County issued a draft General Plan Amendment and Comprehensive Annexation Plan and associated EIR in November 2000. This plan, however, was never adopted. Once again, development outside of the City, Sutter County, and MAP Permit Areas was deferred indefinitely.

Subsequently, the City engaged Sacramento County in a dialogue to develop a joint process representing a joint City and Sacramento County vision for responding to development and annexation requests. This effort was yet another attempt to address the concerns deferred by

the unadopted Comprehensive Annexation Plan. This discussion resulted in the preparation and adoption of a MOU for the Joint Vision by the City Council of the City of Sacramento and Sacramento County Board of Supervisors on December 10, 2002 (Appendix G of this Final EIR/EIS), after the Draft NBHCP and EIR/EIS were released for public review and comment. The MOU identifies certain principles designed to guide regional growth in the Natomas Basin, the goals of the endeavor, and the economic implications of growth. The goals of the Joint Vision are to: (1) enhance quality of life for the region's citizens; (2) preserve permanent Open Space; (3) preserve habitat for endangered and other special status species; (4) protect the airport from urban encroachment; and (5) preserve farmland. The Joint Vision process also is envisioned to provide certain principles intended to guide further discussions regarding the City's and Sacramento County's respective land use roles and understandings regarding future tax sharing arrangements [See Joint Vision MOU Letter to Cay Goude and Larry Eng dated December 5, 2002].

The MOU currently includes a map that identifies a 10,000-acre SOI area where the City's existing SOI could be expanded to enable future development and an Area of Concern (AOC) where permanent Open Space may be established. The Joint Vision identifies the SOI area as the area within which the acreage and location for future growth would be determined based on further planning efforts, biological resource evaluations, and environmental analyses. The City and Sacramento County also desire the permanent protection of Open Space in the Basin. Thus, the AOC identifies that area in which land or easements could be acquired at a minimum 1:1 ratio pending further evaluations. No development is anticipated within the AOC by the Joint Vision MOU (See Appendix G of this Final EIR/EIS).

The MOU effort is modeled after the comprehensive approach to regional planning regarding establishment of the American River Parkway. Here, the City took the lead on a comprehensive planning effort that resulted in approvals by the City of Sacramento, Sacramento County, and the State of California of the American River Parkway Plan. To develop in the parkway or otherwise modify the parkway plan, all three entities must approve the modification. Such strict restrictions on modifying the parkway plan have resulted in a long-term plan that is not changed easily by the decisions made by a single jurisdiction. Similarly, the City and Sacramento County contemplate a future joint planning process for the Natomas Basin that would require both parties to consider future development proposals within the Basin.

3.1.3.2 Impact of Joint Vision on Future Development in the Natomas Basin

Commentors request that the NBHCP and EIR/EIS evaluate the cumulative impacts of up to 27,500 acres of new development consisting of the 17,500 acres of Planned Development and 10,000 acres of development under the Joint Vision. Additionally, commentors suggest that the Joint Vision process would affect the feasibility and implementation of the NBHCP conservation program. Some commentors also believe that development within the Joint Vision area may jeopardize the survival and recovery of the giant garter snake. Commentors also indicate that urban impacts of development permitted within the SOI area, in combination with neighboring Sutter County development, substantially would diminish the biological value of the existing Mitigation Lands within the SOI area. Commentors also question whether the Joint Vision MOU will allow Sacramento County to permit urban development within the AOC.

As described above, the Joint Vision effort is intended to provide a comprehensive process for the City and Sacramento County to consider future proposals for annexation and development. Development of 10,000 acres or any portion of the Joint Vision planning area, however, is not proposed at this time and the outcome of the Joint Vision planning effort remains unknown. Many existing constraints limit the amount of development which may be considered outside of the City's existing SOI. Key constraints include the 100-year floodplain, an extensive system of canals which provides giant garter snake habitat, and the City and Sacramento County's desire to establish a permanent community separator within the SOI area. Due to all of these constraints, this planning effort may result in consideration of substantially less than 10,000 acres of development. Consequently, while landowners may attempt to seek approval of urban development outside of the City's SOI and the County's urban growth boundary, the likelihood any development will proceed depends upon extensive planning and analyses which will determine the outcome of the Joint Vision effort. Consequently, it is speculative to predict the extent to which the City's SOI will be expanded or the amount of urban development beyond the 17,500 acres of Planned Development.

Any urban development which may be contemplated through future Joint Vision planning efforts is not covered by the revised NBHCP. As stated in the revised NBHCP, development beyond 17,500 acres would constitute a significant departure from the Operating Conservation Program established in the NBHCP. As such, no development outside of the 17,500 acres could or will be approved absent full compliance with the federal and state Endangered Species Acts and with NEPA and CEQA. No development outside of the 17,500 acres could or will occur without additional biological resource evaluations in the Basin. In fact, before any development can occur associated with the Joint Vision, many other tasks and approvals must be completed, including among other things: (1) land use planning; (2) environmental review, including a thorough biological resources evaluation; (3) compliance with all local, state, and federal laws; and (4) approval of the plan by both the City and Sacramento County, as well as Local Agency Formation Commission (LAFCO).

Moreover, the City and Sacramento County recently committed in the Joint Vision MOU to not allow development to occur in the Basin in excess of the Planned Development without (i) conducting a full biological evaluation of the impacts of any new development proposals, and (ii) fully evaluating the effects of additional development on the effectiveness of the revised NBHCP. In the revised NBHCP and the Implementation Agreement, the City also commits that it will not increase the allowable development area beyond the Permit Area established in the revised NBHCP without conducting thorough and complete biological evaluations. If after completion of the necessary biological resource evaluations, technical analyses and environmental review, the City and County decide to approve future development beyond the 17,500 acres of Planned Development, then the City and County, in conjunction with USFWS and CDFG will evaluate the effectiveness of the NBHCP as set forth in Chapter VI of the revised NBHCP, and either will:

- prepare a separate HCP to support issuance of an incidental take permit for the additional development beyond the 17,500 acres or outside of the City's Permit Area;
- prepare an amendment or revision to the NBHCP to amend the adopted conservation strategy to cover the additional development beyond the 17,500 acres or outside of the City's Permit Area; or

- prepare an amendment or revision to the NBHCP to authorize the transfer of development from within the City or Sutter County's Permit Area to an area within the Joint Vision boundaries.

In response to concerns that development within the Joint Vision area may jeopardize the survival and recovery of giant garter snake, that is precisely the reason that further biological evaluations must be performed in the Joint Vision's SOI study area before the SOI would be expanded and development allowed to proceed. However, at this time, details regarding the land use type, location, extent, and amount of development are unknown, and thus, the agencies are unable to determine the extent of any impacts associated with future development. Moreover, the City and Sacramento County would evaluate through the Joint Vision planning process, cumulative effects associated with development permitted within a future SOI area, in combination with the 17,500 acres of Planned Development covered by the NBHCP and any neighboring Sutter County development.

3.1.3.3 Impact of Joint Vision on Mitigation Lands

Commentors express concern that it is unlikely that TNBC will be able to acquire Mitigation Lands within the Joint Vision area. Commentors suggest that the Joint Vision MOU will have an immediate impact on implementation of the NBHCP because of the impacts to valuable giant garter snake habitat within this area.

The NBHCP contemplates incidental take coverage for 17,500 acres of the Natomas Basin. Over 26,000 acres currently remain available within the Natomas Basin for their potential acquisition as Mitigation Lands. If the NBHCP is approved and incidental take permits are issued, TNBC will consider these areas as potential Mitigation Lands, to the extent landowners are willing to sell their property. The effectiveness of the NBHCP conservation strategy depends on the availability of such lands, as well as the availability of lands outside the Basin and the NBHCP contemplates that these lands will continue to be available for Mitigation Land acquisition. As such, in the event that the Joint Vision planning process were to result in a change in the City's SOI, this change would be viewed as a change in the NBHCP Operating Conservation Program and would require an amendment to the NBHCP or a separate HCP for the development of such areas.

Although the Joint Vision planning process identifies an Area of Concern in which the City and Sutter County intend to preserve open space, the actual amount of Open Space area has not been defined and the City and Sutter County have not yet established an Open Space program. The Joint Vision effort intends to conduct extensive planning and environmental analyses to determine the extent of open space preservation in the event the City's SOI is expanded. At this time, however, all of the lands outside of the 17,500-acre Permit Areas, are anticipated to remain in their existing agricultural, open space and limited development conditions as described further in Chapters II and III of the NBHCP and Chapter 3 of the Draft EIR/EIS. Since there are no new development efforts contemplated by the City at this time outside of its adopted SOI, the adopted land use plans do not authorize such development, and the location of any adjustments to the SOI have not been determined through the Joint Vision effort, it is speculative at best to assume that 10,000 acres of future development will occur in the Basin outside of the 17,500-acre Permit Areas. Consequently, lands outside of the Permit Areas remain available for the foreseeable future as potential sites for Mitigation Land acquisition.

The Joint Vision planning process also would involve comprehensive biological resource evaluations to determine the nature and extent of effects on existing habitat, including habitat afforded by TNBC Mitigation Lands. This evaluation would be necessary to determine the extent of avoidance, mitigation, and minimization measures required to offset any impacts caused by development authorized by the Joint Vision.

3.1.3.5 Treatment of the Joint Vision in the NBHCP and EIS/EIR Cumulative Analysis

Commentors are referred to Master Response 4 (Cumulative Impacts) for a discussion of the NBHCP's and EIR/EIS's treatment of the cumulative effects associated with the Joint Vision planning effort under ESA, CESA, NEPA, and CEQA.

3.1.4 Master Response 4: Cumulative Impacts

Several comment letters raised questions about the approach to, and analysis of cumulative impacts in the NBHCP and EIR/EIS. To be responsive to these issues, this master response is organized in the following way:

- Scope of cumulative impacts analysis for the NBHCP and EIR/EIS, including the treatment of 17,500 acres of Planned Development in the NBHCP and Draft EIR/EIS cumulative effects analysis (Section 3.1.4.1);
- Regulatory framework for cumulative impacts assessment under ESA, CESA, NEPA, and CEQA (Section 3.1.4.2);
- Development in excess of 17,500 acres, including future annexation, other development, Joint Vision, and flood control projects (Section 3.1.4.3);
- Effect on the NBHCP of future development outside the Permit Areas (Section 3.1.4.4);
- Inconsistencies between the NBHCP and EIR/EIS discussion of cumulative effects (Section 3.1.4.5).

3.1.4.1 Cumulative Impacts Assessment under the ESA and CESA

This section presents the regulatory framework for evaluating cumulative impacts under the ESA, CESA, NEPA, and CEQA.

Federal Endangered Species Act

Two provisions under the ESA, Sections 7 and 10, govern the analysis of the effects of the Proposed Action. Under Section 10 of the ESA, the USFWS is required to determine the impact that likely will result from the incidental take of covered species [50 CFR § 17.32(b)((1)(C))]. An incidental take permit authorizes incidental take, not the activities that result in take. As such, the effects analysis under Section 10 focuses on the extent and amount of take associated with granting incidental take coverage for activities contemplated by the local land use agency. As part of its review of the NBHCP, the USFWS also is required to conduct an internal Section 7 consultation to determine whether the Proposed Action (i.e., issuance of the incidental take permits) will result in jeopardy to federally listed threatened or endangered species, or the destruction or adverse modification of critical habitat (50 CFR § 402.10). As part of this consultation process the federal action agency (in this case, USFWS) is required to consider cumulative effects. Under Section 7, cumulative effects:

include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the Proposed Action are not considered in this section because they require separate consultation pursuant to Section 7 of the Act.

Future federal actions requiring separate consultation (i.e., unrelated to the Proposed Action) are not considered in the cumulative effects analysis. 50 CFR § 402.02 ; HCP Handbook, p. 4-31. Future non-federal actions are, however, included in a cumulative analysis. Past and present impacts of non-federal actions are part of the environmental baseline. 50 CFR § 402.02.

Projects included in a cumulative effects analysis must be “reasonably certain to occur.” Projects considered reasonably certain to occur may include, among other factors, approval of the action by state, tribal, or local agencies or governments (e.g., permits); indications by state, tribal, or local agencies or governments that granting authority for the action is imminent; and the project sponsor’s assurances that the action will proceed. The more discretion remaining to be exercised by a state, tribal, or local agency or government before a proposed non-federal action can proceed, the less there is reasonable certainty the project will be authorized. That is, the ESA does not require an evaluation of speculative non-federal actions that may never be implemented. By the same token, “reasonably certain to occur” does not require a guarantee that the action will, in fact, occur. USFWS is required to consider economic, administrative, and legal hurdles that must be overcome in order for a non-federal action to proceed.

In the context of a Section 7 consultation within a larger Section 10(a) planning area, the Section 7 Consultation Handbook advises that non-federal proposals for development in the HCP are considered cumulative effects for that planning area until the Section 7 consultation for the Section 10(a) permit is completed. At that time, the effects of the non-federal proposals become part of the environmental baseline for future consultations (HCP Handbook, p. 4-32 —33).

California Endangered Species Act

There are no statutory or regulatory provisions expressly requiring an analysis of cumulative effects under CESA related to the issuance of a Section 2081 Permit. Nonetheless, CDFG must consider whether issuance of an incidental take permit would jeopardize the continued existence of a species. As part of this analysis, CDFG evaluates the adverse impacts of the take in light of known population trends, known threats to the species, and reasonably foreseeable impacts on the species from other related projects and activities (14 Cal. Code Regs. § 783.2(a)(7)).

Consistent with the Section 10 regulations, the NBHCP conservation strategy is based on an analysis of the combined effects of past, present, and future development in the Natomas Basin. To determine the extent and amount of take that may be authorized under the NBHCP’s Operating Conservation Program, the Draft NBHCP considers the amount of development that has occurred in the Natomas Basin, and the amount of development that could occur based on adopted land use plans. Consistent with the Section 7 regulations, future federal actions requiring separate consultation (i.e., unrelated to the Proposed Action) are not considered in the cumulative effects analysis. Future federal actions that may be required for Planned Development are, however, identified in the NBHCP. Vernal pool

species-related conservation measures are included in the NBHCP in order to provide avoidance, mitigation, and minimization measures for species-related effects. These actions specifically include Covered Activities that may require a Section 404 Permit for the fill of waters of the U.S. subject to Clean Water Act jurisdiction. Future federal actions related to water supply and flood control/drainage improvements as described in Section 4.1.2.3 of the Draft EIR/EIS are not included in the cumulative analysis for Section 7 purposes because they involve federal actions.

Future non-federal actions are included in the NBHCP cumulative analysis as explained further below. Past and present impacts of non-federal actions are part of the environmental baseline or included in the effects of the NBHCP and incidental take permits as described more specifically below.

Scope of NBHCP Analysis.

To determine the extent and amount of take that may be authorized under the NBHCP's Operating Conservation Program, the NBHCP considers: (1) the amount of development that has occurred in the Natomas Basin; and (2) the maximum amount of development that could occur based on adopted land use plans. Consistent with the Section 7 regulations, future federal actions requiring separate consultation (i.e., unrelated to the Proposed Action) were not considered in the cumulative effects analysis. Future non-federal actions are included in the NBHCP cumulative analysis.

With respect to *past* development, the Draft NBHCP describes the development that occurred prior to 1997, when the USFWS approved the original NBHCP and explains that of the 53,537 acre Natomas Basin, approximately 7,267 acres were already developed in 1997 (Draft NBHCP, pages III-3 — 11, IV-1). Thus, approximately 46,270 acres of undeveloped and agricultural land remained in the Basin as of 1997. This past development is included in the baseline conditions for purposes of evaluating the effects of the NBHCP on Covered Species under ESA and CESA.

To account for the effects of *present* development, the Draft NBHCP describes the development that occurred between December 1997 and December 2001 (the period of time between adoption of the original NBHCP and preparation of the revised NBHCP). In this regard, the Draft NBHCP explains that between December 1997 and December 2001, urbanization occurred on approximately 3,787 acres in the Basin and provides a detailed description of this additional development (Draft NBHCP, pages III-6 – 11). The 3,787 acres of present development are included within the 17,500 acres of Planned Development described below. As of December 2002, 4,413 acres have been developed (see Response to Comment O1-2).

As required by the ESA consultation regulations, the NBHCP includes future projects in its cumulative analysis that are “reasonably certain to occur.” To account for the effects of *future* development covered by the NBHCP, the NBHCP relies on the adopted general plans of the City, Sutter County, and Sacramento County as a reasonable basis for predicting the extent, amount, and location of future development. The NBHCP also considers the level of development contemplated in adopted community plans and specific plans in order to further refine the determination of future development covered by the plan. Based on these adopted plans, the NBHCP contemplates the development of up to 17,500 acres of Planned Development in the Basin. The NBHCP explains that adopted general plans for each land use

permittee indicate that the total acreage potentially to be developed in the Basin is 13,533 to 20,033 acres, depending primarily on the extent of urbanization in Sutter County. Although the adopted general plans include a range of development, the NBHCP and associated incidental take permits limit the amount of development to 17,500 acres for which incidental take coverage may be obtained under the NBHCP because development in Sutter County's Industrial-Commercial Reserve over and above 7,467 acres is not foreseeable during the permit term. As explained in the NBHCP, the 17,500 acres of Planned Development consist of 8,050 acres of development in the City, 7,467 acres of development in Sutter County, and 1,983 acres for Metro Air Park in Sacramento County (Draft NBHCP, pages III-1 —III-3, III-12 —III-15). The development covered by the NBHCP, based on the adopted general and specific plans noted above, is evaluated as part of the Proposed Action for which incidental take is being sought. The cumulative effects of the Proposed Action therefore consist of the effects of the Planned Development considered in conjunction with the past and present impacts of existing development and the impacts of any non-federal future development in the Basin that is "reasonably certain to occur" beyond the 17,500 acres covered by the NBHCP.

The NBHCP covers future development of the Natomas Basin that is reasonably foreseeable, and this reasonable foreseeable development is also the development for which the NBHCP seeks coverage for incidental take. This development consists of the 17,500 acres of future Planned Development described above, in conjunction with any roadways and other infrastructure located within the City and Sutter County's Permit Areas necessary to serve this Planned Development (see Draft NBHCP Section I.N., Covered Activities). Thus, the NBHCP covers the cumulative effects of development within the City, Sutter County, and Sacramento County portion of the Basin to the extent such development is authorized within the Plan Area. Future development in the Natomas Basin beyond the amount of development covered by the NBHCP, however, is not considered "reasonably certain to occur" or "reasonably foreseeable."

The approach used to satisfy ESA requirements also satisfies the requirements under CESA. That is, the NBHCP considered in its evaluation of effects of incidental take due to the Covered Activities, and the reasonably foreseeable impacts on the species from other related projects and activities. In this regard, the NBHCP evaluated both the individual effects of development projects proceeding within each Permit Area, as well as the combined effects of all 17,500 acres of planned development occurring within the Plan Area. In other words, the NBHCP Technical Memoranda and biological resources evaluations considered the combined effects of each development project within each specific Permit Area (e.g., City of Sacramento) and among all of the Permit Areas (i.e., City, Sutter County, water agencies) and evaluated these impacts in conjunction with past and present development. Chapter VII of the NBHCP contains a summary of effects of take of each Covered Species associated with development within each Permit Area individually and generally. The Draft EIS/EIR acknowledged that other development within an identified area under consideration for annexation within the Basin may contribute to cumulative impacts to resources within the Natomas Basin. However, because there are no specific development proposals under consideration, the impacts of such development were determined to be speculative, as discussed further below.

3.1.4.2 Cumulative Effects Under NEPA and CEQA

National Environmental Policy Act

Under NEPA, an EIS is required to conduct an analysis of cumulative impacts (40 CFR 1508.8) Under NEPA, the USFWS evaluates direct, indirect, and cumulative effects (Draft Fish and Wildlife Service Manual Part 550, § 2.4). According to the CEQ Guidelines (40 CFR 1508.7), a cumulative impact is the:

... impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

California Environmental Quality Act

Under CEQA an EIR is required to conduct an analysis of cumulative impacts (14 Cal. Code Regs. 15130(a). Pursuant to the CEQA Guidelines, the CEQA Lead Agencies are required to evaluate the cumulative impacts of a project when the project's incremental effect is cumulatively considerable. Under CEQA, an EIR is required to discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable (14 Cal. Code Regs. 15130(a)). Under CEQA, as with NEPA, cumulative impacts are defined as:

"Cumulative impacts" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

(a) The individual effects may be changes resulting from a single project or a number of separate projects.

(b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (14 Cal. Code Regs. 15355).

A cumulative impact consists of an impact which is created as a result of the combination of the proposed project together with other projects causing related impacts. 14 Cal. Code Regs. 15355. CEQA Guidelines Section 15130 states that an adequate discussion of significant cumulative impacts must include either: (1) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or (2) a summary of projections contained in an adopted General Plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact.

Section 15130 further states that it is appropriate for probable future projects to be limited to those:

...requiring an agency approval for an application which has been received at the time the notice of preparation is released, unless abandoned by the

applicant; projects included in an adopted capital improvements program, general plan, regional transportation plan, or other similar plan; projects included in a summary of projections of projects (or development areas designated) in a general plan or a similar plan; projects anticipated as later phase of a previously approved project (e.g. a subdivision); or those public agency projects for which money has been budgeted.

Scope of EIR/EIS Analysis

The EIR/EIS contains an analysis of the combined effects of past, present, and future development in the Natomas Basin, in accordance with NEPA and CEQA. Past and present impacts of non-federal actions are part of the environmental baseline or included in the analysis of the Proposed Action evaluated in the EIR/EIS. The EIR/EIS considers all of the applicable existing long-range planning documents, as discussed in Section 4.1.2.3 of the EIR/EIS. Also explained in the EIR/EIS, the total amount of Planned Development covered by the NBHCP is limited to the 17,500 acres evaluated in the EIR/EIS (see Section 2.2.1 and Section 4.1.2.3) because this is the amount of development authorized in the Natomas Basin under adopted City, Sutter County, and Sacramento County land use plans. In other words, 17,500 acres represents the level of development considered reasonably foreseeable in the Basin.

For the Covered Activity of Planned Development, this equates to the 17,500 acres of approved development in the Natomas Basin (see Appendix C of the Draft EIR/EIS for a detailed summary of the effects of the Planned Development in the Natomas Basin). Any potential for development outside of those 17,500 acres is not reasonable or foreseeable in consideration of NEPA and CEQA cumulative impact assessment criteria (see Section 3.1.4.3 below). Other specific development approval requests for lands outside of the City, Sutter County, and MAP Permit Areas are not reasonably foreseeable under NEPA and CEQA. Therefore, the analysis in the NBHCP and Draft EIR/EIS includes the effects of “planned, proposed, and projected activities throughout the Basin” as requested by the commentors and consistent with the requirements of NEPA, CEQA, ESA, and CESA.

3.1.4.3 Development in Excess of 17,500 Acres of Planned Development

Several comments asserted that the EIR/EIS considered only other closely related regional conservation activities and indicated that the cumulative effects of Planned Development are not assessed in the EIR/EIS. In response to the request to analyze impacts of the 17,500 acres of Planned Development, it is important to note that the 17,500 acres of Planned Development represents the extent of approved development in the Basin (i.e., the NBHCP is seeking coverage for the extent of approved urban development in the Natomas Basin). Therefore, the Draft EIR/EIS contains an analysis of the combined effects of past, present, and future development in the Natomas Basin in accordance with NEPA and CEQA.

Section 4.1.2 of the EIR/EIS (and Section 3.1.4.1 and 3.1.4.2 of this Final EIR/EIS) presents the requirements for conducting cumulative impact assessments, the specific actions that are analyzed in the cumulative impact analysis for the Proposed Action, and other potential long-term projects that have the potential to occur in the Natomas Basin at some future date. As discussed in Section 4.1.2 of the EIR/EIS, the incremental impacts of past, present, and reasonably foreseeable actions were evaluated. A review of actions that met these criteria resulted in consideration of actions relevant to management of state and federal lands, the Cal FED Bay Delta Program, and the San Joaquin County Multi-species Conservation Plan.

Several commentors have requested that other proposed development in the Basin be considered in the evaluation of cumulative impacts.

As discussed above (Section 3.1.3.2 of this Final EIR/EIS), past and present impacts of non-federal actions are part of the environmental baseline or included in the analysis of the Proposed Action evaluated in the Draft EIR/EIS. In other words, the 17,500 acres of Planned Development represents the level of development considered reasonably foreseeable in the Basin, and other non-federal actions were considered (and are discussed) in the EIR/EIS, but they do not meet the NEPA and CEQA criteria established in this EIR/EIS for inclusion as a cumulative action. With respect to the treatment of reasonably foreseeable development under NEPA and CEQA, the EIR/EIS discusses and presents the prior analyses of the effects of Covered Activities based on the prior environmental review conducted for the adoption of the land use plans and associated development entitlements (Section 4.1.3 of the EIR/EIS). As the EIR/EIS explains, based on adopted land use plans, Planned Development of up to 17,500 acres may occur within the Natomas Basin over the term of the 50-year incidental take permits (ITPs).

As noted on page 4-10 of the Draft EIR/EIS, direct, indirect, and cumulative impacts associated with the construction of Planned Development have been evaluated in both previously certified and in draft environmental documents prepared by the City of Sacramento and Sutter County. As discussed on page 4-11 of the Draft EIR/EIS, the impacts (including direct, indirect, and cumulative impacts) of the Planned Development are summarized both in the individual resource sections and in Appendix C of the EIR/EIS. In addition to the detailed listing of the impacts of Planned Development in Appendix C, cumulative impacts are specifically addressed in several places in the EIR/EIS. As noted in Section 4.1.2.1 (page 4-4 of the EIR/EIS), "Potential cumulative effects are assessed within the separate resource sections in this chapter, and are presented at the end of the individual resource sections." This analysis is conducted throughout the applicable resource sections of Chapter 4. To clarify the rationale used in the EIR/EIS for identifying past, present, and reasonably foreseeable future to include in the cumulative impact analysis, actions to text revisions to the first and second paragraphs in Section 4.1.2.2 of the Draft EIR/EIS are provided in Chapter 2 of this Final EIR/EIS.

Presented below are discussions of the future annexation, other urban development, and flood control projects.

Potential for Future Annexation

Several commentors are concerned that the NBHCP arbitrarily limits the City's ability to annex lands outside of the City's Permit Area. Other comments suggest that future development proposals not included within the 17,500 acres of Planned Development should be able to proceed in reliance on the Draft NBHCP and the City's ITPs. Commentors also request that the NBHCP and EIR/EIS include an analysis of reasonably foreseeable development in the Natomas Basin. Some commentors suggested that the following projects be included in the cumulative analysis as reasonably foreseeable development: specific annexation and development requests; Joint Vision; County Airport intended terminal expansion and third runway on up to 800 acres; construction of new or expanded highway, drainage, flood control, and other infrastructure in the Basin; proposed levee improvements; and new development in Sacramento County.

As discussed above in Sections 3.1.4.1 and 3.1.4.2, the NBHCP covers future development of the Natomas Basin that is reasonably foreseeable. Future development in the Natomas Basin beyond the amount of development covered by the NBHCP, however, is not considered “reasonably certain to occur” or “reasonably foreseeable.” With the exception of one area located within the unincorporated Sacramento County portion of the Basin (i.e., the panhandle), development beyond the levels of authorized development within each Permit Area are considered speculative because the adopted City and Sutter County land use plans (i.e., North Natomas and South Natomas Community Plans, Sutter County General Plan and South Sutter County Specific Plan) do not authorize any additional development at this time. The area known as the panhandle always has been included in the North Natomas Community Plan. Because approved land use plans contemplated annexation of this area, the NBHCP includes the panhandle annexation area as part of the City’s authorized development. However, if the City were to obtain ITPs for its authorized development, the permits would not apply to the panhandle area unless and until the area is annexed to the City (Draft NBHCP, p. III-15). This is the only annexation area that may be covered by the NBHCP and associated ITPs.

By contrast, although the NBHCP acknowledges that several landowners of property within the Basin have attempted to seek annexation of their properties to the City to enable future urban development, those annexation requests are not covered by the NBHCP because such annexation and future urban development requests have not been approved either by the LAFCO or the City (Draft NBHCP, page II-15). Moreover, urban development in areas located outside of the Permit Areas is ill-defined and considered speculative because: (1) these areas are not planned for urban development under adopted land use plans; (2) these areas are located outside of the City of Sacramento’s SOI, the City of Sacramento city limits, and the Sacramento County’s Urban Services Boundary; (3) no urban services are available to serve development; or (4) other significant legal and planning hurdles must be overcome before development could proceed.

Other Urban Development

Several comments asserted that urban development (other than the Planned Development of 17,500 acres) should be included in the EIR/EIS as actions subject to cumulative analysis under NEPA and CEQA. Specific comments request that this analysis include the Joint Vision planning effort that may be implemented at some future date.

In reference to NEPA compliance with cumulative impacts analysis, the comments state that the EIR/EIS analysis is insufficient to comply with 40 CFR Section 1508.7 because potential unknown future development should be considered reasonably foreseeable. The EIR/EIS approach to identifying actions to consider as reasonably foreseeable is consistent with the NEPA CEQ regulations and USEPA guidance (USEPA, Office of Federal Activities, *Consideration of Cumulative Impacts in EPA Review of NEPA Documents*, EPA 315-R-99-002/May 1999). (Also see Section 3.1.4.2, above). Specifically, one of the criteria for identification of applicable actions for a cumulative assessment is the likelihood that a project will occur. The guidance further states that the best indicator of whether a project is reasonably foreseeable is whether final approval has been obtained or if the project is imminent, and that the long-range planning of government agencies should also be considered. The EIR/EIS considers all of the applicable existing long-range planning documents, as discussed above. As explained in the EIR/EIS, the total amount of Planned Development is limited to the 17,500 acres evaluated in the EIR/EIS

(see Section 2.2.1 and Section 4.1.2.3) because this is the amount of development that would be allowed in the Natomas Basin under adopted City, Sutter County, and Sacramento County land use plans. In other words, 17,500 acres represents the level of development considered reasonably foreseeable in the Basin.

Other specific development approval requests for lands outside of the City, Sutter County, and MAP Permit Areas were not considered reasonably foreseeable under NEPA for the reasons described above in the discussion regarding the treatment of cumulative effects under the ESA. Section 4.1.2.3 of the EIR/EIS explains that several other long-term projects, including the potential for development within the unincorporated portion of Sacramento County, have the potential to occur in the Basin at some unidentified future date. If these projects occur, they would not be included in the 17,500 acres of Planned Development unless the NBHCP is amended or a separate HCP were prepared for that additional development. Both the EIR/EIS and NBHCP acknowledge that any additional urban development in the Basin beyond 17,500 acres may contribute to significant cumulative environmental effects to the resources within the Natomas Basin. However, at the time the Draft EIR/EIS was prepared, insufficient data were available to conduct an assessment of these cumulative effects, in part, because the nature, location, amount, and extent of such development was unknown, and remains unknown as described further above in this Master Response. Additionally, no specific land uses or proposals were identified (with the exception of the Greenbriar Farms and West Lakeside areas) that would enable an analysis of potential cumulative impacts.

The following text summarizes the status of future specific development proposals or planning efforts that commentors suggest should be considered cumulative projects and the way in which the NBHCP and EIR/EIS address these planning efforts or proposals.

West Lakeside and Greenbriar Farms. The Draft NBHCP describes the West Lakeside and Greenbriar Farms proposals on page III-15. The developer has attempted to obtain necessary development approvals for several years to support development of the West Lakeside and Greenbriar Farms properties. In its latest attempts, the developer filed a general plan amendment, rezoning and annexation applications with the City on February 22, 2002 for the West Lakeside project. Although the developer has expressed interest in annexing the Greenbriar Farms property, it has not filed any applications with the City. Because the West Lakeside and Greenbriar Farms properties are *not* included in any adopted land use plans nor are they located within the City's SOI and city limits or within the County's Urban Services Boundary, development of these areas is not allowed by the City or Sacramento County. While the developer has expressed interest in annexation to the City, the status of these requests and the timing and ability to obtain necessary local approvals remain uncertain because it is unknown whether the Joint Vision effort would result in changes to the SOI so that such development could proceed. Consequently, development of these properties was considered speculative at the time the Draft NBHCP was prepared, and it remains speculative.

Moreover, the City is limited in its ability to approve development of the West Lakeside and Greenbriar Farms for the foreseeable future. In accordance with the Settlement Agreement in the prior *NWF v. Babbitt* litigation, the City adopted a resolution (Resolution No. 2001-518, Appendix H of the Final EIR/EIS), imposing restrictions on its approval of General Plan amendments, rezonings/ rezonings, and development agreements for the Camino Norte,

West Lakeside, and Greenbriar Farms areas, or any lands otherwise located outside of the existing boundaries of the North and South Natomas Community Plans until completion of the Joint Vision. Consequently, these areas are not covered by the NBHCP and the ITPs, and the City is prohibited under its Resolution from taking any actions to approve the West Lakeside and Greenbriar Farms annexations and development proposals pending the results of the Joint Vision effort. Development of the West Lakeside and Greenbriar Farms property is not considered reasonably certain to occur because extensive studies, planning, and further analyses are required as part of the Joint Vision process before any development approvals may be considered for any of these areas, and because the outcome of these efforts is unknown. These projects also are not considered related projects under ESA or CESA because they are not considered authorized activities that may be covered by the NBHCP and ITPs. For these reasons, they are not considered reasonably foreseeable.

Northern Territories/Brookfield Land Company. In the 1990s, Northern Territories, Inc. proposed a large development project in Sacramento County north of Elkhorn Boulevard outside the County's Urban Services Boundary. The County denied the development project and rejected the proposal to change the Urban Services Boundary for this project. As of the date of preparation of the Final NBHCP and EIR/EIS, the developer has not filed any further annexation requests with the County or the City of Sacramento. As stated above, the City is restricted in its consideration of this project, should an application be filed, because this area is outside of the City's SOI and County's Urban Services Boundary. In other words, unless the City's SOI or County's urban service boundary is expanded to include this property, the City or County must deny an urban development application. Consequently, this area is not covered by the NBHCP and the ITPs, and the City is prohibited under Resolution No. 2001-518 from taking any actions to approve a development proposal pending the results of the Joint Vision effort described above. Development of this property is not considered reasonably certain to occur because extensive studies, planning, and further analyses are required before any development approvals may be considered for this area, and because the outcome of these efforts is unknown. This project also is not considered a related project under the ESA because it is not covered by the NBHCP and ITPs. Consequently, it is not considered reasonably foreseeable.

North River Coalition. The North River proposal consists of 822 acres for development south of West El Camino Avenue, including a 350-acre auto mall, outside of the Urban Services Boundary and the City's Permit Area. Sacramento County has held on abeyance its response to this proposal pending the outcome of the Joint Vision process. Development of the North River Coalition's proposal is not considered reasonably certain to occur because extensive studies, planning, and further analyses are required as part of the Joint Vision process before the potential for development of this property can be determined.

Alleghany Properties. This area consists of 86 acres on the west side of El Centro Road outside of the City's Permit Area. No application has been filed for urban development on this property. This property must await the results of the Joint Vision planning effort before the City could consider development of this site.

Lauppe Family/AKT. This area consists of approximately 298 acres of land bounded by I-5, Powerline Road, West Drainage canal, and RD 1000 Lone Tree canal outside of the City's Permit Area. This property must await the results of the Joint Vision planning effort before

the City could consider development of this site. No application has been filed for urban development on this property.

Draft General Plan Amendment and Comprehensive Annexation Plan. Because of pressures from landowners to seek approval for urban development in Sacramento County, the City and Sacramento County undertook an evaluation of approximately 6,519 acres in North Natomas areas that might properly be included within the City's LAFCO-approved SOI and ultimately annexed to the City. This evaluation included areas within the area covered by the 1997 NBHCP, but outside of the area covered by the ITPs. This effort was driven, in part, by the fact that the Sacramento Regional County Sanitation District was undertaking an engineering master plan for sewer service for its entire service area. Landowners requested amendments to Sacramento County's General Plan to ensure that their properties were included within the County's urban services boundary or the County's General Plan policies were amended so that the Sanitation District could provide sewer service to their properties (Draft EIR for the General Plan Amendment for Long-term Planning in North Natomas or Other Appropriate Areas (SCH #: 1999022071), November 2000, page 4.2). As part of this SOI evaluation, Sacramento County issued a draft General Plan Amendment and Comprehensive Annexation Plan and related EIR in November 2000. This plan, however, was never adopted. A new planning effort, the Joint Vision described in Master Response 3 represents another attempt to guide a comprehensive solution for land use planning in the Basin. Consequently, these properties remain outside of the Sacramento Regional County Sanitation District service area, and as such, these properties both lack entitlements for urban development and sewer services.

Joint Vision. The Joint Vision process is addressed in Master Response 3, which states that the City and Sacramento County have recently undertaken a new planning effort, the Joint Vision for the Natomas Basin, to guide any future determinations regarding the City's SOI. This effort commenced after the Draft NBHCP documents were circulated for public review and comment. The Joint Vision is a planning and analysis effort which, when implemented by the City and Sacramento County, will be applied in determining whether or not to approve future annexation requests and development proposals – it is not, however, indicative of specific development efforts that could occur.

Before any development (i.e., rezoning or zoning to urban uses) associated with the Natomas Joint Vision may proceed, many other tasks and approvals must be completed, including among other activities: (1) land use planning; (2) environmental review, including a thorough biological resources evaluation; (3) compliance with all local, state, and federal laws; (4) approval by LAFCO of an amendment to the City's SOI; and (5) approval of the plan by at least both the City and Sacramento County. Any urban development that may be contemplated through future Joint Vision planning efforts is not addressed in the NBHCP. As stated in the Draft NBHCP, development beyond 17,500 acres would constitute a significant departure from the Operating Conservation Program established in the NBHCP. As such, no development outside of the 17,500 acres could or will be approved absent full compliance with the federal and state Endangered Species Acts and with NEPA and CEQA. No development outside of the 17,500 acres could or will occur without additional biological resource evaluations in the Basin.

Private University Proposal. In May, 2002, landowners of property comprising approximately 1,164 acres reportedly offered to donate land for a private university in exchange for Sutter

County assurances that the remaining land would be redesignated for urban development. At this time, no proposals have been submitted by the landowners or a private university for the development of a campus within the Natomas Basin. Consequently, the extent, location, and amount of development is unknown. Due to the ill-defined nature of this donation, the NBHCP does not include such efforts as Covered Activities or related projects.

Sacramento County. Commentors also have requested that the NBHCP and EIR/EIS consider the effects of Sacramento County's approval of rural residential and small-scale development projects that may occur in the Basin under existing zoning. Additionally, some commentors assert that Sacramento County, and specifically, the Airport, have conducted illegal activities resulting in take of threatened and endangered species. These topics are discussed below.

Sacramento County Airport. The Sacramento County Division of Airports initiated an update to the Master Plan for Sacramento International Airport in May 2002, but completion of the Master Plan Update has been delayed. It is anticipated that the Master Plan Update would address the expansion of the airport, including runways, terminals, and accessory facilities. The current schedule for the Master Plan Update is for a draft plan to be released late in 2003.

Rural Development. There are certain by-right uses allowed in the Natomas Basin outside of the Permit Areas. For example, a residence can be constructed in Sacramento County's AG-40 zone (agricultural zone with a minimum 40-acre lot size), as well as accessory structures as long as the parcel contains a minimum of five gross acres per accessory structure (Sacramento County Zoning Code, Section 205-07). These are permitted uses that could be built on parcels outside of the City and Sutter County Permit Areas without discretionary action. In addition, Section 120-14 of the Sacramento County Zoning Code addresses non-conforming parcels (e.g., existing parcels less than 40 acres in an AG-40 zone). In accordance with Section 120-14 of the Zoning Code, residences can be built on non-conforming parcels without discretionary approval as long as various requirements are met (i.e., the property was legally created prior to the effective date of the zoning ordinance). Non-discretionary construction of individual homes and small businesses has occurred from time to time throughout the Natomas Basin, and is expected to continue to occur throughout the duration of the permit term. Because future construction of this type is expected to occur in a manner similar to current practices, rural development is not considered a "project" that is subject to analysis of cumulative effects.

With respect to future development within the unincorporated portions of Sacramento County in the Natomas Basin, under the Joint Vision, the City of Sacramento would be responsible for activities related to planning new growth in the Basin; the County would be the appropriate agent for preserving open space, agricultural, and rural land uses (Joint Vision MOU, § I.B.). In this role, the County also would preserve its interest in the planning and development of the airport (not addressed in the NBHCP) and Metro Air Park (addressed in the NBHCP).

Regarding concerns raised about Sacramento County's role in allowing development activities to proceed without incidental take authorizations, the USFWS and CDFG sent a joint letter to Sacramento County notifying County officials that authorizing development to proceed without obtaining incidental take authorizations violates Section 9 of the ESA and

CESA (Appendix I). The USFWS and CDFG have informed the County of their intent to initiate enforcement actions in the event such activities continue.

Flood Control and Water Supply Projects

In response to the recommendation that local flood control projects be discussed in the context of cumulative actions, the EIR/EIS currently includes such a discussion (see Section 4.1.2.3) of these and other potential long-term future actions. As noted in the introduction to Section 4.1.2.2, the criteria for assessing whether an action would be evaluated in detail for cumulative impacts in association with the Proposed Action in this EIR/EIS are that an urban development permit or other permit application has been submitted to a federal or non-federal agency that has approval authority or those that are related to the types of impacts attributable to those that would result from implementing the Proposed Action evaluated in the EIR/EIS. As noted in EIR/EIS, a project by the U.S. Army Corps of Engineers and SAFCA would improve the east levee of the Sacramento River at some future, but unknown, time. This project is related to the comprehensive American River Watershed Investigation, which was an important precursor to the NBHCP. In addition, other projects are under consideration along the east levee, including the construction of a consolidated pumping plant for Natomas Mutual. Although the flood control and water-related projects discussed in Section 4.1.2.3 have the potential to occur in the future, data are insufficient to conduct a meaningful analysis of their cumulative impacts for several reasons as explained on page 4-7 of the Draft EIR/EIS, including: (1) the sponsor of the future activities had not yet initiated the planning and feasibility studies at the time the Draft EIR/EIS was prepared so the nature of the flood control and water-related activities was undefined; (2) where preliminary engineering plans were available, these plans were being revised, so the nature of the proposal remained unknown; or (3) the environmental review process for the projects had not been initiated at the time the Draft EIR/EIS was released.

3.1.4.4 Effect on the NBHCP of Future Development Outside the Permit Areas

As stated in the NBHCP, the conservation program and ITPs provide incidental take coverage for the cumulative development of 17,500 acres of Planned Development within the City, Sutter County, and the MAP Permit Areas in the Natomas Basin. As the NBHCP and EIR/EIS explain and for the reasons described above, development activities on unincorporated lands outside of the City, Sutter County, and MAP portion of Sacramento County are not addressed in the NBHCP and do not receive incidental take authorizations based upon this NBHCP (see Draft NBHCP pages I-5 to I-7, I-11; Draft EIR/EIS page 2-2).

The Operations Conservation Program proposed in the NBHCP is effective in compensating for the effects of incidental take associated with 17,500 acres of Planned Development when considered with the 7,267 acres of development which occurred in the Basin prior to 1997. Thus, 24,767 acres of urban development is contemplated in the Natomas Basin by the NBHCP. The NBHCP does not address more than 17,500 acres of Planned Development because it is unknown whether the NBHCP would remain effective in mitigating for effects beyond 17,500 acres. The analyses conducted in support of the NBHCP demonstrate that the Operating Conservation Program is effective with up to 24,767 acres of past, present, and future urban development in the Basin. Thus, the effectiveness of the NBHCP is dependent on limiting Planned Development to 17,500 acres of development. If future development proposals were to proceed, or developers were to seek annexation to the City of Sacramento for purposes of developing their projects, such proposals would be considered outside of

the scope of the NBHCP. These proposals would represent a significant departure from the Operating Conservation Program, which would trigger a new analysis and a separate HCP or amendment to the NBHCP. At this time, however, such development is unable to proceed because the City and Sacramento County have not completed the Joint Vision planning effort. Moreover, Resolution 2001-518 precludes certain development proposals from proceeding until a comprehensive annexation program is developed for the Basin.

Because a comprehensive annexation program for the remainder of the Natomas Basin has not been established, over 26,000 acres currently remain available within the Natomas Basin for their potential acquisition as Mitigation Lands. If the NBHCP is approved and ITPs are issued, TNBC may consider these areas as potential Mitigation Lands, to the extent landowners are willing to sell their property. The effectiveness of the NBHCP depends on the availability of such lands, as well as the potential availability of lands in Area B outside the Basin. The NBHCP contemplates that these lands will continue to be available for Mitigation Land acquisition. As such, in the event that the Joint Vision planning process were to result in a change in the City's SOI or other development were to proceed outside of the City's and Sutter County's Permit Areas, these changes would be viewed as a change in the NBHCP's Operating Conservation Program. These changes would, therefore, require an amendment to the NBHCP or a separate HCP for the development of such areas, as described in the NBHCP and further discussed in Master Response 3 (Joint Vision).

3.1.4.5 Inconsistencies in Cumulative Impact Analysis in the NBHCP and EIR/EIS

Comments also suggested that the NBHCP and the EIR/EIS are inconsistent in the discussion of cumulative impacts. The basis for the assertion of inconsistency is that the criteria used in the EIR/EIS for identifying the actions that could result in cumulative impacts are too narrow and do not allow for evaluation of future development. One comment stated that the EIR/EIS narrowly interprets the California Code of Regulations, Section 15355 (CEQA) and 40 CFR Section 1508.7 (NEPA) guidance on cumulative impacts. We believe the criteria used to identify actions to assess for cumulative impacts, the existing criteria used in the EIR/EIS are based on CEQA and NEPA guidance. They are adequate as defined and discussed further above. The Draft EIR/EIS includes verbatim the CEQA and NEPA guidance to which the comment refers (see Section 4.1.2.1, pages 4-3 and 4-4).

Commentors also suggest that future development projects are identified in the Draft NBHCP but not included in the EIS/EIR. Specifically, the NBHCP states that applications were filed for the West Lakeside and Greenbriar Farms projects as potential future annexation proposals, which are not covered by the NBHCP. The EIS/EIR indicates, however, that no applications have been filed for future specific development proposals. To clarify this situation, text revisions have been made to page 4-8 of the Draft EIR/EIS. The text of the changes is in Chapter 2 of this Final EIR/EIS.

3.1.5 Master Response 5: Swainson's Hawk Foraging Habitat

Commentors have raised concerns about the NBHCP's measures for mitigating the impacts to Swainson's hawk foraging habitat in the Natomas Basin from the Covered Activity of Planned Development. This master response is provided to clarify the effectiveness of the NBHCP, under ESA and CESA, in mitigating for the effects of take of Swainson's hawks

that could result from changes in foraging habitat because of Planned Development within the Natomas Basin.

The assessment of effects on Swainson's hawk foraging habitat from Planned Development evaluates the loss of potential Swainson's hawk foraging habitat within 1 mile of nesting trees located in the Basin and addresses the loss of potential foraging habitat generally within the Basin. The 1-mile radius is based on the fact that the availability and quality of habitat near nests has the potential to influence reproductive success (see the Addendum to the Biological Resources Technical Memo, Appendix K of the Final NBHCP, p. 11). More high and moderate quality habitat¹ in the Basin under baseline conditions occurs primarily within 1 mile of the nesting trees (9,431 acres of high and moderate quality habitat) than outside the 1-mile distance (8,070 acres of high and moderate quality habitat). The assessment of impacts to Swainson's hawk foraging habitat from implementing Planned Development also evaluates the potential loss of Swainson's hawk habitat located at distances greater than 1 mile of nesting trees throughout the Basin.

This assessment of effects of Planned Development and the implementation of the NBHCP must be considered in the context of effects on nesting habitat as evaluated in the Addendum to the Biological Resources Technical Memorandum (Appendix K of the Final NBHCP) and the NBHCP. Additionally, the analysis of effects on potential foraging habitat also must be considered in the context of the availability of foraging habitat within the region.

3.1.5.1 Effects on Potential Foraging Habitat Within 1 Mile of Nesting Trees

Effects

As demonstrated in the Addendum to the Biological Resources Technical Memorandum (Appendix K of the Final NBHCP) and the NBHCP, Planned Development within 1 mile of nesting trees would result in the loss of 4,148 acres of foraging habitat, including 311 acres of high quality habitat, 3,498 acres of moderate-quality habitat and 339 acres of low-quality habitat. Of the total potential foraging habitat, approximately 3,679 acres of potential habitat would be affected within the City of Sacramento Permit Area; approximately 305 acres would be affected within the MAP Permit Area; and 164 acres would be affected within Sutter County's Permit Area. Although foraging habitat would be affected, not all of this habitat is considered high quality, nor does it support equivalent levels of foraging opportunities. Very limited high-quality habitat exists in the Basin, as reflected in the very limited high-quality habitat within a mile of the nesting trees. As demonstrated in the NBHCP and the Addendum, most of the higher quality foraging habitat within 1 mile of the nest sites will be retained under the NBHCP.

Mitigation Lands and Avoidance Measures

The NBHCP requires that 8,750 acres of Mitigation Lands be acquired and maintained in a habitat reserve system as mitigation to offset the effects of take associated with Planned Development. In accordance with the NBHCP, all developers of the 17,500 acres of Planned Development will contribute Mitigation Fees to acquire the 8,750 acres of Mitigation Lands that offset the loss of habitat for Covered Species. Regardless of whether Planned

¹ Characterization of habitat quality was based on Estep and Teresa (1992) and is described in the Addendum to the Biological Resources Technical Memorandum (Appendix K of the Final NBHCP).

Development affects Swainson's hawk foraging habitat, each sponsor of Planned Development will be required to pay its Mitigation Fees, which will be applied to the purchase of 8,750 acres of Mitigation Lands.

Of this 8,750 acres, 4,375 acres would be maintained in rice, 2,187.5 acres would be managed marsh, and 2,187.5 acres would be in upland habitat. As explained in the Biological Resources Technical Memorandum (Appendix H of the NBHCP) and the Addendum to the Biological Resources Technical Memorandum (Appendix K of the Final NBHCP), 2,187.5 acres of upland habitat would be primarily managed to provide foraging habitat for Swainson's hawk. Additionally, 20 to 30 percent of the managed marsh reserves would be in upland edges and would provide another 546.9 acres of foraging habitat. Following the rice reserves under the NBHCP will provide another 437.5 acres, and the MAP HCP affords an additional 200 acres of foraging associated with nest tree removal. In combination, these mitigation areas provide 3,372 acres of Mitigation Lands to offset the loss of 4,148 total acres of potential foraging habitat within 1 mile of nesting trees.

The NBHCP also requires extensive avoidance measures. Avoidance measures include avoiding removal of known nest trees, preserving valley oaks, preserving riparian habitat, implementing a tree planting program, and requiring avoidance measures associated with Authorized Development. By preserving nesting trees and associated habitat in which such trees are located, the NBHCP further contributes toward mitigating for the loss of foraging habitat. One notable avoidance measure involves avoidance of a 1,015-acre area, of which about 416 acres currently support non-rice crops within the Sutter County portion of the Swainson's Hawk Zone. Sutter County has eliminated this area from its Permit Area and will initiate a general plan amendment to redesignate lands within this area to agricultural use. This measure benefits Swainson's hawks by providing long-term certainty that the land use designation of 1,015 acres within 1 mile of known nest sites will remain compatible with Swainson's hawk foraging.² This avoidance measure contributes to a combined total of 4,387 acres of avoidance and compensation, which exceeds the projected loss of 4,148 acres of potential habitat within 1 mile of nest trees.

3.1.5.2 Effects on Foraging Habitat Within the Natomas Basin

The Biological Resources Technical Memorandum (Appendix H of the NBHCP) and the Addendum to the Biological Resources Technical Memorandum (Appendix K of the Final NBHCP) indicate that under baseline conditions approximately 22,051 acres of the Basin provide foraging habitat for Swainson's hawk. The majority of this habitat is considered to be of moderate quality (15,666 acres) and low quality (4,550 acres). High-quality habitat comprises only 1,835 acres of the Basin. Planned Development within the Basin would result in the loss of 9,188 acres of foraging habitat, including 733 acres of high-quality habitat, 7,299 acres of moderate-quality habitat and 1,156 acres of low-quality habitat. None of the 371 acres of alfalfa would be affected (Appendix K, p. 15). Of this 9,188 acres, approximately 6,925 acres of potential habitat would be affected within the City of Sacramento Permit Area, approximately 403 acres would be affected within the MAP Permit Area, and 1,860 acres would be affected within Sutter County's Permit Area.

² The 1,015 acres of avoidance within the Sutter County portion of the Swainson's Hawk Zone is comprised of lands with varying forage values. However, the proximity of the land to the Sacramento River enhances the foraging values of this land compared with more remote lands in the Basin. Additionally, avoidance of development in this area provides a substantial buffer between Sacramento River nesting habitat and urban development.

As indicated in the previous text, regardless of whether Planned Development affects Swainson's hawk foraging habitat, each sponsor of Planned Development will be required to pay its Mitigation Fees that will be applied to the purchase of 8,750 acres of Mitigation Lands. Of these 8,750 acres, 2,187.5 acres will be maintained as upland reserves. The additional 546.9 acres of managed marsh in upland edges, 437.5 acres of fallowed rice reserves, and the MAP HCP's 200 acres of foraging associated with nest tree removal, in conjunction with the 2,187.5 acres of upland reserves provide 3,372 acres of Mitigation Lands. In addition, under the NBHCP, another 1,015 acres within the Sutter County portion of the Swainson's Hawk Zone would be located outside Sutter County's Permit Area, and a general plan amendment will be initiated to designate this land for open space and agricultural use resulting in a combined total of 4,387 acres of avoidance and mitigation.

Effects Based on Habitat Quality of Mitigation Lands and Swainson's Hawk Zone

The NBHCP also requires enhancement and restoration activities on Mitigation Lands to maintain higher quality habitat in the Basin. For example, the NBHCP requires that the City of Sacramento plant a total of 60 nest trees on TNBC reserves (See Draft NBHCP, "Extent of Take of Swainson's Hawk as a Result of Covered Activities, Nesting Habitat," page VII-11). While the nesting trees serve as mitigation for the potential loss of four nest trees, providing additional nesting habitat in proximity to foraging habitat will enhance the foraging habitat quality. From an energetics perspective, nesting locations will be provided in proximity to foraging opportunities to minimize the expenditure of energy associated with longer foraging distances. Woodbridge (1991, cited in England et al., 1997) found reproductive success of Swainson's hawk to decline as the distance to foraging habitat increased. By creating nesting opportunities near foraging habitat provided on the Mitigation Lands or near existing foraging habitat that is underused because of the absence of nearby nest sites, reproductive success is expected to be improved.

Although the NBHCP is designed to replace lower-quality habitat with higher-quality habitat, under a worst-case scenario, if TNBC acquires all existing high quality habitat, the 2,187.5 acres of Mitigation Lands would result in only a small increase of about 350 acres in high quality habitat when compared to baseline conditions (Appendix K, p. 16). However, under the best possible future condition for Swainson's hawk, the proposed Mitigation Lands would provide new foraging opportunities resulting in a doubling in the amount of high quality habitat relative to baseline conditions (Appendix K, pages 16-17). That is, the 2,187.5 acres of upland habitat to be provided in the reserves would be high quality habitat created from lands providing no foraging opportunities for Swainson's hawk or low or moderate value as foraging habitat.

Effects Based on Temporal Availability of Habitat

The Mitigation Lands, restoration and enhancement measures, and adaptive management program are fundamental features of the Operating Conservation Program in terms of improving the temporal availability of foraging habitat. Under the NBHCP, the upland reserves will be managed to provide consistently accessible and abundant prey for Swainson's hawks throughout their residency. Such measures would increase the availability of foraging habitat relative to baseline conditions during most (April, May, and July) of the nesting period for Swainson's hawk (Addendum, pages 17-18). During this important foraging period, TNBC reserves, in conjunction with remaining foraging habitat under baseline conditions, would provide between 4,765 and 8,130 acres of foraging habitat

within the Basin depending on the differences in implementation assumptions (Appendix K, p. 18). This range reflects the fact that baseline conditions afford varying foraging opportunities depending on the month of the year and the crop types. Additionally, rice fields are drained for two months of the seven-month period during which Swainson's hawk forage in the Natomas Basin and, when drained, these rice fields provide additional foraging habitat. Within the managed marsh component of the TNBC system of reserves, substantial upland areas and the seasonally dry component of the managed marsh provide foraging habitat for Swainson's hawk.

In addition to the avoidance and mitigation measures, the NBHCP (see NBHCP, p. VII-15) provides extensive minimization measures related to construction impacts associated with Planned Development or TNBC activities designed to further reduce the effects of take. The Operating Conservation Program also includes a comprehensive monitoring and adaptive management program designed to respond to the needs of the Covered Species over the 50-year term of the permits. One of the features of the adaptive management program enables adjustments in reserve composition to address competing needs among upland and wetland dependent species (see NBHCP, Sections VI and IV.C.1.e). Another feature of adaptive management is that Mitigation Lands that have not been restored and are impacted by substantial land use changes may be replaced with replacement reserve sites that would provide improved foraging habitat opportunities (see NBHCP, Section IV.C.1.e). These aspects of the Operating Conservation Program contribute to the preservation and enhancement of foraging habitat within the Basin.

3.1.5.3 Baseline Considerations

The NBHCP addresses up to 17,500 acres of Planned Development in the Natomas Basin. With 17,500 acres of Planned Development, approximately 12,863 acres of baseline foraging habitat would remain outside the Permit Areas and within the Basin. The majority of the 12,863 acres is comprised of moderate quality habitat and would be expected to continue to provide moderate quality habitat (see Appendix K, page 17) during the term of the NBHCP and ITPs. Additionally, the Mitigation Lands established under the NBHCP are anticipated to result in total available foraging habitat ranging from a worst case scenario of 13,847 acres to 16,035 acres depending on the extent to which the Mitigation Lands are established on lands currently providing foraging habitat.

Much of this habitat is expected to be retained in the future because adopted land use plans and policies designate these areas for open space and agriculture. With respect to the City of Sacramento, the City's Sphere of Influence is contiguous with its Permit Area. As such, all remaining lands within the Sacramento County portion of the Basin are unincorporated and located outside the City's Sphere of Influence. The City's adopted land use policies at this time do not contemplate urban development of lands outside its Sphere of Influence.

Approximately 16,881 acres of the Basin are within Sutter County. Of this acreage, 7,467 acres are within the area of Authorized Development for Sutter County. The remainder areas (excluding the 1,015 acres subject to the General Plan Amendment for the Swainson's Hawk Zone) are anticipated to be retained in agricultural lands for the foreseeable future. Of this 8,399-acre remainder area, 1,686 acres are considered Swainson's hawk foraging habitat. Additionally, another 37 acres of levee slopes along the perimeter of the Sutter County portion of the Plan Area also provide foraging habitat. Another 1,909 acres of

foraging habitat is provided in the SAFCA-owned “Triangle Parcel” which is situated within a flood plain and designated as open space reserves.

Approximately 4,064 acres of lands (not including the Swainson’s Hawk Zone or airport buffer lands) within the Sacramento County portion of the Basin are designated in the Sacramento County General Plan and zoned by the County Zoning Ordinance for agricultural uses and currently provide potential foraging opportunities. Additionally, the 1-mile wide Swainson’s Hawk Zone extends through Sacramento County. If Sacramento County agrees to maintain its portion of the Swainson’s Hawk Zone in agriculture and open space uses, an additional 5,808 acres of foraging habitat will be precluded from development, some of which could be acquired as Mitigation Lands. Additionally, another 39.7 acres of levee slopes along the perimeter of the Sacramento County portion of the Plan Area also provide foraging habitat. Development of the Sacramento County portion of the Swainson’s Hawk Zone with urban uses would require that Sacramento County either participate in a revision or amendment to the NBHCP or develop a separate conservation strategy to secure incidental take authorizations.

Within Sacramento County, Sacramento International Airport maintains approximately 4,050 acres of buffer lands surrounding the existing airport. These buffer lands provide foraging habitat for Natomas Basin Swainson’s hawk populations (approximately 889 acres). Development of the airport buffer lands with urban uses would require that Sacramento County and the airport either participate in a revision or amendment to the NBHCP or develop a separate conservation strategy to secure incidental take authorizations.

The Sutter County and Sacramento County lands described above represent a total of 12,940 acres of baseline foraging habitat that are anticipated to remain undeveloped in the Basin. The Mitigation Lands provided under the NBHCP would add to and improve on these foraging lands remaining within the Natomas Basin.

3.1.5.4 Long-Term Availability of Foraging Habitat

It is extremely unlikely that the future and baseline foraging lands will be converted to urban uses without requiring additional mitigation of the effects resulting from those urban uses because of their location, site constraints, and land use designations. Under the NBHCP, the Mitigation Lands will be retained as mitigation in perpetuity.

For urban development occurring within the City (i.e., through annexation of Sacramento County lands) or Sutter County portions of the Basin outside the Permit Areas, the City and Sutter County have agreed that any such land use approvals would trigger an evaluation of effects due to the loss of foraging habitat within the Basin and would require that the City of Sacramento or Sutter County, as may be appropriate, either participate in a revision/ amendment to the NBHCP or develop a separate conservation strategy to secure incidental take authorizations for that additional development. The project applicants for this additional development would be required to mitigate the impacts of their development on foraging habitat.

Under the NBHCP, the 1,015 acres of lands within the Sutter County portion of the Swainson’s Hawk Zone cannot be converted to urban development without triggering further review and approval of a new or amended conservation strategy for such additional

development. Similarly, under the NBHCP conversion of the 1,686 acres of remaining foraging habitat in Sutter County (see Table 3-2) would not occur without triggering further review and a new or amended conservation strategy. During the life of the permits, urban development in the agriculturally zoned portions of Sutter County is unlikely for the reasons further described in Section IV.C.1.e of the NBHCP. Additionally, due to their location and constraints, lands within Sutter County such as the Triangle Parcel and the slopes of levees are expected to continue to provide another 991 acres of available foraging opportunities in the long-term. Urban development on the levee slopes in Sutter County would be precluded pursuant to Reclamation Board regulations.

TABLE 3-2
Baseline Conditions Remaining Under NBHCP

Habitat	Acreage within Basin and TNBC Permit Area							Regional Acreage — Out of Basin
	Sacramento County Swainson's Hawk Zone	Sacramento County Agriculture	Airport Buffer Lands	Sacramento County Levees	Sutter County Agriculture	Sutter County Levees	Area B -- Triangle Parcel	Yolo County ^a
High	175	607	0	0	202			
Moderate	3,266	3,043	525	39.7	1,338	37	954	
Low	2,368	415	364	0	146			
Total	5,808	4,064	889	39.7	1,686	37	954	25,000

^a The eastern edge of the Natomas Basin is about 8 miles distant from the Sacramento River where most of the Swainson's hawk nest sites are located. To the west of the Sacramento River, about 45,000 acres of Yolo County are within 8 miles of the river. Based on crop data for Yolo County for the period 1991 through 2001, about 25,000 acres of this area provides potential foraging habitat for Swainson's hawk nesting along the Sacramento River.

In Sacramento County, more than 10,000 acres are anticipated to provide available foraging opportunities as shown in Tables 3-2 and 3-3. For example, the 889 acres of airport buffer lands are located in a restricted over-flight zone. Therefore, safety restrictions preclude development in this area. Conversion of undeveloped lands to urban development within the remaining Sacramento County portion of the Basin outside the Permit Areas would require either expansion of the City's Sphere of Influence or adjustments to the County's Urban Services Boundary, approval by the Local Agency Formation Commission, general plan amendments, rezoning, and changes in policies regarding the provision of services. These land use approvals would trigger an evaluation of effects due to the loss of foraging habitat within the Basin and would require that Sacramento County or City of Sacramento, as may be appropriate, either participate in a revision or amendment to the NBHCP or develop a separate conservation strategy to secure incidental take authorizations.

TABLE 3-3
Available Foraging Opportunities

Basin and TNBC Permit Area Foraging Locations	Acreage
Remaining Lands within Sutter County ^a	2,677
Remaining Lands within Sacramento County ^b	10,761
Avoidance and Compensation Provided Under NBHCP ^c	4,387

^a Includes Triangle Parcel, levee slopes, and agricultural zoned lands.

^b Includes agricultural zoned lands, airport buffer lands, and Sacramento County portion of Swainson's Hawk Zone.

^c Mitigation Lands would be derived from lands in Sacramento and Sutter counties outside of the Permit Areas and could consist of lands included in the acreages totals of lands remaining in Sacramento and Sutter counties.

For remaining lands within the Sacramento County portion of the Basin, Sacramento County and the City have agreed to the guiding principle that, should further development be considered in the Natomas Basin, it will be necessary to consider a new, separate, or enhanced HCP to address development impacts to Federal and State protected species (Joint Vision MOU Recitals, Appendix G of this Final EIR/EIS, p. 2). Also, both Sacramento County and the City have acknowledged that open space provided in the Basin in the future may be in conjunction with, or distinct from the NBHCP, and may exceed the scope of the mitigation contained in the NBHCP. Both the County and the City have further expressed that any new development beyond that covered by and analyzed in the NBHCP will be required to comply with State and Federal laws and regulations, and provide adequate habitat and buffer areas for affected species (Joint Vision, § A.2.).

Thus, in the event that further development should be considered in the Basin, all three land use jurisdictions governing local land use in the Basin — the City, Sutter County and Sacramento County— have committed either through the NBHCP or by separate agreement, to a new, separate or enhanced conservation strategy for such additional development.

Although the existing baseline foraging habitat is not considered mitigation under the NBHCP, the NBHCP adaptive management program is designed to respond to changes in baseline habitat that could occur if existing undeveloped lands in the Basin were converted to urban uses. As part of the Overall NBHCP Program Review and the Independent Program Reviews (see NBHCP Sections VI.I and VI.J), a general evaluation of Basin land uses will be conducted to determine whether amendments to adopted General Plan land use designations, master plan amendments, specific plan adoption or amendments, or rezonings to allow urban land uses outside the Permit Areas have the potential to adversely affect the NBHCP Operating Conservation Plan. In the event that available foraging opportunities, as identified in Table 3-3, are converted to urban uses without adequate provisions to maintain foraging habitat, thus potentially compromising the effectiveness of the NBHCP Operating Conservation Program, TNBC would consider and implement the actions contained in NBHCP Section IV.C.1.e.

3.1.5.5 Regional Considerations

Foraging habitat opportunities in the Natomas Basin must be considered within the Basin's regional context as hawks do not limit their foraging to the Basin. As the Addendum indicates, under the NBHCP, the Mitigation Lands would not be the only foraging habitat available to Swainson's hawks nesting in the Natomas Basin. Foraging habitat available in Yolo County on the west side of the Sacramento River supports more than 200,000 acres of non-rice agricultural crops with about 40,000 acres of alfalfa (Appendix K, p. 15). About 25,000 acres of non-rice crops are within the same distance of nest sites on the Sacramento River as foraging opportunities provided in the Natomas Basin. The enhanced foraging opportunities provided by the NBHCP Mitigation Lands extend the available foraging opportunities in the region and enable the Natomas Basin to function more effectively in providing foraging habitat for hawks relying on the Yolo Basin and surrounding areas.

3.1.5.6 Findings Regarding Operating Conservation Program

The NBHCP Operating Conservation Program is effective in mitigating for the loss of Swainson's hawk foraging habitat within each Permit Area and within the Natomas Basin as a whole.

Overall Effects due to Authorized Development in the City's Permit Area

Authorized Development within the City of Sacramento's Permit Area potentially would result in the loss of 3,679 acres of foraging habitat within 1 mile of nesting trees. Within the Basin as a whole, Authorized Development in the City's Permit Area would result in the loss of 6,925 acres of foraging habitat. Approximately 1,006.3 acres of upland reserves would be available to offset this loss. When combined with the 201 acres due to 10 percent fallowed rice, and 252 acres for upland edges of managed marsh, a total of 1,459 acres would be provided on the reserves purchased with Mitigation Fees collected from City of Sacramento developers. Moreover, the City provides extensive nesting habitat mitigation as further described in the NBHCP. The provision of additional nesting habitat in proximity to foraging areas will further enhance the effectiveness of the foraging opportunities available in the Basin. Additionally, the reserve composition on TNBC Mitigation Lands may be adjusted in the event that only the City proceeds under the NBHCP, such that additional upland reserves would be established in lieu of rice fields.

Overall Effects due to Authorized Development in Sutter County's Permit Area

Within 1 mile of nesting trees, Authorized Development in the Sutter County Permit Area would result in the loss of 164 acres of foraging habitat. For the Basin as a whole, Sutter County Authorized Development would result in the loss of 1,860 acres of foraging habitat (within 1 mile and outside 1 mile of nesting trees). Sutter County would provide 933.4 acres of upland reserves, which more than compensates for the loss of 164 acres of foraging habitat within 1 mile of nesting trees. When combined with the 187 acres due to 10 percent fallowed rice, and 233 acres for upland edges of managed marsh, a total of 1,353 acres would be provided on the reserves purchased with Mitigation Fees collected from Sutter County developers. In addition, Sutter County will process a general plan amendment for agricultural uses on 1,015 acres of the Sutter County portion of the Swainson's Hawk Zone.

Overall Effects due to MAP

Within 1 mile of nesting trees, MAP development would result in the loss of 305 acres of foraging habitat. A total of 450 acres of reserve sites (250 acres) and mitigation for loss of

nesting trees (200 acres) would be provided, which results in a greater than 1:1 mitigation. For the Basin as a whole, MAP development would result in the loss of 403 acres of foraging habitat (within 1 mile and outside 1 mile of nesting trees). The 450 acres of reserves and other Mitigation Lands would offset this loss of potential habitat.

Overall Effects of the NBHCP

The NBHCP Operating Conservation Program results in a total of up to 4,387 acres of avoidance, mitigation, and enhancement/restoration lands to offset the loss of 4,149 acres of potential habitat within 1 mile of nesting trees and a total loss of 9,188 acres within the Basin. When considered in the context of baseline conditions, while implementation of the NBHCP would result in a net loss of between 6,016 acres to 8,204 acres of potential foraging habitat in the Basin overall, the amount of high value habitat would nearly double from 1,835 acres to 3,290 acres (Addendum, page 15). Further, 13,438 acres of existing foraging habitat would remain within specified portions of the Basin (Table 3-3) and would not be converted to urban development without triggering a new or amended conservation strategy for the additional development. The NBHCP Operating Conservation Program would add to and improve on these foraging lands. Additionally, about 25,000 acres of foraging habitat would be available in nearby Yolo County.

NBHCP reflects a multi-species approach to conservation planning. While the loss of habitat of one species may be greater within one Permit Area when compared to the loss of that same area within another Permit Area, the multi-species and multi-jurisdictional approach embodied in the NBHCP provides opportunities for offsetting such effects in a variety of ways. For example, development within the City's Permit Area would result in a greater loss of Swainson's hawk foraging habitat than within Sutter County's Permit Area. The Sutter County portion of the Basin, however, offers additional opportunities to provide foraging habitat than does the City. By contrast, Sutter County development would result in a greater loss of giant garter snake habitat than would development within the City. However, the City's portion of the Basin provides greater opportunities to provide giant garter snake habitat. Thus, while each Permittee will implement avoidance, minimization, and mitigation measures to offset the effects of take of each Covered Species within each Permittee's Permit Area, the Plan is designed to recognize the combined mitigation opportunities provided with each Permittee's participation. Moreover, the provision of higher quality foraging habitat under the NBHCP contributes to the availability of foraging opportunities within the Basin and from a regional context.

3.2 Individual Responses to Comments

Attachments 1 and 2 include copies of the individual comment letters and their responses, respectively. As discussed in Section 1.1 of this Final EIR/EIS, the comment letters are organized in the following way:

- Government – G (federal agencies, state agencies, local agencies)
- Organizations – O
- Individuals – I

In addition, Table 3-4 is a list of the comment letters and the agencies, organizations, or individuals that submitted them.

TABLE 3-4
Comment Letters Received on the NBHCP Draft EIR/EIS

Comment Number	Commentor
G1	U.S. Army Corps of Engineers
G2	Environmental Protection Agency
G3	California Department of Fish and Game
G4	Caltrans—Aeronautics Division
G5	Caltrans, District 3
G6	California Department of Water Resources
G7	Placer County Transportation Planning Agency
G8	County of Sacramento
O1	Environmental Council of Sacramento/Friends of Swainson's Hawk/National Wildlife Federation/Planning and Conservation League/Sierra Club
O2	Friends of Swainson's Hawk
O3	Institute for Ecological Health
O4	Swainson's Hawk Technical Advisory Committee
I1	Chris Chaddock
I2	The Diepenbrock Law Firm
I3	Downey, Brand, Seymour & Rohwer
I4	Kim Gagnon
I5	Eric Hansen
I6	Daniel Hrdy, MD
I7	Burton H. Lauppe
I8	Frank McCormack
I9	McKenzie Farms
I10	Jud Monroe and Dean Carrier
I11	Perry Farms
I12	Remy, Thomas and Moose
I13	Law Offices of Gregory Thatch

G: Government
O: Organization
I: Individual

SECTION 4

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ATTACHMENT 1

Comments



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO, CALIFORNIA 95814-2922

October 31, 2002

Regulatory Branch (199800167)

Mr. Wayne White
Field Supervisor
U.S. Fish & Wildlife Service
2800 Cottage Way, W-2605
Sacramento, California 95825-3901

Dear Mr. White,

I am responding to the Draft Environmental Impact Report for the Draft Natomas Basin Habitat Conservation Plan (NBHCP), that was prepared by a number of agencies, which include the City of Sacramento, Sutter County, Natomas Basin Conservancy, and in association with the Reclamation District No. 1000 and the Natomas Central Mutual Water Company. The report was prepared for the United States Fish and Wildlife Service and the California Department of Fish and Game.

The Corps of Engineers' jurisdiction within the study area is under the authority of Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act for the discharge of dredged or fill material into waters of the United States. Waters of the United States include, but are not limited to, rivers, perennial or intermittent streams, lakes, ponds, wetlands, vernal pools, marshes, wet meadows, and seeps.

GI-1 [Any project, project feature, or channel dredging that result in the discharge of dredged or fill material into waters of the United States **including those that are covered by the proposed NBHCP** will require Department of Army authorization prior to starting work. Every effort should be made to avoid project features which require the discharge of dredged or fill material into waters of the United States. In the event it can be clearly demonstrated there are no practicable alternatives to filling waters of the United States, mitigation plans should be developed to compensate for the unavoidable losses resulting from project implementation.

Please refer to identification number 199800167 in any future correspondence concerning this project. If you have any questions, please write to Laura Whitney at the letterhead address, or email Laura.A.Whitney@usace.army.mil, or telephone 916-557-7455.

Sincerely,

Tom Cavanaugh
Chief, Sacramento Valley Office

-2-

Vicki Campbell, Chief, Conservation Planning District, U.S. Fish & Wildlife Service,
2800 Cottage Way, W-2605, Sacramento, California 95825-3901
City of Sacramento, City Hall, 915 I Street, Room 100, Sacramento, California 95814
Sutter County, P.O. Box 1555, Yuba City, California, 95992
The Natomas Basin Conservancy, 1750 Creekside Oaks Drive, Suite 290, Sacramento,
California 95833

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

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SACRAMENTO
FISH & WILDLIFE OFFICE

September 30, 2002

Ms. Vicki Campbell
Division Chief
Conservation Planning
US Fish and Wildlife Service
Sacramento Fish and Wildlife Office
2800 Cottage Way, W-2605
Sacramento, CA 95825

Dear Ms. Campbell:

G2-1

The Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Report/Environmental Impact Statement (DEIS) for the project entitled **Natomas Basin Habitat Conservation Plan and Incidental Take Permit, Sacramento and Sutter Counties, California** (CEQ # 020343, ERP# SFW-K64021-CA). Our review is pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

The US Fish and Wildlife Service (Service), is considering approval of a revised Natomas Basin Habitat Conservation Plan (Natomas Basin HCP) and re-issuance of Endangered Species Act Incidental Take Permits (ITPs) to the City of Sacramento (City), Sutter County, and the Natomas Basin Conservancy (Conservancy). Reclamation District No. 1000 (RD 1000) and the Natomas Central Mutual Water Company (Natomas Mutual) may be future permittees. Incidental take of listed species could occur as a result of urban development in the Natomas Basin. The Natomas Basin is the primary urban growth center for the City of Sacramento and Sutter County.

The Natomas Basin HCP was developed to provide and implement a multispecies conservation program to minimize and mitigate impacts of planned urban development by the City of Sacramento and Sutter County and of land management activities of the Conservancy, RD 1000, and Natomas Mutual. The focus of the Natomas Basin HCP basin-wide conservation program is the preservation, enhancement, and restoration of ecological communities which support species associated with the wetland and upland habitats of the Natomas Basin. Through the payment of development fees, one-half acre of mitigation land would be established for every acre of land developed within the Natomas Basin HCP area. The mitigation land would be acquired and managed by the Conservancy, a non-profit conservation organization established to implement the Natomas Basin HCP. The Natomas Basin HCP covers the entire 53,537 acres of undeveloped and agricultural land in northwestern Sacramento County and southern Sutter County (Natomas Basin and Area B, north of the Natomas Basin).

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Issuance of the ITPs would allow urban development of 17,500 acres in the City of Sacramento, Sutter County, and Metro Air Park over the 50-year permit period. Using development fees, the Conservancy would acquire 8,750 acres of mitigation lands to compensate for incidental take of threatened and endangered species and for habitat lost due to urban development. Of the acquired lands, 75 percent would be managed as wetlands or in rice production and 25 percent as upland habitat. Mitigation land located in the Swainson's Hawk Zone (land within one mile of the Sacramento River) would be managed specifically for Swainson's Hawk nesting and foraging habitat. In addition, urban developers, RD 1000, Natomas Mutual, and the Conservancy would implement proven species-specific measures to avoid and minimize incidental take during construction, rice farming, canal operation and maintenance, and habitat reserve management on their lands. The DEIS evaluates six alternatives: Revised Natomas Basin HCP (Proposed Action), Increased Mitigation ratio of 1:1 (Alternative 1), Habitat-Based Mitigation (habitat value focused reserves, Alternative 2), Reserve Zones (geographically focused habitat reserves, Alternative 3), Reduced Potential for Incidental Take (urban development restricted to 12,000 acres, Alternative 4), and No Action - No Take (Alternative 5).

Prior to adoption of the Natomas Basin HCP and issuance of an Incidental Take Permit to the City of Sacramento in December 1997, the Service prepared an Environmental Assessment. A Federal court ruling on August 15, 2000, held that the Service's decision to issue the Permit and its decision not to prepare an EIS for the project were arbitrary and capricious. This DEIS was prepared to address the court's concerns and support the issuance of Permits to both the City and Sutter County. On May 15, 2001, an interim settlement agreement was approved which allowed a limited amount of development to go forward during the preparation of this DEIS. The settlement agreement provides for acquisition by the Conservancy of some of the best quality habitats in the basin and a temporary increase in mitigation fees from developers to pay for them.

In addition, a separate Incidental Take Permit has been issued by the Service for the Metro Air Park Property Owners Association for urbanization of 1,983 acres of land within the Natomas Basin portion of unincorporated Sacramento County. The Metro Air Park development is included in the 17,500 acres of planned development covered by the Natomas Basin HCP and ITPs evaluated in this DEIS. The Metro Air Park Property Owners Association propose participation in the Natomas Basin HCP. Their Metro Air Park HCP incorporates the Natomas Basin HCP by reference and would automatically include amendments or modifications made to the Natomas Basin HCP conservation program.

EPA supports the multi-species/multi-habitat approach, use of adaptive management, and an inclusive habitat conservation plan development process. We commend the acquisition and preservation of large blocks of new habitat reserves with a mosaic of wetland, rice production, and upland habitats. We are also pleased to see the proposed reserve urban and road buffer zones, connectivity and water supply requirements, HCP Technical Advisory Committee, species-specific conservation measures, and the focus on providing wetland habitat while also preserving and accommodating valuable commercial rice production.

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In addition to preserving and restoring already existing undeveloped habitat, we advocate providing specific conservation measures or nonmonetary "incidental take" mitigation measures on the land to be developed. For instance, we believe a commitment to planned growth which is town-centered, transit and pedestrian oriented, and has a greater mix of housing, commercial and retail uses could significantly enhance the benefits of a regional conservation planning effort. We also urge a focus on infill opportunities and development near existing infrastructure which would reduce the need to utilize undeveloped and prime agricultural lands for new development. This type of planned growth could provide for development while minimizing traffic congestion, adverse air and water quality effects, and degradation to the environment and sensitive, threatened, and endangered species habitat. Furthermore, urban development within a "deep floodplain" such as the Natomas Basin, should be considered very carefully and designed to account for the substantial flood risk within this Basin. We note that the Metro Air Park DEIS anticipates a 500 percent increase in the 100-year peak storm flows in the Natomas Basin from urban buildout (pg. 4.8, Metro Air Park DEIS).

G2-3

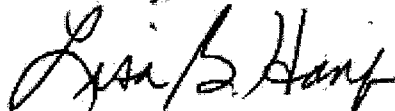
G2-4

Given the explosive growth in the area and the number of sensitive species, we urge adoption of more frequent HCP review periods or a 10- to 20-year permit duration. More frequent reviews or a shorter permit duration would reduce potential irreversible adverse impacts to habitats and species, if growth projections, development rates, and species conservation assumptions prove to be significantly incorrect. We strongly support the proposed compliance monitoring, basin-wide biological monitoring, site-specific biological monitoring, and annual reporting requirements. It is critical that these monitoring activities are implemented now and adequately funded.

G2-5

Based on our review, we have concerns regarding the scientific support for the mitigation ratio, the feasibility of implementing the HCP due to the cost and availability of potential reserve lands, the cumulative effects analysis, and the environmental consequences analysis. These concerns are described more fully in the attached Detailed Comments. Based upon these concerns, we have rated the DEIS and proposed Natomas Basin HCP/ITP as EC-2, Environmental Concerns - Insufficient Information (see attached "Summary of the EPA Rating System"). We appreciate the opportunity to review this DEIS. Please send two copies of the FEIS to this office at the same time it is officially filed with our Washington D.C. Office. If you have any questions, please call me at (415) 972-3854 or Laura Fujii, of my staff, at (415) 972-3852.

Sincerely,



Lisa B. Hanf, Manager
Federal Activities Office

Enclosures: Detailed Comments (5 pages)
Summary of the EPA Rating System

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MI#003584

Filename: natomasHCPdcis.wpd

**cc: Patricia Roberson, US Army Corps of Engineers
David Zezulak, CDFG
Gerry Kamilos, Metro Air Park Association
John Roberts, Natomas Basin Conservancy
Sacramento Area Flood Control Agency (SAFCA)
Grace Hovey, City of Sacramento
Paul Junker, Sutter County
Sacramento County Planning Department**

EPA DEIS COMMENTS, FWS, NATOMAS BASIN HCP, SEPT 2002

DETAILED COMMENTS

The Mitigation Ratio

1. The Natomas Basin Habitat Conservation Plan (Natomas Basin HCP) provides for habitat compensation of one-half acre of mitigation land for every acre of land developed within the Natomas Basin HCP area. We acknowledge that the actively managed, restored habitat reserves would provide greater habitat value than existing rice fields and habitat which will be converted to urban uses. However, the Draft EIS (DEIS) does not provide a scientific basis for the proposed mitigation ratio. For instance, there is no clear demonstration that the value of habitat lost would be fully replaced by the proposed habitat reserves. It is also our experience that habitat conservation plans usually provide for a mitigation ratio of 1 acre of mitigation land for every acre of land lost or equivalent compensation in the form of additional conservation measures or mitigation fees (e.g., Roosevelt Reservoir HCP, Clark County Multispecies HCP). We note that Alternative 2 is the environmentally preferable and superior alternative because this alternative provides the greatest mitigation (i.e., 17,763 acres of habitat reserves) (pg. 2-58).

Recommendations:

The Final EIS (FEIS) should address whether the proposed habitat reserves will fully compensate for the value of habitat lost. We strongly recommend that the scientific basis for the proposed mitigation ratio be provided in the FEIS (e.g., a demonstration that habitat values of habitats to be destroyed and conserved are equivalent).

We urge consideration of a greater mitigation ratio than one-half acre to one acre of developed land. Such a mitigation ratio would be more comparable to those provided by other HCPs and would enhance the equitable application of ESA requirements for all developers.

Feasibility of Implementing the HCP

1. EPA is concerned that the potential cost and unavailability of habitat reserve lands could significantly hinder successful implementation of the Natomas Basin HCP. For instance, land speculation, which has greatly increased the cost of mitigation land, has already occurred (i.e., Settlement Agreement lands, Natomas Basin HCP, pg. VI-5). In fact, the DEIS states that identifying specific reserve areas is considered infeasible because of the concern that speculation would artificially inflate land costs (pg. 2-57). Other acquisition requirements such as availability of willing sellers and sufficient water rights to support wetland habitat goals could also hinder obtaining habitat reserve lands.

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Recommendation:

We recommend that the FEIS provide a general comparative analysis for each alternative which evaluates the availability of reserve lands (e.g., willing sellers, potential cost, lands that meet the acquisition criteria), availability of adequate water rights for those lands, and whether current and projected mitigation fees will be sufficient to purchase and manage required habitat reserve lands in perpetuity.

G2-7

Cumulative Impacts Analysis

1. EPA is concerned with the long-term, cumulative implications of mitigating the impacts of incidental take solely through increased mitigation funding and acquisition of habitat reserves. We advocate alternatives which focus on avoidance and minimization of potential incidental take in addition to more habitat preservation.

G2-8

Recommendation:

The FEIS should clearly and persuasively demonstrate that the proposed Natomas Basin HCP will result in improved on-the-ground conditions which would not otherwise be achieved through existing conservation and resource management plans.

G2-9

2. Although the DEIS clearly states that the National Environmental Policy Act (NEPA) defines cumulative impacts as "the impact on the environment which results from the incremental impact of the action when added to other (emphasis added) past, present, and reasonably foreseeable future actions" (pg. 4-3), the cumulative impacts analysis appears to consider only other closely related regional conservation activities (e.g., pgs. 4-127, 4-158). While we recognize that the cumulative impact analysis is focused on effects of implementing the Natomas Basin HCP, issuance of the incidental take permits and approval of the Natomas Basin HCP would enable urban development to proceed. This urban development will have significant cumulative impacts on the environment of the Natomas Basin. The goal of evaluating cumulative effects is to provide decisionmakers and the public with an overall picture of reasonably foreseeable impacts to resources of concern.

Recommendation:

The FEIS should document cumulative impacts from past, present and reasonably foreseeable actions that affect the same resources being addressed by the proposed Natomas Basin HCP. For example, the FEIS should integrate into the cumulative impacts analysis for each resource the potential impacts of urban development plans instead of providing only a summary of findings from previous environmental analyses (i.e., Appendix C). Other projects which should be considered in the cumulative impacts analysis are local flood control projects (e.g., levee improvements, American River Watershed Long-Term Study), agricultural practices, irrigation practices, as well as other conservation actions.

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In addition, we recommend the environmental evaluation describe, as a whole, the combined environmental consequences of the Natomas Basin HCP, its habitat reserves, proposed urban development, and indirect and secondary effects of the urban development permitted by the incidental take permits (ITPs).

G2-9

Environmental Consequences Analysis

1. Alternative 4, Reduced Potential for Incidental Take, would reduce the urban development area covered under the incidental take permits (ITPs) from 17,500 acres to 12,000 acres. The DEIS does not appear to evaluate the implications of this reduced acreage of urban development.

G2-10

Recommendation:

It is our belief that a reduction in the urban development area covered by the ITPs could have environmental and socioeconomic consequences which should be thoroughly explored in this environmental analysis. We recommend the FEIS evaluate the consequences and implications of this reduced level of urban development.

2. The DEIS states that the specific effect of a potential increase in aircraft bird strikes at the Sacramento International Airport was not evaluated in prior environmental documents for proposed urban development (Public Health and Safety Section, pg. 4-159). While the potential for increased bird strikes is evaluated for the Natomas Basin HCP and closely related regional conservation actions, there is no evaluation of the potential effects of urban development, permitted by the ITPs, on the bird strike risk at the Sacramento International Airport.

G2-11

Recommendation:

Additional urban development, permitted by the ITPs, could attract more birds (e.g., new roosting sites and food sources) and result in airport encroachment issues such as aircraft noise and diesel fumes. We recommend the FEIS consider evaluating potential effects of urban development on the risk of increased bird strikes and encroachment issues at the Sacramento International Airport.

Covered Species

1. A total of 101 special-status species were identified by the Service with the potential to occur in the Natomas Basin (pg. 3-22). Of these 101 species, 22 species were chosen for coverage by the Natomas Basin HCP. Many of the species not chosen for coverage are not known to inhabit or use Natomas Basin. However, some of the covered species (e.g., Delta tule pea, Colusa grass) are also not known to inhabit or use Natomas Basin. Thus, it is not clear why some species were chosen for coverage while others were not.

G2-12

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Recommendation:

We recommend the FEIS include a more detailed explanation for why certain species were selected or not selected for coverage by the Natomas Basin HCP. For instance, we recognize that some of the covered species may have been selected because of the potential for their reintroduction to habitat on the actively managed habitat reserves. If this was the reason for their inclusion as covered species in the Natomas Basin HCP, it should be so stated in the FEIS.

G2-12

2. It is our understanding that California has a state list of "fully protected" species which forbids any harm to these species. Are any of the special-status species which may occur in the Natomas Basin "fully protected" species?

Recommendation:

We recommend that the FEIS include a short description of California's "fully protected" species requirements. The FEIS should describe whether these requirements would apply to any of the species potentially affected by proposed urban development, reserve management, or other proposed activities in the Natomas Basin.

G2-13

General Comments

1. The DEIS states that a shorter permit period (e.g., 25 years) was not carried forward for detailed analysis because it would not allow adequate time for the habitat reserve system to be fully developed and assessed for effectiveness (pg. 2-54). However, the scientific basis or underlying rationale for this conclusion is not provided.

Recommendation:

The FEIS should provide the scientific basis, data, or detailed rationale for the conclusion that the habitat reserve system would not be developed enough to assess its effectiveness under shorter permit terms. We believe effectiveness monitoring should begin with initial establishment of habitat reserves and be a continuous monitoring effort. We note that the Natomas Basin Conservancy is already actively managing acquired habitat reserve lands within the Natomas Basin. Thus, an assessment of, at least, the preliminary effectiveness of mitigation could be implemented now.

G2-14

2. We recommend subsequent environmental analysis for project-level actions (e.g., specific urban development projects or reserve restoration projects). We believe such follow-up environmental planning is critical given the geographic and temporal scope of the Natomas Basin HCP, the number of proposed covered species, and the possible reliance on adaptive management strategies.

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- G2-16 [3. If available, the FEIS should include a summary of existing scientific evidence documenting the effectiveness of habitat conservation planning and restoration in assuring species viability. We commend the strong commitment to monitoring, surveys, and adaptive management; especially given the possible limited amount of specific scientific information regarding ecological mechanisms and specific species needs. The FEIS should describe possible fallback options if special-status species and critical habitat continue to experience a decline.
- G2-17 [4. We recommend the FEIS provide an acronym list. Also, the major water delivery canals (e.g., Cross Canal, North main Canal) and waterbodies (e.g., Fisherman's Lake) on the maps in the EIS (e.g., Figure 1-2a and 1-2b) should be labeled.

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SUMMARY OF EPA RATING DEFINITIONS

This rating system was developed as a means to summarize EPA's level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the EIS.

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

ADEQUACY OF THE IMPACT STATEMENT

Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

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December 5, 2002

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SACRAMENTO
FISH & WILDLIFE OFFICE

Steve Thompson, Field Supervisor
U.S. Fish and Wildlife Service
2800 Cottage Way W2605
Sacramento, CA 95825-1846

Re: Draft Natomas Basin Habitat Conservation Plan (July 2002)

Dear Mr. Thompson,

G3-1

The California Department of Fish and Game (Department) appreciates the opportunity to review and provide comments on the July 2002 Draft Natomas Basin Habitat Conservation Plan (NBHCP or Plan), the Draft Implementing Agreement (IA), and the August 2002 Draft Environmental Impact Report/ Environment Impact Statement (Draft EIR/EIS). The NBHCP is a multi-species habitat conservation plan designed to support applications for "incidental take permits" (ITPs) from the Department and U.S. Fish & Wildlife Service (Service) under the State and federal Endangered Species Acts. The City of Sacramento (City) and the County of Sutter (Sutter) submitted the NBHCP to the Service earlier this year in support of individual applications for ITPs under the federal Endangered Species Act (ESA) (16 U.S.C. § 1531 et seq.). The Department anticipates similar applications from the City and Sutter under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.) during 2003. Any such applications will be processed by the Department in accordance with the Fish and Game Code and regulations governing the issuance of ITPs under CESA. (See generally Cal. Code Regs., tit. 14, § 783.0 et seq.)

G3-2

In general, the Draft EIR/EIS sets forth the City and Sutter's, and the Service's analysis of the potential environmental impacts that could result with issuance of ITPs to the City and Sutter based on the NBHCP. The City, Sutter, and Service prepared the Draft EIR/EIS to fulfill their respective "lead agency" obligations under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.) and the National Environmental Policy Act (NEPA) (42 U.S.C. § 4321 et seq.). The Draft EIR/EIS, in this respect, also analyzes a reasonable range of alternatives to the proposed Plan, as well as potential environmental impacts associated with establishment and maintenance of the habitat reserves contemplated by the NBHCP, and the possible future issuance of ITPs to other entities in the Natomas Basin. Against this backdrop, the Department submits the comments set forth below as a trustee and responsible agency under CEQA. (See generally Pub. Resources Code, §

21069; CEQA Guidelines, §§ 15381, 15386.)¹ In that capacity, the Department limits its comments to those activities that fall within its area of expertise as the State's trustee agency for fish and wildlife, and to those activities associated with the NBHCP that it may be required to approve or carry out as a responsible agency. (Pub. Resources Code, § 21153, subd. (c); CEQA Guidelines, §§15086, subd. (c), 15096, subd. (d); see also Fish & Game Code, §1802.)

G3-2 The Department also submits these comments as part of its ongoing efforts to consult with the City and Sutter regarding their prospective applications for ITPs under CESA. At the request of the City and Sutter, the Department provided previous comments regarding earlier administrative drafts of the revised NBHCP. (See Cal. Code Regs., tit. 14, § 783.2, subd. (b).) In general, the Department appreciates the opportunity to consult with project proponents and we commend the City and Sutter's effort to seek the Department's input during the local agency planning process. Even so, the Department emphasizes its continuing obligation to exercise its independent judgment during the City and Sutter's ongoing review of the NBHCP, as well as during its review of any permit application that the Department may face in the future. As a consequence, the Department's comments set forth below, as well as our previous comments, should not be interpreted as an approval, tacit or otherwise, of mitigation measures that may ultimately be adopted by the City or Sutter, or as an approval, tacit or otherwise, of any conditions that may be imposed by the Department during a future permitting action under CESA. In short, the Department has yet to review the adequacy of the revised NBHCP under CESA and will only do so during its formal review of ITP applications submitted at some point in the future.

G3-3 Against this backdrop, the Department would like to emphasize a number of important points for the sake of introduction. First, the Department recognizes that the present version of the NBHCP updates and revises the 1997 NBHCP. As is well known, the Department and Service relied on the earlier version of the Plan to authorize incidental take by the City within a portion of the Natomas Basin. The Department, in particular, issued a management authorization to the City in December 1997, under former Fish and Game Code section 2081. (See Fish & G. Code, § 2081.1.) A State trial court upheld the Department's authorization in February 2000, and the trial court ruling became final in May 2001, after the Third Appellate District dismissed an appeal filed by Friends of the Swainson's Hawk and other petitioners. (See *Friends of the Swainson's Hawk et al. v. California Depart. of Fish and Game* (Super. Ct. Sacramento County, 2000, No. 98CS01131); *Friends of the Swainson's Hawk et al. v. California Dept. of Fish and Game* (May 30, 2001, C034952).) The Department's existing management authorization to the City remains legally valid as a consequence.

G3-4 In contrast to the Department's management authorization based on the 1997 NBHCP, a federal trial court set aside the ITP issued to the City by the Service. (*National Wildlife Federation v. Babbitt* (E.D.Cal. 2000) 128 F.Supp.2d 1274.) The

¹ The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

G3-4

revised NBHCP is intended, as a result, to address various shortcomings identified by the court during the federal litigation. Based on our preliminary and ongoing review, the Department believes the revised NBHCP addresses the issues identified by the court during the federal litigation. In addition, the Department believes the revised NBHCP improves upon the earlier version of the Plan.

G3-5

Our second point of introduction concerns Reclamation District No. 1000 and the Natomas Central Mutual Water Company, which the NBHCP refers to collectively as the "Water Agencies." The NBHCP contemplates participation by the Water Agencies, but also includes some inconsistent statements regarding the role the Water Agencies played in efforts to revise the Plan, as well as the existence or status of an application by the Water Agencies to the Service for an ITP based on the current version of the Plan. These issues aside, the Department commends the Water Agencies' commitment to the NBHCP. The Water Agencies, for example, just like the City and Sutter, sought the Department's input some months ago regarding the contents and prospect of an application to the Department for an ITP based on the NBHCP. (See generally Cal. Code Regs., tit. 14, § 783.2, subd. (b).) The Water Agencies have yet to follow up on the prior consultation and, as a consequence, the Department is skeptical that the revised NBHCP includes sufficient information to support an application to the Department by the Water Agencies for an ITP under CESA. (*Id.*, §§ 783.2, subd. (a), 783.3, subd. (a).) The Department stands ready, however, to re-initiate consultation with the Water Agencies to provide input regarding any such application.

G3-6

The possible application by the Water Agencies aside, the Department emphasizes that the Draft EIR/EIS includes an analysis of environmental impacts associated with the Water Agencies' potential participation in the NBHCP. The Draft EIR/EIS does a reasonable job, in fact, describing the potential environmental impacts associated with activities by the Water Agencies that may be covered by the NBHCP at some point in the future. The level of detail in the analysis is appropriately commensurate with the less-than-specific detail as to the scope and nature of the Water Agencies' activities for which they may seek coverage under CESA at some point in the future.

Our third point of introduction concerns the Department's prior comments regarding the South Sutter County Specific Plan. The Department provided comments to Sutter in December 2001, and April 2002, regarding the environmental impact report for the proposed specific plan. The Department's letters take issue with Sutter's environmental analysis of project-related impacts on biological resources and the Department understands the proposed project is the subject of pending litigation. While the Department is aware of the legal presumption of adequacy attached to Sutter's document during the course of litigation (see Pub. Resources Code, § 21167.3), the Department emphasizes its obligations under CEQA with respect to any ITP application that Sutter may submit to the Department. (Cal. Code Regs., tit. 14, § 783.3, subd. (a).) In this respect, the Department trusts that Sutter will provide appropriate CEQA analysis as a lead agency to the Department in support of any permit application under CESA

G3-6

that is based on the NBHCP.

G3-7

Finally, the Department believes the NBHCP would benefit from additional clarity regarding obligations of the potential permittees relative to the Plan Operator. The NBHCP should state more clearly that the local agency permittees may not and cannot completely delegate their obligations to implement and comply with the NBHCP to the Plan Operator. In this respect, the NBHCP should clarify that the local agency permittees are obligated to fulfill the requirements of the Plan in the event the Plan Operator is unable to do so for any reason. The Department recognizes, of course, that the Plan Operator is also a permittee under the NBHCP. The Plan Operator is charged with certain obligations under the NBHCP that are independent of its obligations as an agent of the prospective local agency permittees. In this respect, the NBHCP should clarify that the Plan Operator must fulfill its independent obligations under the Plan, but that the local agency permittees may not completely delegate responsibility for their own permitting obligations under the NBHCP to the Plan Operator.

With these introductory comments in mind, the Department's specific comments regarding the revised NBHCP and the related documents follow below.

Habitat Reserves

G3-8

The Department understands the practical difficulties associated with designating specific areas for habitat reserves. Some of these difficulties are discussed in the NBHCP at pages VII-68 and 69. Yet, with respect to Swainson's hawk, the Plan and related conservation strategy relies on and commits to no development within the one-mile Swainson's hawk zone. The Department commends the City and Sutter's commitment to this important component of the conservation strategy for Swainson's hawk. Even so, the Department believes the conservation strategy will be more effective if the NBHCP includes a requirement that upland habitat reserves contemplated by the Plan all be acquired within one mile of the Swainson's hawk zone. In the Department's view, such a requirement would allow for reserve acquisition flexibility and willing sellers, and result in a connected, robust permanently located and protected reserve system for Swainson's hawk. The current analysis would benefit from consideration of this issue.

G3-9

Under the proposed Plan, reserve lands may be sold and relocated as the habitat reserve system develops. The Department is concerned about this aspect of the Plan and believes that additional detail is warranted to ensure that related impacts are avoided to the extent feasible, and minimized and fully mitigated. In the Department's view, the "trade-out" and relocation of established reserves could result in the temporal loss of habitat functions and values under the operating conservation program unless there are adequate safeguards. In this respect, the Department believes the NBHCP would benefit from additional detail as to how the habitat functions and values of existing reserves will be adequately mitigated in the event the trade-out provision in the Plan is invoked by the Plan Operator. It is not reasonable to assume,

for example, that covered species benefiting from an existing reserve will necessarily "follow" the Plan Operator to a new reserve site. Moreover, without the benefit of a habitat reserve designation, covered species benefiting from and occupying the former reserve could suffer adverse effects that should be addressed in the Plan. Potentially feasible mitigation measures to address the temporal loss of habitat functions and values where the trade-out provision is invoked include: (1) acquisition of an equal amount of reserve lands; (2) restoration and/or maintenance of new reserve lands to provide habitat functions and values comparable to the former reserve; and (3) maintenance of the habitat functions and values on the former reserve until the new reserve is fully established biologically.

The Department believes the analysis addressing the issues detailed in the preceding paragraph should also consider an additional mitigation requirement to offset the temporal loss of habitat functions and values at the former reserve site. Once habitat reserves are established, the Department believes the reserves will act as a biological sink drawing covered species to the site. This biological benefit afforded by the reserves will not be entirely offset by relocating the reserve in another place, particularly if the former reserve is de-watered, converted from managed marsh to rice, converted from rice to another agricultural use, or no longer managed for the benefit of covered species. In the Department's view, the NBHCP should address the prospect of such temporal impacts and provide appropriate mitigation at a minimum habitat replacement ratio of 1:1.

Finally, the Department believes the additional analysis highlighted in the two preceding paragraphs should clarify whether or the extent to which former reserves could be developed as part of the 17,500 acres of development contemplated by the proposed Plan. If a former reserve is subsequently developed under the NBHCP, for example, the Plan should clarify that such development is contingent upon the payment of habitat mitigation fees or compliance with the other mitigation alternatives set forth in the Plan. In the alternative, if development of former reserves is not contemplated as part of the 17,500 acres of contemplated development, the NBHCP should make clear that any such development will require independent authorization by the Department under CESA and other pertinent provisions of the Fish and Game Code.

G3-9

The reserve habitat ratio in the NBHCP allows for 50% of the mitigation acreage to be in rice, although page VII-67 states that managed marsh "provides significantly more beneficial edge habitat for the snake than a typical rice field." Sections II-10 and 11 also state that Giant garter snakes prefer permanent freshwater marshes and low gradient streams. Likewise, at page VII-70, the NBHCP discusses rejected alternatives - including one comprised entirely of managed marsh - based on economic and biological considerations, stating that the proposed percentage of reserve habitat types "may not be biologically optimal." Despite all of these comments, the Plan states that the biological necessity of more marsh, as opposed to lands farmed for rice, must be demonstrated before the required percentage of managed marsh will be increased. In the Department's view, the last statement conflicts with the prior highlighted statements

G3-10

G3-10

in the NBHCP and, more importantly, with existing scientific literature indicating that Giant garter snake prefer marsh habitat to rice habitat. Along these same lines, the Department believes the Plan would benefit from additional analysis to support the conclusion that the proposed percentage of reserve lands held in rice as opposed to managed marsh will fully mitigate impacts to the covered species. Finally, the Plan should clarify that the Plan Operator has the discretion to convert rice to managed marsh in the event that rice production becomes unprofitable in the future. As a corollary, the Plan should also specify that no such discretion exists with respect to the conversion of reserve lands in managed marsh to rice production, regardless of the required percentage of managed marsh.

G3-11

The Department is concerned about biological connectivity between the habitat reserves contemplated by the NBHCP, particularly with the conflicting information regarding the Water Agencies' present and future participation in the current conservation planning effort. The Department is concerned because the biological conservation strategy for the Giant garter snake and other aquatic covered species depends on functional habitat connectivity between reserves. In our view, the NBHCP would be improved with additional detail as to how biological connectivity between current and proposed habitat reserves will be maintained through the canal system that is currently owned and operated by the Water Agencies. The analysis should focus, in particular, on the biological efficacy of the conservation strategy as it relates to reserve connectivity even if the Water Agencies choose not to participate in the Plan. The additional analysis is crucial in our view because the current approach to the issue appears to be based primarily on an annual obligation by the Plan Operator to consult with the Water Agencies regarding water management and potential canal closures or piping. More assurance of canal connectivity between reserves is necessary.

The additional analysis regarding reserve connectivity should specifically address a number of potential mitigation measures. One potentially feasible mitigation measure that should be considered is a prohibition on Plan Operator approval to grant access across reserve lands for canal modification unless the authority for such access already exists. In the alternative, Plan Operator approval to access reserve lands for canal modification could be conditioned on Department approval. In addition, the Department believes the following measures may help to ensure the effectiveness of mitigation for canal connectivity and that they should be addressed with respect to that issue, as well as for the conservation strategy for the Plan as a whole: (1) designating the Department as a third party beneficiary on all conservation easements held by the Plan Operator for reserve lands; (2) granting the Department a conservation easement on all reserve lands held by the Plan Operator in fee title; (3) acknowledging that any discretionary canal modification by the Water Agencies, including de-watering will result in significant impacts subject to CEQA; and (4) acknowledging that canal modification and de-watering of canals that provide biological connectivity to habitat reserves will require compliance with CESA and other pertinent provisions of the Fish and Game Code. Finally, the Department emphasizes that it will likely require compliance with measures (1) and (2) as part of any ITP issued under CESA that relies on the NBHCP.

G3-12

Reducing habitat fragmentation through compact development is identified as a key conservation goal for the NBHCP. To this end, the Plan states that the City and Sutter, and presumably any other local agency permittees subject to the NBHCP, will "promote connectivity between reserves and surrounding agriculture[.]" and that such agencies, "through their adopted general plans, community plans, and specific plans, will *promote* compact urban development within limited *portions* of the Natomas Basin." (Emphasis added.) The Department emphasizes that these commitments are only meaningful from a biological standpoint to the extent they exist in the context of the local agencies' planning and zoning structure. The Plan, in this respect, should include a specific requirement that any local agency permittee's planning and zoning structure include such binding policies, designations, and commitments.

On a related note, the NBHCP indicates that an analysis is required during the mid-point review of the Plan to analyze, among other things, whether the remainder of the 1,100 acres in the Sutter County industrial/commercial reserve is or is becoming fragmented. Consistent with the statements in the preceding paragraph, if the Plan is intended to ensure fragmented development in the Natomas Basin does not occur, Sutter's specific land use policies to achieve this result should be identified and incorporated by reference in the NBHCP.

G3-13

Finally, the NBHCP requires that reserve lands be in habitat blocks that are a minimum of 400 acres in size to "support long-term viability of Covered Species." Exceptions to this standard are allowed if the Plan Operator "determine[s] that smaller reserves have biological significance and [that they] should be preserved[.]" including as a condition of the Adaptive Management Program. In the Department's opinion, no exception to the 400-acre minimum reserve size should exist for reserves that provide mitigation for Giant garter snake and Swainson's hawk. In our view, exceptions to the minimum size requirement for reserves should only exist for reserves that provide habitat for covered plants and invertebrates exclusively.

G3-14

As regards the 400-acre minimum reserve requirement, as well as the 2,500-acre minimum, the Department believes the NBHCP would benefit from additional detail regarding how these standards will be applied while the habitat reserve system is established over time. As currently drafted, the NBHCP makes clear that the reserve acre minimums must be met at buildout, but the Plan provides little detail as to how the minimums should be applied in the interim. The Department believes the Plan should address the issue. The Department suggests an approach requiring progress towards the minimum reserve requirements that is proportionate over the term of the contemplated permits to the amount of development permitted and the number of acres of habitat reserves acquired. Additional consultation with the Department on this issue will likely be necessary. Even so, we emphasize that the minimum sizes of the contemplated reserves are a critical component of the proposed Plan that must be achieved to ensure the effectiveness of the operating conservation program.

Covered Species

G3-15

The Department recommends that the NBHCP include a species mitigation matrix that lists all the species impacts and mitigation measures included in the Plan. The matrix would provide a concise, comprehensive method for the public to evaluate how the Plan fully mitigates impacts for each covered species. The Department will need such a matrix in any event to support issuance of any incidental take permit to the City or Sutter under Fish and Game Code section 2081, subdivision (b).

G3-16

The Department believes the NBHCP would benefit from additional detail regarding the conservation strategy for Swainson's hawk. The issue is of great concern to the Department as the State's trustee agency and, as the City, Sutter, and Service know, the matter continues to receive considerable attention from a number of parties involved in the previous State and federal litigation. The Department, in this regard, appreciates the City's letter of November 20, 2002, regarding Swainson's hawk mitigation under the NBHCP and believes that the Plan would benefit from some of the analysis in the letter. The Department also believes that the Plan would benefit from additional detail regarding a number of important points highlighted in the table that appears on page 4 of the City's letter. In general, the table summarizes the City's conclusion that the conservation strategy provides a total of nearly 4,300 acres of Swainson's habitat, including the 2187.5 acres of upland habitat reserves managed specifically for the benefit of the species. Approximately 1,500 acres of the total land area identified in the table is tied to upland edges of managed marsh reserves and the levee and upland areas of reserve lands farmed for rice. The NBHCP should clarify how the numbers were derived, explain that the 1,500 acre figure is not a product of "double counting," and detail management practices for these specific areas, as appropriate, that will further benefit Swainson's hawk. Finally, with respect to Swainson's hawk, the Department believes the NBHCP would benefit from an explanation as to why additional mitigation for the species is not necessary to meet State standards under CESA. The Department believes this additional analysis is important, particularly because the proponents of Metro Air Park provided an additional 200 acres of land to mitigate the loss of a single Swainson's hawk nest tree as part of their permit application for an ITP from the Department.

G3-17

The Department believes the NBHCP and related documents should be revised to clarify the circumstances under which the take authorization for covered but currently unlisted species will take effect under Fish and Game Code section 2081, subdivision (b). The matter is currently addressed in various portions of the NBHCP, as well as the draft IA in sections 3.3.5 and 6.2.4. The documents currently describe the take authorization as automatic at the time the covered but currently unlisted species are designated as a candidate, endangered or threatened species under CESA. The language is substantially similar to language in the Metro Air Park ITP issued by the Department earlier this year. In contrast, the City's existing management authorization contemplates a different approach, reflecting practices by the Department prior to substantial changes to CESA in 1998. The Department believes the approach

G3-17

contemplated in the revised NBHCP should be changed in one important respect. In the Department's view, take authorization for covered but unlisted species should take effect after a brief review of the status of the species at issue under the NBHCP at the time the species is designated as candidate under CESA. We believe that the permittees at that time should demonstrate through a report that there are no changed biological conditions with respect to the species under the conservation program, that reserve lands provide habitat functions and values for the species, and that the species actually occupies reserve lands established pursuant to the NBHCP. Under this approach, the assurances that may be provided by the Department through the issuance of an ITP based on the Plan will take effect following the Department's review of the status report. Revisions to the NBHCP and IA to reflect this point will likely be necessary.

G3-18

The NBHCP proposes coverage for three species that are State listed endangered plants generally found in and around vernal pool habitat. The Department believes the NBHCP would benefit from additional information regarding how the conservation strategy of avoidance and on-site preservation will minimize and fully mitigate the impacts to these species. The additional analysis should specifically address cumulative and indirect effects associated with habitat isolation and urban development impacts. To the extent additional detail regarding minimization and mitigation measures is needed, the Plan should identify and establish a minimum size for on-site vernal pool mitigation areas that include buffers, and watershed and upland areas for pollinators. In addition, the discussion should consider vernal pool creation on reserve lands as a potential mitigation measure. The Department emphasizes, however, that created vernal pools could only be used for mitigation under the NBHCP after species establishment criteria are met. Moreover, the use of created vernal pools as mitigation for related impacts is only appropriate at Department-approved conservation/mitigation banks with available, relevant credits.

Monitoring

G3-19

Development of the Biological Effectiveness Monitoring Program (BEMP) as discussed at page VI-14, for example, should include peer and public review.

G3-20

The NBHCP indicates that the final BEMP will be completed within two years following permit issuance. This time frame conflicts with the commitment to initiate monitoring on lands already acquired. Site specific biological monitoring plans should be prepared following the Department's approval of the BEMP. Site specific biological monitoring plans for new reserve acquisitions should be prepared when 40 or more acres of new reserve lands in one location are acquired. Subsequent reserve acquisitions should also comply with this condition within a six month period, but only with approval from the Technical Advisory Committee.

G3-21

The monitoring data must be maintained in a spatial data system to allow for analysis, data sharing, and reporting.

General comments

G3-22 [Appendix B of the NBHCP includes a Department staff report regarding mitigation for impacts to Swainson's hawk in the Central Valley of California. The staff report, however, is not the biological "benchmark" governing the adequacy of the NBHCP under CESA. The staff report does not, in fact, apply to the NBHCP and the Department believes it should not be included in the Plan as an appendix.

G3-23 [The NBHCP refers to rice farming best management practices in a number of places, including page IV-29. If the rice farming best management practices are considered mitigation, they should be specifically identified and incorporated into the Plan as part of the proposed conservation strategy.

G3-24 [At page IV-29, the NBHCP states that the ultimate goal of the proposed reserve system is to "establish self-sustaining natural communities capable of supporting the appropriate Covered Species." The Department disagrees that the goal of self-sustaining "natural communities" will be achieved because most of the reserves will either be in managed marsh or farmed for rice production. The existing statement in the NBHCP should be deleted or revised accordingly.

G3-25 [At page VI-2, the NBHCP states that developers covered by the Plan would be allowed to establish mitigation banks that could be used to sell credits to others in the basin. In the Department's view, the NBHCP should clarify that, while developers may hold their own excess acreage for future mitigation, developers wishing to sell mitigation credits to others would not be authorized to do so without full compliance with the Department Mitigation Banking Policy and procedures.

G3-26 [At page VI-22, the NBHCP refers to "significant land use changes outside of the reserve system." The meaning of this phrase should be clarified.

G3-27 [At page VI-22, the NBHCP refers to "uncertainties associated" with "Plan implementation." The Plan should identify and clarify the "uncertainties" referred to in the existing text. The NBHCP should then explain how the Plan ensures these uncertainties will not adversely affect the biological success of the operating conservation program.

G3-28 [At page VI-23, the NBHCP refers to "research needs for successful implementation of the Plan." The Plan should clarify what research needs are contemplated and describe how they are analyzed in the economic analysis.

G3-29 [The NBHCP, at page VI-23, refers to a time period when biological monitoring threshold limits will be defined and implemented. Because these thresholds are relevant to the proposed adaptive management program, the Department recommends that greater detail be provided.

G3-30 [At page VI-27, the NBHCP mentions the prospect of changes to the operating conservation program in response to the adoption of a Swainson's hawk recovery plan. The Plan would benefit from greater detail regarding the range of potential changes that could occur in response to a recovery plan. Detail commensurate with that provided for the Giant garter snake is appropriate to the extent such potential changes are reasonably foreseeable and not speculative.

G3-31 [At page VI-28, the NBHCP refers to an overall program review to assess the "success of the 25% managed marsh/50% rice/25% upland for supporting Giant garter snake[.]" The review should extend to all covered species.

G3-32 [At page VI-36, the NBHCP refers to required notice to the Department and Service within seven days of changed circumstances related to toxics. The required notice should not be limited to toxics. Rather, the NBHCP should be revised to require notice to the Department and Service of changed circumstances generally.

G3-33 [At page VI-37, the NBHCP discusses non-participation in the Plan by local land use agencies and the obligation to assess protected habitat in the event of such non-participation. The stated purpose of the analysis is to assess the rough proportionality between reserves and mitigation, and impacts to covered species resulting from activities covered by the NBHCP. The Plan, however, does not appear to require tracking of the types of habitat impacted by covered activities. In our view, such tracking should be required. Doing so will facilitate the required analysis and serve as a gauge to ensure that habitat protection and mitigation keeps pace with impacts to specific habitat types.

Editorial Corrections

G3-34 [Page VI-8, 4th paragraph. Change "MOAS" to "MOAs," and delete "moas."

G3-35 [Page IV-22, 4th paragraph. Existing text refers to Figure 14. The figure is mis-labeled and the reference in the text should be corrected.

G3-36 [Page VI-28, last line on page. Insert "CESA."

G3-37 [Page VI-40, Item (13). For revisions not requiring an amendment, insert "goals" after "biological" in the first sentence.

G3-38 [Page VI-41, Item (2). The amendments section should also include changes to CESA.

G3-39 [Page VI-42, 2nd paragraph. Delete the reference to amphibians.

G3-40 [Figure 13. The figure should be updated to depict the four Swainson's hawk nests removed in 2002. The figure should also reflect the Swainson's hawk zone as

G3-40 [referenced on page IV-22.

G3-41 [Figure 15. The figure does not contain the identified graphical data.

G3-42 [Figure 16. The figure does not accurately depict the identified data due to an error in shading of the represented parameters.

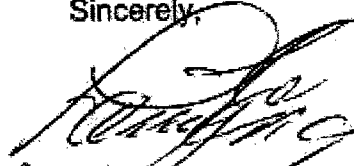
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G3-43 [

In closing, the Department appreciates the opportunity to review and provide comments regarding the revised NBHCP. We commend the City, Sutter and Service's efforts to date. The Department is committed to the long-standing yet unfinished effort to devise a balanced conservation strategy in the Natomas Basin and we look forward to the future work required to achieve that end.

If you have questions and would like to discuss any of these items please contact Terry Roscoe, Habitat Conservation Supervisor, at (916)358-2382, or Jenny Marr, Staff Environmental Scientist, at (530)895-4342.

Sincerely,


BANKY E. CURTIS
Regional Manager

cc: Tom Lee
Carol Shearly
City of Sacramento

Larry Combs
County of Sutter

Ron Rempel
Sandra Morey
CDFG Habitat Conservation Division

Michael Valentine
John Mattox
CDFG Office of the General Counsel

10/08/2002 12:25 PLANNING & BUILDING DEPARTMENT + 96143437
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~~STATE OF CALIFORNIA - BUSINESS, TRANSPORTATION AND HOUSING AGENCY~~

NO. 151 002
PAGE 81/02
GRAY DAVIS, Governor

DEPARTMENT OF TRANSPORTATION
DIVISION OF AERONAUTICS - M.S.#40
1120 N STREET
P. O. BOX 942873
SACRAMENTO, CA 94273-0001
PHONE (916) 654-4959
FAX (916) 653-9531

13



*Flex your power!
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October 7, 2002

Ms. Grace Hovey
City of Sacramento
1231 "I" Street, Suite 300
Sacramento, CA 95814

Dear Ms. Hovey:

*Re: City of Sacramento and Sutter County Draft EIR/EIS Draft Natomas Basin
Habitat Conservation Plan (NBHCP); SCH# 1997062064*

The California Department of Transportation (Department), Division of Aeronautics, reviewed the above-referenced document with respect to airport-related noise and safety impacts and regional aviation land use planning issues pursuant to CEQA. The following comments are offered for your consideration.

- G4-1 [The proposal is for the establishment of a multi-species habitat conservation program to "minimize and mitigate the expected loss of habitat" in the Natomas Basin area. As discussed in the Draft EIR/EIS, there is a concern for increased "conflicts between waterfowl and aircraft from Sacramento International Airport."
- G4-2 [The need for compatible and safe land uses near airports in California is both a local and a state issue. Along with protecting individuals who reside or work near an airport, the Division of Aeronautics views each of the 250 public use airports in California as part of the statewide transportation system, which is vital to the state's continued prosperity. This role will no doubt increase as California's population continues to grow and the need for efficient mobility becomes more crucial. We strongly feel that the protection of airports from incompatible land use encroachment is vital to California's economic future.
- G4-3 [The proposal should be submitted for a consistency determination to Dave Boyer with the Sacramento County Airport Land Use Commission (ALUC) in care of the Sacramento Area County of Governments (SACOG).
- G4-3 [These comments reflect the areas of concern to the Department's Division of Aeronautics with respect to airport-related noise and safety impacts and regional airport land use planning issues. We advise you to contact our district office concerning surface transportation issues.

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NO.151 000
PAGE 02/02

Ms. Grace Hovey

^ October 7, 2002

Page 2

Thank you for the opportunity to review and comment on this proposal. We also request copies of the Final EIR/EIS and the Final NBHCP when available. If you have any questions, please call me at (916) 654-5314.

Sincerely,


SANDY HESNARD

Aviation Environmental Planner

c: State Clearinghouse
Dave Boyer-SACOG
G. Hardy Acree-Sacramento International Airport
Patrick L. Smith-USDA, Wildlife Services

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STATE OF CALIFORNIA — BUSINESS, TRANSPORTATION AND HOUSING AGENCY

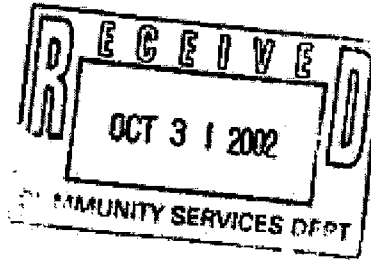
GRAY DAVIS, Governor

DEPARTMENT OF TRANSPORTATION

DISTRICT 3 - Sacramento Area Office
Venture Oaks - MS 15
P.O. Box 942874
Sacramento, CA 94274-0001
PHONE (916) 274-0638
FAX (916) 274-0648
TTY (530) 741-4509



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October 28, 2002

02SAC0113
03-SAC- 5, 99
Natomas Basin Habitat Conservation Plan
DEIR/DEIS
SCH#1997062064

Ms. Grace Hovey
City of Sacramento
Planning Division
1231 I Street, Suite 300
Sacramento, CA 95814

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NOV 11 2002

SACRAMENTO
FISH & WILDLIFE OFFICE

Dear Ms. Hovey:

Thank you for the opportunity to review and comment on the Natomas Basin Habitat Conservation Plan (HCP) proposal. Our comments are as follows:

GS-1

• We support Sutter County and the City of Sacramento's efforts to enhance the role that the natural environment will take on as area development occurs. Our comments are directed at helping to ensure successful implementation of the HCP in conjunction with the continuing operation and expansion of Interstate 5 (I-5) and State Route (SR) 99/70 adjacent to the HCP area.

GS-2

• We request that the HCP provide mechanisms to keep Caltrans informed of issues that may affect future transportation improvements including drainage, future interchange sites, and wider freeway facilities with access control. This will benefit the HCP by allowing us to provide useful information as early as possible so as to prevent any delays or increased costs to HCP implementation.

GS-3

• The Natomas Basin HCP area includes segments of I-5 and SR99. These Caltrans facility segments rely on Reclamation District 1000 and its drainage system to manage the State's stormwater. These segments are, in

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Ms. Grace Hovey
October 28, 2002
Page 2

general, above the grade of the surrounding fields. Lands near and abutting State facilities, thus, serve a valuable purpose regarding established drainage patterns.

The HCP should ensure that existing drainage patterns are perpetuated or improved within State right-of-way. Any increases of discharge into the State drainage system as a result of changes in impervious surfaces or other causes related to the Plan must be mitigated. Pre and post-Plan discharge information should be supplied for Caltrans review. Any change in drainage capacity needs as a result of this HCP should be identified. Any runoff that comes from the proposed HCP area must not contribute a contaminant load to storm waters handled by the State, for example oils, grease, sand, sediment, debris. All runoff that enters the State right-of-way must meet Regional Water Quality Control Board (RWQCB) standards for clean water.

The incorporation of environmental Best Management Practices (BMP), such as retention ponds, infiltration trenches, and other drainage improvements may be sufficient to mitigate adverse drainage impacts from proposed developments.

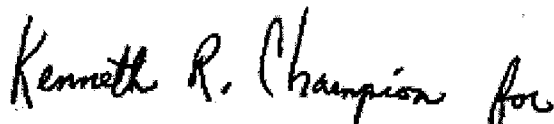
GS-3

- HCP implementation must address right of way preservation for the future expansion of I-5 and SR99 and their interchanges. Plans for the SR99 freeway segments indicate a need for an "ultimate" 8 lane freeway. Plans for the I-5 freeway segments indicate a need for an "ultimate" 8 lane freeway north of the I-5/I-80 Interchange and an "ultimate" 10 lane freeway south of the I-5/I-80 Interchange. Any plans to infringe or use this needed right of way for HCP purposes should be developed in close consultation with Caltrans.

GS-4

Please provide our office with any further action regarding this project. If you have any questions regarding these comments, please contact Ken Champion at (916) 274-0615.

Sincerely,



JEFFREY PULVERMAN, Chief
Office of Regional Planning

c: Katie Shulte Joung, State Clearinghouse
Paul Junker, Sutter County Planning

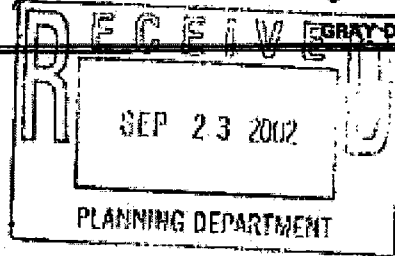
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W. Campbell

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Oct 8 02
10/7/02

STATE OF CALIFORNIA - THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94238-0001
(916) 653-5791



ERRY DAVIS, Governor



Grace Hovey
City of Sacramento
1231 I Street
Sacramento, California 95814

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OCT 03 2002

SACRAMENTO
RSM & WILDLIFE OFFICE

Dear Ms. Hovey:

Water Resources' staff has reviewed State Clearinghouse Document Number 1997062064 and provides the following comments:

A review of Draft Natomas Basin Habitat Conservation Plan indicates portions of the proposed plan may encroach into the Sacramento River Plan of Flood Control, over which The Reclamation Board has jurisdiction. In the event that any work, including excavation and construction activities, is proposed within the jurisdiction of the Board, a permit will be required (pursuant to Section 8710 of the California Water Code). All proposed projects shall comply with standards contained in the California Code of Regulations, Title 23.

G6-1

- Section 8 of the Regulations states that additional information, such as geotechnical exploration, soil testing, hydraulic or sediment transport studies, biological surveys, environmental surveys and other analyses may be required prior to Board action on the application for permit.
- Section 10 of the Regulations requires that applications for permits being submitted to the Board must include a completed environmental questionnaire that accompanies the application and a copy of any environmental documents if they are prepared for the project. For any foreseeable significant environmental impacts, mitigation for such impacts shall be proposed. Applications are reviewed for compliance with the California Environmental Quality Act.

If you have any questions, please call me at (916) 653-0402, or Samuel Brandon at (916) 653-6491.

Sincerely,

Sterling Sorenson,
Engineering Associate
Floodway Protection Section

cc: Richard Marshall, Chief
Flood Project Inspection Section
3310 El Camino Avenue
Sacramento, California 95821



PLACER COUNTY
TRANSPORTATION
PLANNING AGENCY

October 28, 2002

SACRAMENTO WILDLIFE
& FISHERY OFFICE

Vicki Campbell, Chief
Conservation Planning Division
U.S. Fish and Wildlife Office, W-2605
2800 Cottage Way
Sacramento, CA 95825

* MY FAX WAS
NOT DELIVERED
YESTERDAY
(SEE TIME ENCLOSED
FOR RECORDS)

ATTN: [Handwritten initials]

- KATHY SANDS
City of Auburn
- SHERRE BLACKMUN
City of Colfax
- TOM COBGRIVE
City of Lincoln
- MIGUEL UGOVICH
Town of Loomis
- KATHY LUND
City of Rocklin
- ROCKY ROCKHOLM
City of Roseville
- HARRIET WHITE
TED GAINES
Placer County
- ROGER IMSDAHL
Citizen Representative
- CELIA MACADAM
Executive Director

RE: Draft EIS for the Natomas Basin Habitat Conservation Plan

I attended the September 25, 2002 public meeting at Whitaker Hall in Yuba City. It was very informative.

Placer Parkway

PCTPA will be conducting a Tier 1 EIS/EIR for the Placer Parkway (Parkway). A Parkway overview and copy of the Project Study Report (PSR) alignment alternatives are attached

As illustrated in the PSR map, segments of four alignments are depicted crossing the eastern portion of the HCP area. All of these would be in the proposed South Sutter Specific Plan area along SR 70/99.

Note, the PSR identified and evaluated several concept alignments. The 'recommended' alignment is subject to change based on the subsequent detailed environmental review. The purpose of selecting a recommended alignment was to help focus the PSR and to improve cost estimates for engineering and environmental studies.

G7-1

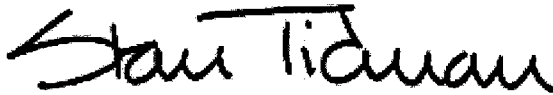
There are a number of development projects (recently approved, pending approval, and/or anticipated) for south Sutter, western Placer, and northern Sacramento Counties. As the region continues to develop, Parkway alignment options may become more limited with potentially greater environmental/economic impacts. PCTPA will be working with Sutter County to ensure viable Parkway corridor alignments are maintained for the Tier 1 process.

Environmental Review

G7-2

The Revised Natomas Basin HCP EIR/EIS references a new east-west expressway (Placer Parkway) in 4.8 Traffic (page 4-147). It is understood that the EIR/EIS would support discretionary actions such as the issuance of incidental take authorization for activities such as infrastructure and other public works projects including the future Placer Parkway.

Thank you for including PCTPA in the review process. If you have any questions, please call me at 530.823.4033.



Stan Tidman, Senior Planner

Attachments

Copy: Celia McAdam, Executive Director

Placer Parkway Overview

A Conceptual Plan (2000) and a Project Study Report (2001), for the proposed Parkway have been completed. Both were based on comprehensive public participation programs and preliminary engineering/environmental background. PCTPA and SACOG Boards adopted both documents.

The PSR envisions a transportation facility within three segments:

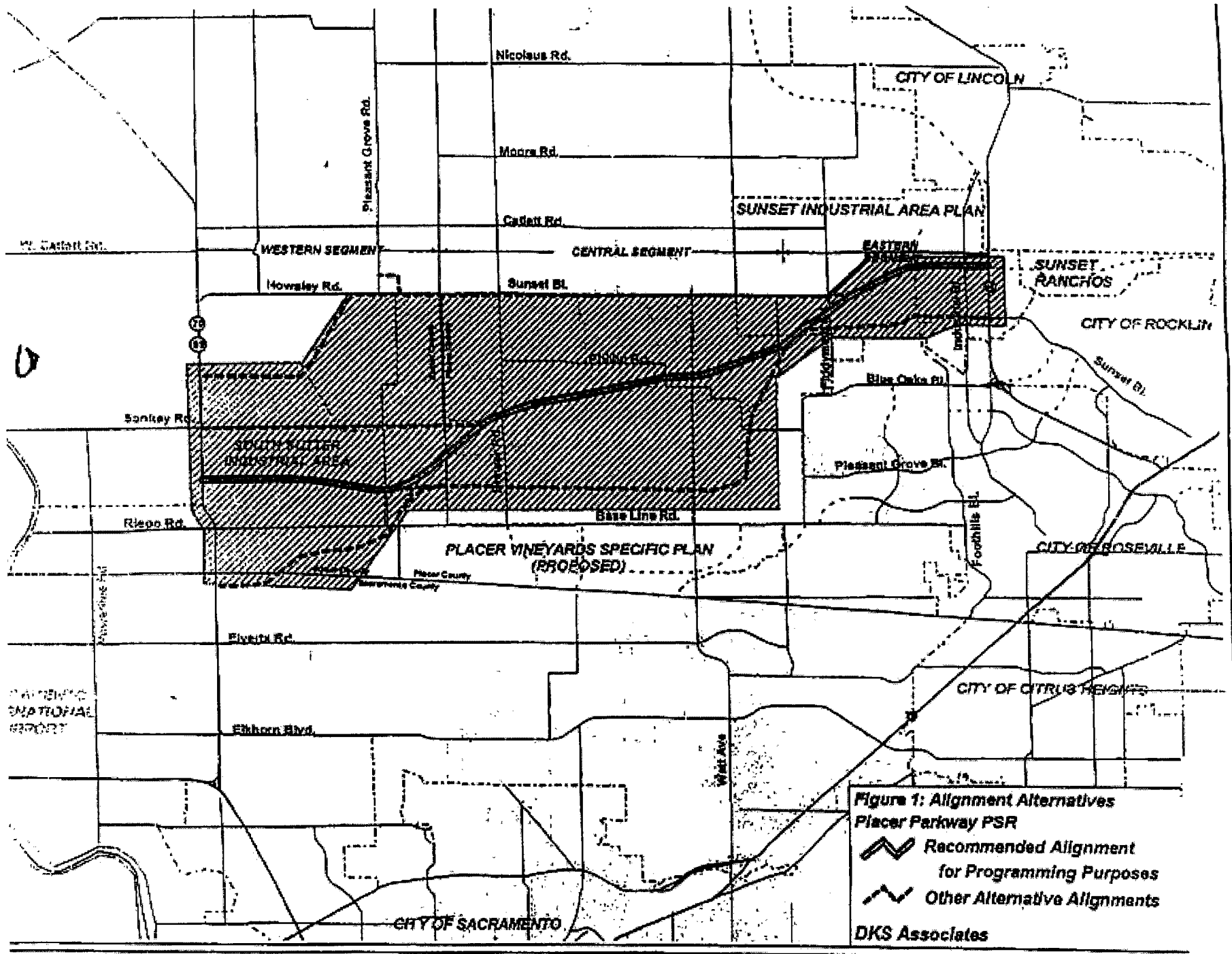
- Western – SR 70/99 to the Sutter/Placer County line -- with four alignments
- Central – Sutter/Placer County line to Fiddymont Road – with three alignments
- Eastern – Fiddymont Road to SR 65 – with two alignments

The western and eastern segments would contain interchanges at each State Route. The central segment – between Fiddymont and Pleasant Grove Roads would have no access. The PSR cited this central segment would contain an average maximum 1,000'-wide 'no-development buffer'. This corridor concept is to include and promote vicinity open space features. All of the alignment alternatives are to evaluate a 'with' and 'without' Watt Ave. extension during the project's environmental review.

Funding for the Parkway's environmental review was programmed in FY2002/03 in the 2002 RTIP. The proposed Parkway project is included in *the Placer County Regional Transportation Plan 2022 (PCTPA 2001)*. This document cites the project as a high regional priority. The project was also included the 2002 STIP and SACOG's recently adopted *Metropolitan Transportation Plan (MTP)* and the *Metropolitan Transportation Improvement Program (MTIP)*. In July, the California Transportation Commission allocated funding. In August, Caltrans authorized PCTPA to proceed.

Earlier this year, the newly formed South Placer Regional Transportation Authority (SPRTA) adopted a \$125 million Regional Transportation and Air Quality Mitigation Fee. New development in the south Placer County area will be assessed over the next 20 years to supplement federal and State funding for

regional transportation projects such as the Parkway. Approximately \$50 million will be collected for the Parkway.





COUNTY OF SACRAMENTO

PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT

827 SEVENTH STREET, ROOM 230
SACRAMENTO, CA 95814
Telephone: (916) 874-6141
FAX: (916) 874-6400

THOMAS W. HUTCHINGS
DIRECTOR

Robert Sherry, Principal Planner
Long Range Planning

Tricia Stevens, Principal Planner
Application Processing

Richard Maddox, Principal Officer
Code Enforcement

Ana Rhodes, ASO III
Administration

December 5, 2002

Field Supervisor
United States Fish and Wildlife Service
2800 Cottage Way, W-2605
Sacramento, CA 95825

RE: Comments on Draft EIR/EIS, Draft Natomas Basin HCP
State Clearinghouse No. 1997062064

Dear U.S. Fish and Wildlife Service:

Thank you for the opportunity to comment on the revised Natomas Basin Habitat Conservation Plan (NBHCP) and the Environmental Impact Report (EIR)/Environmental Impact Statement (EIS) prepared in conjunction with the draft plan. The enclosed matrix contains detailed comments on both documents, with an emphasis on technical and policy concerns and suggested areas for clarification or further analysis, particularly in the areas of land use, public safety, and water resources. The following comprises additional comments of the County of Sacramento on both documents, with a focus on general economic and policy concerns.

68-1

The NBHCP is crafted to support the issuance of "incidental take" permits to the City of Sacramento and the County of Sutter. Such permits are authorized to allow an otherwise lawful undertaking, which could result in incidental harm to an endangered species. In this instance, the otherwise lawful activity supported by the incidental take permits to be issued is the development of property within the City of Sacramento and the County of Sutter. While such permits will protect development activities of individual landowners, the permittees will be the City and the County. Against this general background, there are several potential shortcomings within the NBHCP and the permits that it is intended to support.

Land Uses

68-2

The NBHCP relies upon the assumption that "...consolidated . . . large, biologically viable units with connectivity between individual reserve units..." will be acquired. Without landowners willing to sell their properties to the Natomas Basin Conservancy (NBC) at a price the NBC can afford to pay, such acquisitions will not occur. Insofar as the NBC does not possess powers of eminent domain, it is unclear from the NBHCP how such acquisition will occur. Instead, there appears to be an assumption that existing land uses, other than that acreage which the NBHCP acknowledges will develop, will continue. Yet, this assumption relates, in large measure, to property over which no permittee has current jurisdiction.

Field Supervisor
 United States Fish and Wildlife Service
 December 5, 2002
 Page 2

69-3

Further, the strategy envisioned by the NBHCP relies extensively on continued rice farming within the Natomas Basin, even to acquiring conservation easements over existing rice farms. However, owners of such operations may discontinue rice farming at any time without a permit from any governmental entity, and without obtaining an incidental take permit. Water shortages or the escalating cost of this resource render rice farming infeasible. Impacts from such potential operational decisions are not discussed in the draft NBHCP or the EIR/EIS.

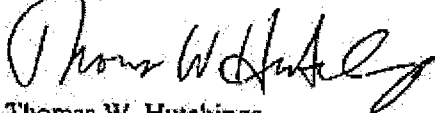
Financing

69-4

In connection with an incidental take permit and the related conservation plan, the permittees, City of Sacramento and County of Sutter, must "...ensure that adequate funding for the plan will be provided." Funding for the NBHCP relies upon a system of "mitigation" fees to be imposed on developers within the County and the City. The system of "mitigation" fees to support the NBHCP does not amount to financial assurance from the City of Sacramento or the County of Sutter. Such a system is dependent upon the continuing economies of development, which may or may not occur. Absent development, there is no fee and no continuing income to the NBC, other than investment interest.

The enclosed specific comments note significant, on-going obligations of the NBC for which more than interest earnings may be required. The County of Sacramento appreciates this opportunity to comment on the proposed NBHCP and the accompanying EIR/EIS.

Sincerely,



Thomas W. Hutchings
 Planning Director

AMW/GR

Enclosure

cc: Vicki Campbell, Division Planning, Conservation Planning - US FWS
 Jenny Marr, Wildlife Biologist, California Department of Fish and Game
 Robert Thomas, City Manager - City of Sacramento
 Gary Stonehouse, Planning Director - City of Sacramento
 Carol Shearly, Natomas Manager, Planning Department - City of Sacramento
 Paul Junker, Pacific Municipal Consultants
 Terry Schutten, County Executive
 Robert Ryan, County Counsel
 Hardy Acree, Director of Sacramento Airport System
 Robert Leonard, Assistant Director of Airports
 Dennis Yeast, Director of Environmental Review and Assessment

**COMMENTS ON
 DRAFT NATOMAS BASIN HABITAT CONSERVATION PLAN (NBHCP), JULY 2002
 AND
 DRAFT ENVIRONMENTAL IMPACT REPORT (EIR/
 ENVIRONMENTAL IMPACT STATEMENT (EIS), AUGUST 2002
 SUBMITTED BY COUNTY OF SACRAMENTO
 November 27, 2002**

Comments on Draft Natomas Basin HCP

Note: HCP=Habitat Conservation Plan, NBHCP= Natomas Basin Habitat Conservation Plan, City = City of Sacramento; SH = Swainson's Hawk; GGS = Giant Garter Snake, Airport or SMF = Sacramento International Airport, TNBC = The Natomas Basin Conservancy, USFWS=United States Fish and Wildlife Service, Garden Highway SPA = Garden Highway Special Planning Area.

The primary issues reviewed below are:

1. Airspace development needs of the Airport as it relates to the limit of 17,500 acres development in the basin
2. Water usage, wetlands, and the attractiveness of NBHCP mitigation lands to migrating waterfowl and other bird species, and the potential increase in conflicts with aircraft
3. Land Uses

	Page(s)	Issue	Comment	Concern
G8-5	I-1, II-1	A detailed description of Natomas Basin, "defined as the area, inside the peripheral levees, and extends to the toe of the levee on the Basin side of the boundary levees", was not provided until Chapter II.	It would be helpful if a detailed description were included on the first page of Chapter I.	After reading the Introduction and looking at Figure 1, Regional Location, it appears that the Basin extends to the Sacramento River, but the definition of the area on page II-1 infers that this is not the case.
G8-6	I-1, I-2, III-2 & throughout document	On page I-1, the plan discusses "loss of habitat values incidental to take of Covered Species" caused from "urban development". During the discussion of departures from the Operating Conservation Plan in the last paragraph on page I-2, "any additional urban development" is used and then followed by "any development". On page III-1, the discussion turns to "any development in excess of that authorized by this HCP" would trigger an amendment to the NBHCP.	The plan seems to use the word "urban development", "any urban development", and "any development" interchangeably throughout the document. These can mean different things to different people. Please clarify.	Do the phrases mean the same type of development? Is the development in question changing agricultural lands to "urban" uses? Or does it literally mean any new building including agricultural barns, primary residences, farm workers dwellings, etc.? If the definition includes all building permits, then "allowed development" under existing zoning in the unincorporated area of Sacramento County may not have been taken into consideration as "development".

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	Page(s)	Issue	Comment	Concern
G8-7	I-2, I-5, I-7, I-34, VII-4 - Table VII-1	"...the NBHCP's effect analysis account for a combined total of 17,500 acres of planned development occurring in the Natomas Basin (i.e., 15,517 acres within the City and Sutter County's permit areas and 1,983 acres of Metro Air Park (MAP) development in Sacramento County."	Acres development proposed includes the entire 17,500 acres (the limit of developable acreage considered by USFWS for the livelihood of the GGS). The designation of acreage between permittees fails to account for the likelihood of expansion at Sacramento International Airport (the Airport), which lies in the Natomas Basin.	The Airport is currently conducting a Master Plan for Sacramento International Airport, which includes Terminal and Airfield development. The HCP and USFWS need to consider the intentions of the Airport before designating the entire 17,500 acres.
G8-8	I-5, I-12	Use of acronyms.	What does "MAP" mean (used in the third paragraph)? A casual reader may not know it stands for Metro Air Park.	The first time an acronym is used, the full spelling should precede it. In this instance, MAP was not defined until page I-12.
G8-9	I-6 and Attachment A, p. 4.	"For purposes of the NBHCP, although the West Lakeside Annexation is proposed by the landowners to be annexed to the City of Sacramento, this area is currently located within Sacramento County and is not included in the 8,050 acres of Authorized Development or within the City's permit area." The proposed Implementation Agreement states that annexation of West Lakeside shall trigger reevaluation of the Plan and potential amendments and/or Plan and Permit revisions.	West Lakeside is not included in the City's 8,050 acres of Authorized Development or Permit Area. This potential development would also affect the total developed acreage. If the West Lakeside project is annexed into the City of Sacramento, the effects of this developed acreage will further push the limit of 17,500 acres.	See relative to Master Plan and Airport development above.
G8-10	I-11	The "Potential Permittees" section states that the County of Sacramento could obtain coverage under the NBHCP or under a similar HCP. "If the County of Sacramento considers new projects within the unincorporated area of the Natomas Basin in Sacramento County, the County may need to address mitigation for biological impacts via amendments to this NBHCP or through..." an HCP similar to the NBHCP.	This would require an HCP amendment and issuance of separate ITPs.	More specific language is needed in this section to enable the Airport to, as an institution to potentially become involved in designating its acreage needs.
G8-11	I-30	"The NBHCP, in making its estimate of the total additional urban development which would take place in the Plan Area during the next 50 years, took into account the land disturbance that will occur within the MAP project area (1,983 acres...)"	The NBHCP, in making its estimate, did not include potential development at the Airport.	See comments relative to Master Plan and Airport development above.
G8-12	I-36	Agricultural activities are included in the section "O. Activities Not Covered by the NBHCP".	What type of agricultural activities would require participation in the NBHCP or other HCP? Does the NBHCP require on-going agricultural activities to be covered by an HCP? Are on-going agricultural activities exempt from this type of process?	Farming currently occurs in the Natomas Basin. Without describing what types of agricultural activities are allowed, it gives the impression that all agricultural activities require some sort of HCP.

G8-18

G8-19

G8-20

Page(s)	Issue	Comment	Concern
III-4	"The residual rice straw in the fields after harvesting is typically burned, plowed under or flooded. Flooding to dispose of rice straw is becoming more prevalent as the practice of burning rice straw is being phased out due to air quality prohibitions. In addition to rotting the rice stubble, flooded rice fields provide wetland habitat for ducks, geese, and other migratory waterfowl."	The NBHCP proposed habitat types of 25% managed marsh, 50% rice production, 25% upland (page I-17).	<p>While rice has been produced in the valley since 1940, flooding of rice fields to eliminate stubble has only been prevalent since the early 1990's. In that period, Sacramento International Airport has sustained an increase in wildlife strikes to Aircraft of over 300%.</p> <p>Whereas the FAA designates an acceptable level of wildlife strikes at 1-strike/10,000 operations, the Airport had reported 1.3 strikes per 10,000 operations in 1990. Wildlife strikes increased steadily to 5.3 strikes per 10,000 operations in 1998.</p> <p>The NBHCP habitat types intend to "memorialize" rice production in lands around the Airport. This is a concern as it will increase the possibility of aircraft/bird conflicts and memorialize these uses as part of the plan.</p> <p>In addition to the threat to human lives associated with an accident resulting from a bird strike, airlines incur significant expense and lost revenue associated with aircraft downtime to repair wildlife strike damage.</p>
III-11	Although the permits are not relying on Airport buffer lands as mitigation for effects with the Natomas Basin, retaining these lands in agricultural uses will contribute to the overall success of the NBHCP conservation strategies for the Covered Species.	As such, the Airport should receive some mitigation credit toward Airport development interests since retaining Airport owned land in agriculture and/or limiting its use contributes to the success of the NBHCP.	In addition to a lack of consideration of Airport development interests in the 17,500 acreage calculations, the NBHCP assumes that no development will occur on Airport buffer lands, thereby reserving development for participating jurisdictions relative to the 17,500. This precludes Airport land use decisions on Airport-owned property and precludes potential for its use as mitigation property for anticipated Airport development from the Master Plan.
III-12, Table III-3	Notes Airport Land Plan Uses as "unspecified"	This connotes that no further development of the Airport is contemplated.	Growth of regional economy and air travel will obviously necessitate expansion.

	Page(s)	Issue	Comment	Concern
G8-21	III-13	Third sentence, first paragraph. "Sacramento County General Plan Land Use Map"	Please replace with "Sacramento County General Plan Land Use Diagram".	
G8-22	III-13	Second to last sentence, first paragraph. "All land outside of these policy areas is designated for retention as Agricultural Cropland by the Sacramento County General Plan."	This is incorrect. The majority of the land is designated as Agricultural Cropland, but there are areas near the current City of Sacramento limits in the southwest portion of the Basin designated for Agricultural-Residential uses and Commercial & Office uses.	Assumptions regarding "development" should reflect the existing land use designations. The underlying zoning of these areas allow for certain types of development that do not provide the nexus for local governments to initiate CEQA or federal review.
G8-23	IV-1	First sentence, last paragraph. "Current development approvals, City and County general plans and community plans, and other plans (including MAP) are the basis for estimating development rates anticipated in the Basin, the resulting habitat loss expected from the Covered Activities authorized by the incidental take permits, and for evaluating the corresponding environmental impacts pursuant to NEPA and CEQA."	Does the reference to the "City and County general plans and community plans" refer to only City of Sacramento and Sutter County or does it also include Sacramento County's General Plan?	If it includes Sacramento County's General Plan, the development rates and environmental impacts should be re-evaluated due to the misinterpretation of Sacramento County's General Plan Land Use Diagram. This area of Sacramento County includes Agricultural Cropland as well as Agricultural-Residential and Commercial & Offices land use designations. If it does not include the existing land uses designations (which allows some construction/development outright without environmental review for all three land use designations) as shown in the Sacramento County General Plan, how can the plan adequately address the additional environmental impacts to the Basin that the proposed covered urban development creates?
G8-24	IV-12, Figure 20	Out-of-Basin Reserves	The land area between the Sacramento River and the landside toe of the levee is out of the Natomas Basin per the definition provided on page II-1. It has not been identified as "Out-of-Basin Mitigation Area" or Area "B" on page IV-12 or on Figure 20.	According to the draft plan "up to 20% of the reserve lands may be established in 'Area B'". The land area between the Sacramento River and the landside toe of the levee is not within the definition of Area B. It should not be included in the definition of the Swainson's Hawk Zone as shown on Figure 13.

G8-25

G8-26

G8-27

Page(s)	Issue	Comment	Concern
IV-17	Water Regime: "...Water will be maintained within the managed marsh during the period when rice fields dry down."	As August 1 st through September 30 th is traditionally a dry period in the Sacramento valley, it is unclear what "natural" conditions are being created for the focused species at that time of year.	Federal Aviation Administration (FAA) Advisory Circular No: 150/5200-33 discusses "Hazardous Wildlife Attractants on or Near Airports". This Advisory Circular (AC) provides guidance on locating certain land uses having the potential to attract hazardous wildlife to or in the vicinity (within five miles) of public-use airports. The Airport is concerned that the creation of flooded areas in late summer/early fall will be an early season attractant for migrating waterfowl. Once established as an attractive stopover and wintering habitat, SCAS is concerned that this watering practice could also increase attraction to subsequent migrating flocks. SCAS is also concerned that this watering practice could also create an incentive for migrating waterfowl to become "resident" by reducing the dry season and helping create year-round conditions that are attractive to waterfowl.
IV-21	First sentence, last paragraph. "The NBHCP's primary strategies to mitigate impacts to the Swainson's hawk caused by Authorized Development is to avoid of (typo?) development in the Swainson's Hawk Zone..."	Neither the City of Sacramento nor Sutter County currently authorize development or have jurisdiction in the Swainson's Hawk Zone where it intersects with Sacramento County. A more accurate statement would be that the Natomas Basin Conservancy would avoid development in any lands they acquire in the Swainson's Hawk Zone or to add "avoid development in the Swainson's Hawk Zone inside Sutter County and the City of Sacramento", leaving out any reference to the unincorporated area of Sacramento County.	Sacramento County is not a participant or permittee in the NBHCP. However, Sacramento County has jurisdiction over the land inside the unincorporated area of Sacramento County adjacent to the Sacramento River. The current land use designations allow for certain types of construction to occur (i.e. primary dwellings, barns, sheds, etc.) through the local building permit process. These building permits for "allowed uses" do not provide the nexus for environmental review.
IV-21, Figure 13	Swainson's Hawk Zone	Please provide a definition of the land area covered by the Swainson's Hawk Zone. Figure 13 does not provide a clear view of the boundaries.	

ITEM NO.

P. 09

	Page(s)	Issue	Comment	Concern
G8-28	VI-40, Revision Example 13.	States: "Any other modifications to the NBHCP that are consistent with the biological the NBHCP that the USFWS..."	Words are missing. The reader is left to guess the meaning.	Without correct, accurate interpretation of this potential revision type cannot be made.
G8-29	Throughout the document	The plan does not clearly state who or what entity is responsible for updating the NBHCP if a separate HCP is completed within the Natomas Basin.		

Comments on Draft EIR/EIS for Draft Natomas Basin HCP

The primary issues reviewed below are:

1. Water supply may not be sufficient to continue sustaining rice cultivation compared to the value of the water for urban uses due to continued high growth in population, households, and jobs in the Sacramento region.
2. Swainson's Hawk Zone may preclude development within 1-mile of Sacramento River, therefore impacting SMP.
3. Impact of increase in flight operations

	Page(s)	Issue	Comment	Concern
G8-30	4-30	Change in land use acreage resulting from planned development.	Assumes that "Airport" acreage will decline by 39 acres.	It is implicitly assumed that SMF will not need additional acreage. In reality, additional acreage may be needed.
G8-31	ES-7, ES-8	Loss of Marsh Habitat, Sec. 4.4; marsh habitat will decline 8,512 acres because of authorized development.	The proposed mitigation measure: the development review process in the City and Sutter County will include a provision that projects capable of supporting jurisdictional wetlands will result in no net loss of wetlands, and will ensure that wetland functions and values will be maintained.	The proposed mitigation measure may be difficult to attain, and could preclude some projects. The only option in some cases may be to mitigate outside the Basin.
G8-32	4-32, 2-17, 4-22	Adequacy of water supply	EIR states "Reserves would be acquired with stipulation that adequate water supply is available to serve the anticipated needs (e.g. managed marsh, upland). EIR states (p. 4-22) that the "...Conservancy is not expected to experience water supply deficiencies as it purchases lands and develops habitat reserves."	It may be unrealistic to assume availability of a dependable water supply to support managed marshes and rice fields. The demand for water sparked by population growth and shortages elsewhere, coupled with the worsening economics of rice farming, may induce farmers and water suppliers such as Natomas Mutual to sell their water. See endnotes i and ii.
G8-33	4-33	Create high quality managed marsh in preserves in perpetuity.	Strategy to offset loss of wetland acreage by creating 2,187 acres of new marsh. Is preferable to rice fields as habitat.	There may not be sufficient water supply available because of growing urban use demands. (See "Adequacy of water supply" above.)

	Page(s)	Issue	Comment	Concern
G8-34	4-71; Fig. 2-5 (after p. 2-22).	Swainson's Hawk Zone: A corridor extending 1 mile East from Sac River levee, between the river and Natoma Cross Canal in the north and where I-80 crosses the river in the south.	Plan assumes no net loss of SH nesting habitat in the Zone. EIR states, "...no development in the Swainson's Hawk Zone would be permitted under the Proposed Action..." (p. 4-71). Also states, "The Proposed Action's primary strategy to mitigate impacts to SH is avoidance of development in the SE Zone and acquisition of upland habitat inside the SW Zone" (p. 2-21).	The zone intersects SMF to the north and south, and includes most of the SMF buffer territory. There may be future circumstances that could necessitate removing potential nesting sites in this area to maintain aircraft operating safety or to expand airport operations. Also, existing zoning in the unincorporated portion of Sacramento County between the Sacramento River and the Garden Highway (zoned the Garden Highway SPA) and the remainder of the unincorporated area inside the Swainson's Hawk Zone permits certain types of development outright as an allowed use. There is no nexus for environmental review for the allowed uses and construction may occur (i.e. primary dwellings, barns, sheds, etc.) through the local building permit process.
G8-35	ES-15	Noise	The EIR only evaluated the noise impact during construction of habitat reserves.	The potential noise impact on the development that will occur in the 17,500 acres of planned urban development from aircraft operations was not evaluated. (It may be hard to do, however, because the precise areas for development are not identified in the EIR.)
G8-36	ES-17; 4-159 - 64. See bird strike zone map, Fig. 4-2, after p. 4-160.	Public Health and Safety impact within bird-strike zones of SMF; Sec. 4.11.	(1) EIR states "less-than-significant" public health and safety impacts will result from creation of habitat reserves within bird-strike zone because of the similarity of habitat-reserve management with existing land uses, and that "...the concentration of waterfowl would not substantially change within the safety zones of SMF." (2) EIR states (p. 4-160) that "Under the Proposed Action, many existing rice fields within these zones (critical 5-, 2- and 1-mile zones of the airport) (including directly north of the airport) would be purchased for future habitat management; however land uses would not be changed." (3) EIR states that habitat reserves could be established north of SMF, and that such reserves can actually attract fewer waterfowl than rice fields. (4) EIR states that hunting programs in flocking areas of most concern to SMF could be beneficial. (5) EIR states (p. 4-164) that Proposed Action will not interfere with implementing SMF Wildlife Management Plan "...on airport property."	(1) This blanket statement may not be realistic, without including specific measures to reduce waterfowl attraction in water bodies. ²¹ It depends to some degree on where TNBC establishes reserves and their design. The non-significant finding seems to conflict with the statement on p. 4-160 that "The substantial acreage of rice lands north of SMF and in the general vicinity of the airport is a concern because of the heavy use of flooded rice fields by ducks and geese during the winter." It also overlooks potential increase in birdstrikes resulting from increased air traffic paralleling the region's population and economic growth. The "proposed Action" could forestall the Airport's ability to serve a growing region. ULI reports that job growth in the Sacramento region will be 29% between 2000 and 2010, exceeding both the state and national rates. (2) The EIR cannot assume that existing rice fields north of SMF, especially within 5 miles, will be purchased for future habitat management, when the County already owns all the land west of Powerline Rd and south of the Sacramento-Sutter County line (within the 2-mile bird strike zone). (3) Conversion of rice fields to habitat on County land would result in loss of agricultural lease revenue to the county. (4) Allowing gun use under aircraft approach and departure airspace may not be advisable in light of the events of 9-11-01, and may also conflict with FAA safety and security requirements issued since that date. (5) What boundaries did EIR assume for "Airport Property", just the 2,940 acres that comprises the Aircraft Operating Area, or did it also include the 2,497 acres of buffer land? (Note: SMF is comprised of 5,430 total acres.)

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G8-37 [

Page(s)	Issue	Comment	Concern
ES-8	Loss of GGS habitat	The plan would result in a net loss of 1,950 acres of GGS habitat (8,512 - 6,562).	This could stimulate increased requirements by resource agencies in terms of other projects and activities that could affect GGS habitat.

¹ The Urban Land Institute's (ULI) 2002 publication, *Economic and Demographic Trends in California*, forecasts that California will grow between 2000 and 2010 by 6 million people and 2 million households. The 4-county Sacramento region is the fastest growing in the state. ULI's 2002 report, *Putting the Pieces Together: State Actions to Encourage Smart Growth in California*, further estimates that the state population will grow by 12 million between 2000 and 2020, and 24 million by 2040.

² A report published jointly by the California Air Resources Board and the CA Dept. of Food and Agriculture states that a hypothetical rice farmer using typical farming methods in 1998 would have gained a cash net profit of \$274/acre, but including non-cash costs would have reduced the profit to just \$98/acre. Excluding revenue of \$172/acre from the Agricultural Transitional Program subsidy would have resulted in a net cash profit of just \$102/acre, and a net loss if non-cash expenses are included (imputed cost of capital invested in land, equipment and farmer's own labor). These payments will cease in 2003, making rice farming an even more precarious financial endeavor, and therefore subject to fluctuations in the cost of water. The cost of rice farming has risen since the 1991 Rice Straw Burning Reduction Act, with the cost of burning averaging \$2/acre compared to \$36/acre for incorporating straw into soil. Source: 1999 Report to the Legislature, *Progress Report on the Phase Down of Rice Straw Burning in the Sacramento River Valley Air Basin*. California Air Resources Board and California Department of Agriculture, February 2000.

³ FAA Advisory Circular 150/5200-33, 5/11/97, recommends the following separator criteria for sites that may attract wildlife hazardous to aircraft operations: (a) distance of 10,000 feet (almost 2 miles) from an airport's aircraft movement areas, loading ramps, or aircraft parking areas; and (b) a distance of 5 statute miles from aircraft approach or departure space. Such wildlife attractants include wetlands and wetland mitigation projects that may attract hazardous wildlife. This issue is important because aircraft collisions with wildlife annually cost the civil aviation industry \$300 million, and over 500,000 hours of aircraft down time (USDA, *Wildlife Management at Airport*, 1999, p. 1). Also, in the 1960s, 4-engine aircraft comprised 75% of the U.S. fleet of passenger, but by 2008 the number of 2-engine aircraft is expected to reach 90%.

Tossell, Bob/SAC

From: Sample, Brad/SAC
Sent: April 21, 2003 7:33 AM
To: Tossell, Bob/SAC
Cc: Kroetsch, James/KWO
Subject: FW: Inco Meeting wrt Port Colborne ERA/HHRA

Bob - you available to take part in this call tomorrow? We will be needing some input from you on the text for the SOQ at a minimum. If you can sit in on the call, that would be great. I've printed off a whole stack of text from the attached web sites - if you want to look at anything, let me know. Thanks!

Brad

BTW - I do have a charge number for your efforts!

-----Original Message-----

From: Whiffin, Brian/KWO
Sent: April 21, 2003 6:55 AM
To: Sample, Brad/SAC; Kroetsch, James/KWO; Rodricks, Larry/KWO
Cc: Hansen, Kurt/KWO
Subject: RE: Inco Meeting wrt Port Colborne ERA/HHRA

Background on the Port Colborne issues are provided at the websites listed below. We don't have many specifics about the ERA in hand at this point but we do have a hard copy of the Technical Scope of Work that I will ask Jim to get to you this week as I will be away all week. Protocols have been developed for the RA but we have not been able to review these to date. I have requested further information from INCO but have not received anything to date. What we know from limited discussions with Ministry of the Environment and Inco is as follows:

There are 3 concurrent risk assessment reports being prepared to develop community specific clean-up criteria. All 3 reports will require peer review. They are not planning on a peer review of the 4th report as it will be reviewed by MOE. The reports are:

- 1) ERA on natural environment (excludes humans/crops)
- 2) ERA on crops (oats as sentinel species)
- 3) HHRA (including baseline risks from supermarket produce, in vitro and in vivo measurements on Port Colborne soils)
- 4) Integration Report of the above including Remediation Options Analysis and recommended remediation option by lands use

Report 1) is the first one completed in draft and it is the focus of our meeting. However, we also want to showcase capabilities for the remaining 2 risk assessment reports as well as how we could input to 4) if the opportunity arises.

There will be a 6 week review period for each report.

Different firms may be selected for each review.

There are 4 COCs - nickel, copper, cobalt, arsenic

04/21/2003

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**Environmental Council of Sacramento
Friends of the Swainson's Hawk
National Wildlife Federation
Planning and Conservation League
Sierra Club**

December 5, 2002

Field Supervisor
U.S. Fish and Wildlife Service
2800 Cottage Way, W-2605
Sacramento, CA 95825

RE: Comments on Draft Natomas Basin Habitat Conservation Plan, dated July 25, 2002 and Associated Draft Environmental Impact Statement/Environmental Impact Report

Dear Sir or Madam:

01-1

We are writing on behalf of five conservation groups – Environmental Council of Sacramento, Friends of the Swainson's Hawk, National Wildlife Federation, Planning and Conservation League, and the Sierra Club – to comment on the Draft Natomas Basin Habitat Conservation Plan (NBHCP), dated July 25, 2002, and associated documents released for public review, including the Draft Environmental Impact Report and Environmental Impact Statement (EIR/EIS). We are also appending to this letter two consultants' reports (Hausrath Economics Group and Center for Natural Lands Management) that specifically address economic issues, and form an integral part of our comments.

As discussed below, the five conservation groups we represent were plaintiffs in *National Wildlife Federation v. Babbitt*, the litigation challenging the 1997 version of the NBHCP. The August 15, 2000, ruling in that case sets forth important ground rules for future HCPs in the Natomas Basin. We are deeply concerned about the failure of the City of Sacramento and Sutter County, the two proponents of the 2002 draft, to adhere to the directives in this ruling.

Environmental groups have participated in the public review process for the Natomas Basin Habitat Conservation Plan, as well as related local land use processes, since 1995. Our groups were parties to the May 15, 2001, settlement allowing certain land use activities in the Natomas Basin to go forward during the preparation of the current draft HCP, and we have followed closely the implementation of that settlement. We have retained economic consultants to advise us on agricultural and real estate development economics in the Natomas Basin and we have consulted extensively with the leading biologists on Basin species. As a result, we are highly cognizant of the biological and economic realities of the Basin. We are extremely concerned about the failure of the current draft to address some of these realities. If these failures are not corrected, the imperiled species of the Basin will be left without the legal protections they need to survive, and various agencies, local governments, developers, and conservation groups will likely become, once again, mired in litigation.

01-1 It is our sincere hope and desire that legally-required protections will be provided for the imperiled species of the Natomas Basin in the final draft of the NBHCP and that additional litigation will not be necessary. For this reason, we provide in first main section of our comments a "road map" for HCP revisions that we believe, if implemented, would satisfy the requirements of federal and state law and avert litigation. The second main section of our comments provides detailed explanations as to why the current draft NBHCP fail to satisfy the requirements of the federal and state Endangered Species Acts, National Environmental Policy Act, California Environmental Quality Act, and California Fully Protected Species Act.

01-2 Note that although the draft NBHCP proposes to cover 17,500 acres of new development and to mitigate for that amount, some 4,413 acres of this amount has already been developed by the City of Sacramento during the 1997-2002 period under the 1997 NBHCP and under the Settlement Agreement, and mitigated under conditions of those agreements.

I. SUMMARY OF CONCERNS

01-3 Although the draft HCP makes some important improvements over the 1997 HCP that was struck down by the U.S. District Court, it also repeats some of the 1997 HCP's most serious mistakes. The 1997 HCP set a .5 to 1 mitigation ratio based on the flawed premise that the lands to be acquired would have at least three times the habitat value of the lands to be converted to urbanization. As discussed below, undisputed scientific data proves this premise — repeated again in the draft HCP — to be inaccurate. Similarly, 1997 HCP makes an unfounded assumption that landowners across large swaths of land in the Natomas Basin will voluntarily (and without compensation) keep their land in agriculture and provide habitat benefits. The draft HCP does not make this explicit statement; instead it simply ignores the substantial amount of land in the Basin, above and beyond which would receive take permits, that is under intense development pressure. Many of these lands must be protected in some fashion to achieve the habitat connectivity and other goals of the NBHCP.

01-5 These comments explain how the HCP must be revised to provide for the long-term viability of Natomas Basin wildlife while addressing the political and economic constraints of Natomas Basin jurisdictions and developers. Relying on comments submitted separately by independent scientists, we demonstrate the need for, and the practicability of, a mitigation ratio of 1.17 acres of Natomas habitat preserved for each acre of development, rather than the proposed .5-1 ratio. We also explain why the ultimate habitat and agriculture area in the Basin must comprise at least 28,500 acres. Included would be 17,500 acres of habitat acquired as mitigation, maintenance of the existing 4,000 acres of airport buffer lands, and an additional 7,000 acres of open space uses, focused on agriculture. This might include additional canals, ponds, restored marsh areas, and additional airport buffer lands. It could also include limited park lands and trails for public use, associated interpretive centers, restroom and parking areas, native plant and tree nurseries, community gardens, wildlife viewing areas, fishing and boating access, boardwalks and forested areas.

01-5 Put simply, these comments set forth a vision for the Natomas Basin that should be attractive to all stakeholders in the debate. We look forward to engaging in a detailed discussion of each of the elements of our proposed revisions.

II. HCP REVISIONS NEEDED TO SATISFY REQUIREMENTS OF ESA

01-6 To satisfy the ESA, an applicant for an incidental take permit must satisfy three basic requirements. It must submit an HCP that will not “appreciably reduce the likelihood of survival and recovery” of imperiled species substantially worsen the covered species’ prospects for survival and recovery (*see* ESA 10(a)(2)(b)(iv)). It must provide additional biological protections in the HCP where feasible (*see* ESA 10(a)(2)(b)(ii): applicant must minimize and mitigate the impact of takings “to the maximum extent practicable”). And it must ensure adequate funding to carry out the HCP (*see* ESA 10(a)(2)(b)(iii)). In *NWF v. Babbitt*, the court held that the U.S. Fish and Wildlife Service (FWS) arbitrarily found that the City of Sacramento had satisfied these three requirements with respect to the 1997 NBHCP. To comply with these requirements, and the elaboration on these requirements set forth in *NWF v. Babbitt*, the City of Sacramento and Sutter County must revise their HCP to include the following features.

A. Key Features of an Acceptable HCP

I. Mitigation Ratio

01-7 The draft NBHCP requires only 1/2 acre of mitigation land to be acquired for each 1 acre of development. As explained in greater detail below, this mitigation ratio is inadequate to provide protection for the covered species and creates considerable economic and biological uncertainty for the Basin as urban development occurs.

01-7(B) An acceptable HCP would require a 1.17 to one mitigation ratio on the remaining lands to be permitted and have as one of its objectives the creation of a habitat and agriculture area in the Basin comprising 28,537 acres. The ratio is derived from a one to one mitigation ratio that is adjusted for the 13,087 acres of land remaining to be permitted to 1.17 acres of mitigation land for each acre developed. Since 4,413 acres have already been permitted at a lower ratio, and 2,200 acres of mitigation land acquired, the higher ratio is necessary on the remainder to achieve the desired outcome.

01-7(C) Included would be 17,500 acres of habitat acquired as mitigation, including minimum 200 foot easements on each side for canals passing through urbanized areas, maintenance of the existing 4,000 acres of airport buffer lands, and an additional 7,000 acres of open space uses, focused on agriculture. This might include additional canals, ponds, restored marsh areas, and additional airport buffer lands. It could also include limited park lands and trails for public use, associated interpretive centers, restroom and parking areas, native plant and tree nurseries, community gardens, wildlife viewing areas, fishing and boating access, boardwalks and forested areas.

01-7(D) The Land Use Table below compares the 1997 HCP’s targeted land use, the current draft HCP’s targeted land use and an acceptable HCP’s targeted land use. The acceptable HCP would

not exceed 25,000 acres in urban use. It would allow 17,500 acres of new development after 1997, with the remainder of the 25,000 acres derived from urban uses existing prior to 1997. Habitat acquired through the one-to-one mitigation ratio would yield habitat preserves of 17,500 acres. Airport owned buffer lands maintained in agriculture are about 4,000 acres. The remaining 7,000 acres would be acquired using grants and other means, including profits from agricultural operations. Management costs would be paid from agricultural revenues. The lands would be managed to preserve agriculture in the Basin to support habitat protection as well as the health of the agriculture industry. Public trails could also be included. All lands not in urban development would thereby be under one management, the Natomas Basin Conservancy, and coordinated by that Conservancy to maximize collaboration between agriculture, habitat preserves, water, flood and drainage agencies, and the airport. Landowners who want to farm would thereby be assured that agriculture will remain viable in the Basin.

Land Use Table*

	1997 Use	Draft HCP	Acceptable HCP
Existing Urban/Rural Res	4,231	4,231	4,231
Airport	1,551	1,551	1,551
Highways	1,435	1,435	1,435
Proposed development		17,500	17,500
Total Urban	7,217	Unknown	24,717
Land for future development	remainder	Remainder	None
Existing Airport Buffer in Ag	4,000	4,000	4,000
Proposed Preserve	-	8,750	17,500
Canals, ponds, groves	924	Decrease	924
Agriculture, include. pasture	36,606	Remainder	6,396
Idle, Ruderal, Grassland,	4,790	Remainder	0
Other			
Total	53,537	53,537	53,537

* Derived from NBHCP III-7, Table III-4

By sustaining farming, the proposed revision to the HCP would provide significant economic stability and diversity to the Basin, while preventing jeopardy to listed species. All the agricultural lands would be under the control of the habitat manager in order to avoid conflicts between agriculture and habitat needs and to reduce overall uncertainty. However, ultimately the agricultural community would be a full participant in the operation of the Conservancy. Centralized management of non-urbanized lands would provide major benefits to all parties and substantially reduce risks and losses from factors beyond the control of the HCP or private parties (disease, contamination, sabotage, catastrophic flood or drought).

01-7(D)

2. Cap on amount of land to be developed.

The 1997 HCP assumed only 17,500 acres of land would be developed in the Natomas Basin in the next 50 years, that 8,750 acres would be preserved and managed as habitat and that other lands would continue to be used by private landowners for agriculture. The present HCP

01-8

01-8

covers 17,500 acres of land to be developed, and states that other lands are likely to be developed in the future. By so stating, the City of Sacramento and Sutter County are telling developers and landowners that these agencies may permit future development of lands zoned agricultural and outside of the 17,500 acres. This approach will frustrate the ability of the Natomas Basin Conservancy (NBC) to acquire lands needed to carry out the NBHCP's conservation program, because landowners who have been led to expect urban development entitlements will not sell to the Natomas Basin Conservancy for reasonable prices, or at all.

01-8(B)

An acceptable HCP would state as its objective that only 17,500 acres of land in Natomas can be developed (starting 12/31/97, the effective date of the former NBHCP) and that all other remaining lands in the Basin will be acquired or managed for habitat and habitat-friendly agriculture, with public trails, interpretative centers and parking areas. The 1997 USFWS Biological Opinion, plus recent data in the EIS/EIR showing the importance of virtually the entire basin to covered species, provides the basis for setting the maximum amount of development for the basin at 17,500. The 17,500 acre cap includes all infrastructure necessary to serve urban development, including any detention basins or wastewater treatment facilities.

An acceptable HCP would ensure that a minimum of 10,500 acres is managed for Swainson's Hawk and other upland species west of Highway 99/ El Centro Road, and alongside the south of the Natomas Cross Canal. It would ensure that a minimum of 14,000 acres of land and associated canals, ditches and drains throughout the habitat areas are managed for Giant Garter Snake and other wetland species.

3. Habitat Zones/ Location of Mitigation Land

01-9

The draft NBHCP requires minimum sized preserves and connectivity between preserves, but it does not designate areas to be targeted for acquisitions. This approach has already produced harmful results under the 1997 HCP scattered land acquisitions, with large "edge effects" between urban and habitat land uses and added habitat management costs; and speculation in land prices. The HCP must be revised so that the plan's objectives of habitat contiguity and affordability can be achieved.

01-9(B)

An acceptable HCP would designate habitat areas in the Basin to be permanently preserved, designate areas to be developed, and would hold in reserve other areas where future development or habitat could be located. (See Map A) In general, habitat would be designated for remaining agricultural zoned lands west of Highway 99, within one mile south of the Cross Canal, at least one mile wide adjacent to the boundary of Sutter and Sacramento Counties, and include all existing NBC preserve lands. An exception would be made for the Brennan parcel, which is an isolated parcel in an area designated by Sutter County for development, and therefore would not be retained as preserve land.

The ultimate NBC preserve in the Northeast corner of Sacramento County would include at least 1,600 acres of contiguous habitat. No take permit would be issued that could preclude such a preserve. No take permit would be issued to the Sutter industrial development west of Pacific Avenue except for a 50 acre section on the east side Highway 99, to be located at least one-half mile north of the County boundary.

01-9(C)

Based on the performance of the 1997 NBHCP, we know that without new safeguards high quality habitats within the southern Basin will be destroyed and only partly mitigated with lower quality habitat in the northern Basin. Substantial harm could result if acquisitions are not located and staged to protect threatened populations most affected by the City of Sacramento's past development and the likely rapid development of the rest of the City's permit area in the near future. Therefore, an acceptable HCP would require the remainder of the City of Sacramento's permitted development to be mitigated within the County of Sacramento.

4. Conservation Strategies for Uplands and Wetlands

01-10

The 1997 HCP was vague about the overall allocation of habitats among the 8,750 acres preserved, although the fee estimation procedure assumed all lands acquired would be rice lands north of Elverta Road. The draft successor HCP adds specificity. Three quarters of the lands acquired are to be managed for wetland species (6,562 acres), with one-quarter to be managed for upland species (2,188). As our comments elsewhere demonstrate, the conservation strategy, upland, marsh and rice land proportions, land management regimes and connectivity implementation, and guarantees of water supply and water quality for wildlife are inadequate for mitigating the 17,500 acres of habitat displaced by urban uses, and the effects of urbanization on preserve areas.

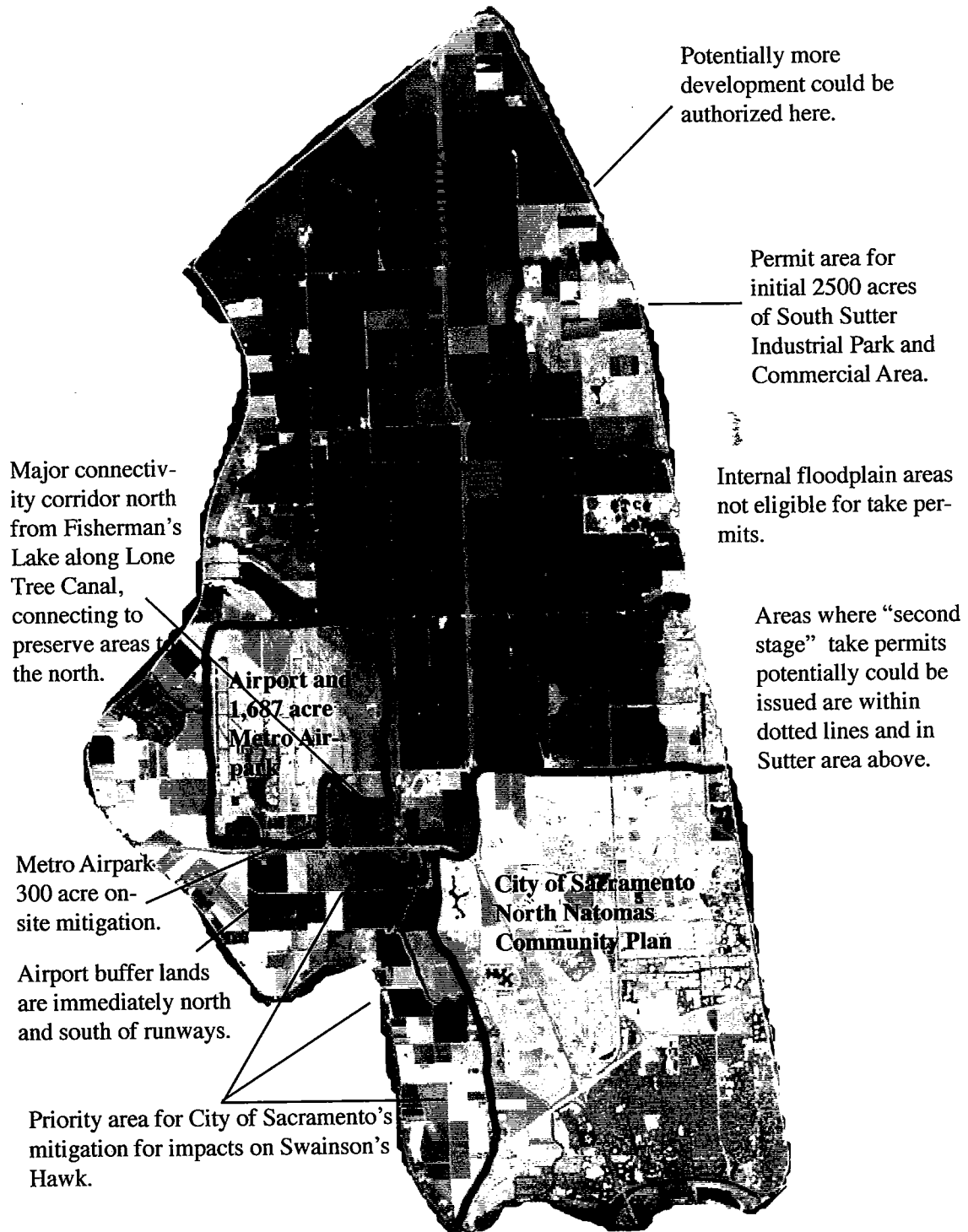
01-10(B)

An acceptable HCP would set forth detailed management prescriptions for 28,000 acres of non-urban land in the Natomas Basin. At minimum, 10,500 acres of acquired preserve lands west of the I-5/Highway 99 corridor and potentially along the Cross Canal, would be managed for Swainson's Hawk, with at least half that acreage in alfalfa or other suitable crop. Initially upland preserve areas would be managed entirely for maximum forage (alfalfa, if feasible, or other suitable crops) and subsequent changes in management practice as the preserve matures should depend upon positive biological findings, or new evidence on forage values. Preserve areas would be at minimum 1,000 acres in size. Priority acquisitions would add to existing preserve areas until 1,000 acres are acquired. Fallowed lands (including rice lands) would be planted in cover crops to increase forage values for all raptors. Connectivity between preserve areas will be guaranteed and enhanced through habitat management of interconnecting canals with 200 feet of conservation easement on each side where needed to buffer from urban encroachment. Fisherman's Lake would be protected on the east by at least an 800 foot habitat area. The City would not receive a take permit for the 180 acres in the "Swainson's Hawk Zone" that have been included in the North Natomas Community Plan. An acceptable HCP would condition issuance of an ITP to Sutter County upon Sutter's prior completion of public wastewater collection and treatment facilities which do not discharge into Natomas Basin, and a public stormwater drainage system meeting water quality requirements.

01-10(C)

An acceptable HCP also would include at least 14,000 acres in rice production, marsh and canals managed for giant garter snake and wetland species. Preserve areas would be at minimum 1,000 acres in size. Priority acquisitions would add to existing preserve areas until 1,000 acres are acquired. Marsh habitat would be encouraged through low cost methods where natural conditions favor marsh, and managed to be compatible with airport needs. Conversion of

Map A: Environmental Organizations "Acceptable HCP" Discussion Map of Natomas Basin



01-10(C) rice land to marsh land would be limited to unproductive edges and require an NBC technical and board finding that such conversion is necessary to achieve adequate protection for the Giant Garter Snake.

5. Authorized Development: Staging of Take Permits

01-11 The 1997 HCP and the present draft provide one permit to each land use jurisdiction to cover thousands of acres of development. While adaptive management techniques exist to fine tune mitigation effectiveness over time, and a 9000 acre review point allows for evaluation of the plan, the proposed allocation of take authority is simply arbitrary and based solely on today's land use expectations in a dynamic market in which these could change dramatically. The "one permit covers all" approach is simply not responsive to the biology or the economics of land development in territories occupied by endangered species. Also, the 17,500 acres of authorized development does not include the numerous projects by public agencies including SAFCA, Sacramento International Airport, Natomas Mutual Water Agency, Caltrans and Sacramento County Public Works that will be built outside the Draft NBHCP permit areas, and in excess of the 17,500 acres permitted by the NBHCP, to accommodate urban development and on-going responsibilities of these agencies.

01-11(B) An acceptable HCP would provide a take permit to the City of Sacramento for its 8,050 acre North Natomas Community Plan area, which is already partly built out, and would reserve 3,000 acres of take for Sutter County for legally authorized development in the Basin. It would assume 1,683 acres (instead of 1,983) at Metro AirPark. These totals would include all development and related infrastructure, including detention ponds. We see a potential of 4,757 acres that could shift among agencies and jurisdictions, within designated areas previously established by an Acceptable HCP. We would support a fast-track ITP amendment process to allocate these acres in the future (not exceeding the 17,500 acre cap) if jurisdictions would be required to first utilize existing take authorization before new lands would be permitted to receive take authorization. We would also like to see projects requiring a separate Section 7 analysis by USFWS conform to the HCP with mitigation requirements to be reviewed and approved by the Natomas Basin Conservancy and integrated with the Conservancy's program, and be included in the 17,500 acre cap.

6. Water Agencies and SAFCA as Partners and Participants.

01-12 The draft NBHCP acknowledges the key role that two water agencies — Natomas Mutual Water Company (NMWC) and Reclamation District 1000 — play now and in the future for habitat for the Basin. The projects of the Sacramento Area Flood Control Agency (SAFCA) will likewise have major habitat impacts. However, the Plan fails to involve SAFCA, and the two water agencies withdrew from Plan participation in February, 2002.

01-12(B) An acceptable HCP would require active participation by the two water agencies and SAFCA in order to ensure the continued viability of agriculture and habitat in the Basin in perpetuity. In order to involve these agencies fully, there must be incentives for them to participate. The HCP mitigation ratio described above would provides such incentives. By permanently limiting urban development to 25,000 acres, the HCP would provide SAFCA with

01-12(B)

greater certainty about the flood protection needs it must plan for. With 28,000 acres of land guaranteed to be in agriculture and habitat, the water agencies would be assured continued operations in perpetuity. Over time, their constituency and client base would shrink to one party, the Natomas Basin Conservancy. These agencies therefore would have a big incentive to be engaged in the habitat plan and to be parties in the governance of the Conservancy.

01-12(C)

During the early years, before land ownership shifts to NBC, these agencies rightfully should be compensated by NBC for their contribution to habitat protection on canals, ditches and drains not under NBC ownership. Therefore, mitigation fees should include costs of working with water agencies on canal management and acquisition of canals that may be abandoned as well as conservation easements along these canals.

01-12(D)

Of grave concern is any potential water transfer out of the Basin. Any water transfer agreements between NMWC and other parties should be subject to review and approval of the NBC TAC and be compatible with the NBHCP. Likewise, flood control projects undertaken by SAFCA should be compatible with the NBHCP.

01-12(E)

A Memorandum of Understanding that acknowledges the evolving partnership and includes a canal maintenance plan, management practices and annual fees is an essential component of an acceptable HCP. Without formal agreements with NMWC, RD 1000 and SAFCA and compliance by these agencies with take permits, any Natomas Basin HCP fails the basic test. US Fish and Wildlife Service can further assure this cooperation by making Section 7 no jeopardy findings for water and flood agency projects contingent on such an agreement.

7. County of Sacramento As Partner and Participant

01-13

The draft NBHCP does not include the County of Sacramento as a party. Both the County in its land use authority and the County's Department of Airports have done significant damage to habitat and species without applying for take permits or mitigating for impacts on species. In addition, the ability of the County to allow much more intensive residential and commercial use of lands under its jurisdiction remains a major threat. Attached as EXHIBITS 1 and 2 are documents listing recent County permits for small-scale urban development in Natomas without ITP's or mitigation for species impacts, and documents concerning County Airport's destruction of SWH nest trees, along with nearly 100 other trees, and illegal filling of wetlands.

An acceptable HCP must have the County of Sacramento as a party and participant. It would also prohibit the County of Sacramento from permitting any further development and re-zoning to ag-residential use in the Swainson's Hawk zone, west of El Centro Rd, south of I-5, and west of the Airport, and it would require the County to require habitat mitigation fees for all construction in accordance with existing zoning on parcels of less than 40 acres. US Fish and Wildlife Service is in a position to require the County to participate in the NBHCP because the Metro AirPark development in Sacramento County is under legal challenge for an Endangered Species violation, the US FWS could require the County to become a party as part of the resolution of those issues.

8. Governance

The draft HCP calls for much of its implementation to be carried out by a non-profit association, the Natomas Basin Conservancy. The Conservancy Board members are appointed by the land use jurisdictions. Up to the present, the NBC Board has been appointed by the Mayor of the City of Sacramento and confirmed by the City Council. Looking ahead, there is potential for a Board that is split between two jurisdictions with significantly different interests, and mired down in territorial and policy disputes between those jurisdictions.

01-14

An acceptable HCP would include a new governance structure that allows Board participation by a variety of parties. It would include an appointment committee to make appointments to the NBC Board (and a change in NBC bylaws for that purpose). The number of Board members would be fixed at 7. The appointment committee would be comprised of the regional directors of USFWS, CDFG, the Mayor of Sacramento, the Chair of the Boards for Sutter County, Sacramento County, SAFCA, RD 1000 and Natomas Mutual Water Company. Employees or current board members of any of the appointing agencies would not be eligible for Board appointment.

9. Funding Guaranteed by the Applicant.

01-15

An acceptable HCP would require land that adequate and appropriate mitigation lands, approved by the NBC, USFWS, and CDFG, are acquired before grading begins. To guarantee that adequate operations and management funds are available during the lifetime of the plan, our proposed revised HCP would have a back-up funding mechanism to be triggered by the land use agencies on request by either of the regulatory agencies. The back-up mechanism could be a bond or an assessment district (provided that levy of special taxes do not require landowner approval after development has occurred).

B. The Revised HCP as Proposed Is Feasible.

01-16

The above outline of an acceptable HCP includes elements from environmentally superior alternatives analyzed in the EIR/EIS. The NBHCP at VII-65-69 outlines reasons why applicants believe that the proposed plan meets statutory requirements and why a higher mitigation ratio is not feasible. Our comments below explain why we disagree. Specifically, the NBHCP at VII-69 states that "a mitigation ratio above .5 to 1 would require the purchase of more reserve lands as mitigation. This would result in a higher price per acre for land, forcing the mitigation fee above the acceptable margin, and making the development infeasible." It also says: "approving too high of a mitigation fee could make development infeasible, making it impossible to achieve the goals and objectives of the Land Use Permittees." One flaw in this analysis is that it doesn't address the net effects on fees of the larger mitigation ratio. (See comments by Hausrath Economics Group, and Center for Natural Lands Management, attached.)

01-17

The economic advantages of the proposed revised HCP include:

- * there is ample land available for purchase for mitigation land since 28,000 acres of the Basin will not be eligible for a take permit for urbanization and will be planned to be preserve land;

- the additional land available for species protection in the proposed revised HCP means that the land does not have to be as intensively managed as in the Proposed Plan, so restoration and enhancement portions of the fee would be far less. Under present base case conditions, GGS habitat exceeds 24,000 acres and SWH habitat exceeds 22,000 acres. Our proposed HCP retains permanently in one large preserve, 28,000 acres to be managed for these species, and protects the most sensitive areas that have been historically used by these threatened species. Thus the habitat lands need only be improved by 60 percent over all to achieve full mitigation of impacts, rather than the 300 to 500 percent improvement in habitat value contemplated under the draft HCP.
- since mitigation land will be acquired before grading, there will be no need for a supplementary endowment to guarantee that all lands required for mitigation are purchased (per acre fees will be lower);
- speculation in land prices for development will be sharply curtailed in the basin, thus reducing the cost of acquiring habitat lands, and making it possible to use grants to acquire land at a fair habitat land value.
- the productivity of agricultural lands under management of the Conservancy provides greater income to the Conservancy for management and administrative costs, and for acquisition of additional agricultural land;
- there is assurance of a permanent water supply at a scale that makes water affordable for agricultural and habitat purposes;
- the option of using conservation easements is much more attractive under the Acceptable HCP scenario than the Draft HCP for both farmer-landowners and for the regulatory agencies and Conservancy, thus reducing the cost of land;
- local government will receive higher revenues from preserves maintained in agricultural uses than from intensively managed preserve uses, and also have less costs and conflicts between uses than were development permitted throughout the basin, interspersed with intensively managed preserve areas;
- the net costs to local governments of lands in open space would likely be lower than would be incurred if the same lands were developed;
- developers will likely directly pay for much of the administrative cost of acquisition since grading will depend on habitat land being acquired first, thus reducing fees per acre;
- the cost of managing and monitoring preserves will be lower per acre and large preserves will require much less fencing and clean-up from public intrusion;
- the scale of agricultural operations will ensure that economies of scale are achieved in production, thereby enhancing farming income;
- the plan allows for additional, future, undefined development totaling over 6,000 acres in the Basin, and ensures that only the highest and best uses of the developable land are attracted to the Basin. Land to be developed is confined to specific areas where urban infrastructure can be cost-effective and conflicts with habitat and agricultural uses are minimized.

Environmental advantages include:

- the water and reclamation districts are engaged as full economic partners in the maintenance of the preserve, thus reducing uncertainty about water supply, quality, and canal management regimes.
- “edge effects” and conflicts with urban uses are greatly reduced;

01-17

- connectivity between preserve areas is assured;
- fragmentation of regulatory effort is minimized with one plan for the Basin to which all parties in the Basin must comply;
- the risks of mitigation failures are minimized by the scale of habitat and agricultural lands permanently preserved.

III. THE CONSERVATION PROGRAM FAILS TO ENSURE THE CONTINUED VIABILITY OF THE COVERED SPECIES IN THE NATOMAS BASIN AND OTHERWISE FAILS TO SATISFY THE REQUIREMENTS OF FEDERAL AND STATE LAW

A. There is No Basis for the Assertion that the Draft NBHCP Will Not Appreciably Reduce the Likelihood of Survival and Recovery of Covered Species

1. Protection of the existing population of Giant Garter Snake ("GGS") in the Natomas Basin is essential to survival and recovery of the species.

01-18

In its Biological Opinion #PN 199200719, March 11, 1994, "Endangered Species Act Consultation On the Revised Natomas Flood Control Improvement Project," found that the American Basin, consisting largely of the Natomas Basin, had the largest remaining extant population of GGS in existence. "Absent measures to address the prospect of future basin-wide losses of existing giant garter snake habitat," urban development resulting from flood protection "could extirpate the giant garter snake population from the American Basin." *Id.* pg. 4. The Service found that "*maintenance of a viable population of Giant Garter Snake in the American Basin (Natomas) is vital to the survival of the species.*" *Id.* pg. 5. (EXHIBIT 3).

The USFWS Draft Recovery Plan for the Giant Garter Snake, July 1999, found that protection of the Giant Garter Snake in Natomas Basin is a "Priority 1" recovery task, *Id.* pg. 51, which the Draft Recovery Plan defines as "*an action which must be taken to prevent extinction or to prevent a species from declining irreversibly*". *Id.* pg. 48.

The Draft NBHCP acknowledges that, without measures to avoid, minimize, and mitigate impacts of development, the City's and Sutter County's development would adversely affect the continued existence of GGS in the American Basin. *Id.*, pp. VII-7-8, VII-9.

01-19

2. Protection of the existing populations of Swainson's Hawk ("SWH") in Natomas Basin is essential to survival and recovery of the species in California.

CDFG's California Endangered Species Act Consultation for the American River Watershed Investigation (1990) found that "*The Natomas area reach of the Sacramento River provides one of the highest concentrations of Swainson's Hawk nesting territories in California.*" *Id.* pg. 4. "The Department believes that the Natomas area is an *essential habitat for the remaining Swainson's Hawks in the Central Valley*. This species cannot sustain significant losses of nesting and /or foraging habitat as a result of development activity in the region." *Id.* p. 7.

FWS's December 17, 1997 Biological Consultation of the former NBHCP found that "The nesting population (of Swainson's Hawks" along the Sacramento River levee adjacent to the Natomas Basin "is considered so significant by CDFG that its loss or reduction could cause them (CDFG) to seriously evaluate a change in the status of the Swainson's Hawk from threatened to endangered." *id.* pg. 5.

01-19

The Draft NBHCP itself, p. VII-11, says that "The Natomas Basin provides foraging and nesting habitat for the Swainson's Hawk and is important to the continued viability of the Swainson's Hawk."; and acknowledges that without measures to avoid, minimize, and mitigate impacts of development, the City's development "might adversely affect the continued existence of SWH in the Basin." *Id.*, pp. VII-14.

3. There Is No Basis for the Draft NBHCP's Assertion that the .5 to 1 Mitigation Ratio Will Fully Mitigate for Impacts on Species and Not Appreciably Reduce the Likelihood of Survival and Recovery of the Giant Garter Snake and the Central Valley Population of Swainson's Hawk.

01-20

In light of the critical importance of Natomas Basin to the survival and recovery of two imperiled species, it is imperative that the NBHCP use great caution to prevent irreversible species decline. The imperative for caution is especially obvious where the mitigation for impacts of take are not implemented until after habitat destruction, and the efficacy or failure of the mitigation program will not be known for many years, when it is too late to undo mistakes. See FWS Section 7 Consultation Handbook (calling for FWS to err on the side of imperiled species in the face of incomplete information).

Yet the Draft NBHCP does the opposite: only 1/2 acre is protected to "mitigate" for destruction of each acre of habitat of imperiled species. There is no basis to believe that the .5 to 1 "mitigation ratio" will fully mitigate for impacts or avoid reducing the survival and recovery prospects of the imperiled species. The Draft NBHCP's assumptions about the quality of habitat lost in comparison to quality of habitat conserved are not substantiated by the EIR/EIS or by independent biological opinion. For more detail on this issue, please review separate letters from the Swainson's Hawk Technical Advisory Committee and from Friends of the Swainson's Hawk.

01-21

a. Habitat Conservation Plans Usually Provide A Mitigation Ratio Of One Or More Acres Preserved For Each Acre Developed.

The U.S. Environmental Agency, in its comment letter dated September 30, 2002, "Detailed Comments" attachment, pointed out that "habitat conservation plans usually provide for a mitigation ratio of one acre of mitigation land for every acre lost".

01-21(B)

Other HCP's in the Central Valley typically require a 1 to 1, 2 to 1, or even 3 to 1 mitigation ratios. The San Joaquin County HCP (adopted 2001) requires a 1 to 1 mitigation ratio for lands converted from agricultural use, including fallow land, (except vineyards and orchards).

San Joaquin's farmlands are foraging habitat for the Swainson's Hawks, (the major species covered by the San Joaquin HCP). The San Joaquin HCP also requires 3 acres of compensation for every acre converted from "natural" land, including aquatic habitat AND man-made canals and drainage ditches (unless lined with concrete), a striking contrast to the .5 to 1 of the NBHCP. The San Joaquin HCP permits a .5 to 1 mitigation ratio only for "multi-use open space lands" consisting of vineyards, cultivated parks, orchards, and similar uses which are clearly little nor no habitat value. Conversion of occupied GGS habitat, identified in the San Joaquin Plan, is forbidden.

01-21(B) The Draft Yolo County HCP, and the Preliminary Conservation Strategy of the Draft South Sacramento County HCP require a 1 to 1 mitigation ratio for conversion of farmland similar to Natomas non-rice farming. These areas are also foraging habitat for Swainson's Hawks. The Metropolitan Bakersfield HCP (1994) requires a 1 to 1 mitigation ratio for conversion of agricultural and "open land", and 3 to 1 ratio for conversion of "natural land".

01-21(C) Brookfield Homes/NTI has offered a 1 to 1 mitigation ratio for its proposed development north of the City. (EXHIBIT 4, p.2) The City of Sacramento's proposed "Joint Vision" for Natomas proposes a ratio of one acre of open space, including species habitat, for every acre developed. (EXHIBIT 5, p. 14)

b. The Wildlife Agencies' Previous Agreement To A .5 To 1 Mitigation Ratio In The Early Negotiations Of The NBHCP Was Conditioned Upon Implementation Of Other Species Protections Measures Which Are Absent In The Present Draft NBHCP

01-22 The .5 to 1 mitigation ratio in the current draft NBHCP was carried over from the 1997 HCP without any new analysis. The 1997 HCP, in turn, adopted the .5 to 1 ratio as a result of negotiations among wildlife agencies, local governments and developers reaching back to 1994. In their letter dated August 8, 1994, (EXHIBIT 6.), FWS and CDFG initially agreed that a .5 to 1 mitigation ratio "should apply to the gross development of any land in the Basin", but only as to the Giant Garter Snake, and several other species using GGS habitat. USFWS/CDFG stated that there must be additional habitat areas, in addition to the .5 to 1 ratio, for other species not using GGS habitat. *Id.* p. 2. "Species conserved by including upland habitat components, in addition to the .5 to 1," included Swainson's Hawk and four other species.

01-22(B) The wildlife agencies also required that all GGS habitat provided under the .5 to 1 mitigation ratio be converted to marsh. "The Service and the Department accept this ratio (.5 to 1) based on the assumption that doubling or tripling of habitat values on half the land base is possible only through restoration and management of natural wetland habitat. . . We have not seen any studies indicating that two to three-fold enhancement of giant garter snake habitat values can be achieved on lands devoted to agricultural production." *Id.*, pp. 3, 4. Other key requirements included canal bank management, unobstructed connectivity, and permanent 250 meter buffers. "Participation by water companies and reclamation districts is essential to the design and management of the HCP habitat preserve." *Id.*, p. 6.

01-22(C)

The FWS/CDFG letter of September 28, 1994 (EXHIBIT 7) outlined additional components of the "package" for .5 to 1 mitigation, including designation of priority areas for habitat acquisition, exclusionary zones where "take" (development) would not be allowed, *Id.* p. 2; best management practices for water conveyance facilities. *Id.* p. 3. In its December 7, 1994 memo, (EXHIBIT 8), the Service also said that "habitat conservation must occur prior to habitat destruction...". *Id.* p. 2.

01-22(D)

The Draft NBHCP omits most of the protective measures which initially made the .5 to 1 mitigation acceptable to the wildlife agencies. Only 25% of mitigation lands are to be converted to managed marsh. There is no additional mitigation, in excess of .5 to 1, for destruction of SWH habitat. Buffers between urban development and habitat preserves can be urbanized after acquisition of the mitigation habitat land. There is no mechanism for unobstructed connectivity between habitat preserve units, (see below), no priority zones for habitat acquisition, no "no-take" zones, and no conservation of habitat before habitat destruction. Measures in the NBHCP pertaining to management of waterways for benefit of species are fictitious because RD1000 and NMWC withdrew from the Draft NBHCP in February 2002 and have refused to sign it.

01-23

c. The Acceptability Of The .5 To 1 Mitigation Ratio In The Former NBHCP Was Based On The Assumption That Development Would Not Exceed 17,500 Acres, And That The Rest Of The Basin Would Remain In Agriculture. The Draft NBHCP Now Anticipates Considerably More Development, And The City Is Proposing Development That Greatly Exceeds The Former 17,500 Acre Threshold.

The former NBHCP's conclusion that a .5 to 1 mitigation ratio would work was based upon the assumption that development in the Basin would not exceed 17,500 acres during the next 50 years, and that much of the rest of the Basin would remain in agriculture, notably rice, which would augment the habitat value of the reserve lands. *NWF v. Babbitt* (2000) 128 F. Supp. 2d 1274, 1281.

01-24

d. The Reasons Asserted For The .5 To 1 Mitigation Ratio Lack Credibility And Factual and Scientific Support.

New biological information developed as part of the EIR/EIS process reveals that the basic premise of the mitigation ratio, established in the 1997 NBHCP and continued in the current draft NBHCP, is not supported by biological evidence. The false premise of the mitigation ratio is that the Natomas Basin is a mix of habitat and non-habitat, and that lands acquired as mitigation will have far superior habitat values than lands converted to urbanization.

01-24

See Draft NBHCP IV-5, I-18, 19, VII-67. In the EIR/EIS process, GIS analysis showed that virtually all of the undeveloped parts of the Basin support either Giant Garter Snake or Swainson's Hawk and other covered species.

01-24(B)

The draft NBHCP fails to consider this important scientific data, and the resulting possibility that habitat destroyed may have habitat value equal to or greater than the habitat value of the mitigation land. The NBHCP fails to quantify how much habitat in the permit area is "inferior" habitat and how much is "superior" habitat; and how much mitigation habitat will be superior to, or inferior to, the habitat permitted to be destroyed by the NBHCP. The Draft NBHCP fails to provide information to back its conclusion that each acre of Natomas habitat subject to urbanization is so degraded that its loss can somehow be compensated through the inadequate mitigation ratio.

01-24(C)

There is no evidence that Natomas Basin habitat has less habitat value than other farmland habitat (including fallow land) in San Joaquin, Yolo, south Sacramento County, and the Bakersfield area, where the mitigation ratio is 1 to 1 for development of ordinary farmland. There is no explanation as to why Natomas habitat is worth mitigating at only .5 to 1, whereas similar habitat in the region is mitigated at 1 to 1, or greater for aquatic habitat and canals. Almost all species habitat in the Central Valley and southern California has been impacted by at least a century of agriculture and other human uses.

01-24(D)

The previous findings of the wildlife agencies, cited above, that Natomas supports critical populations GGS and SWH, are strong evidence that Natomas habitat is better than habitat elsewhere, for GGS and SWH, and therefore merits a higher level of mitigation than 1 to 1 replacement.

01-24(E)

The USFWS American River Watershed Investigation, Natomas Area, Substantiating Report, Vol. IV, November 1991, found that :"The Natomas Area supports a highly significant and diverse Sacramento Valley wildlife assemblage. ...Natomas includes one of the last and largest expanses of unurbanized natural overflow land and highly significant, essentially irreplaceable wildlife ecosystems in the southern Sacramento Valley Region." *Id.*, pp. 33, 34. This theme is echoed in other scientific documents. Recent degradation is a result of development permitted under the former NBHCP, decisions by landowners to fallow or degrade land in anticipation of development, intensified vegetation removal by the water agencies, and tree removals and illegal wetland filling by the County of Sacramento.

01-24(F)

The draft NBHCP asserts that GGS-friendly management of rice farming by the NBC will substantially increase habitat value of rice farms acquired for mitigation land, (HCP I-18, VII-67), but fails to describe the Conservancy's management techniques which so greatly enhance the habitat value of rice farming as to justify a .5 to 1 mitigation ratio. The Conservancy leases its rice farms to farmers using conventional rice-farming techniques, and the use of herbicides and pesticides, including the controversial "Warrior" pesticide, is allowed on Conservancy lands.

A .5 to 1 ratio mitigates for destruction of habitat values only if the habitat value of the mitigation land is trebled (original habitat value of mitigation land plus creation of new habitat

01-24(F)

value equal to the habitat value of the parcel twice this size that was destroyed). The wildlife agencies' letter of August 8, 1994, supra, correctly pointed out that there are no studies showing that two to three-fold enhancement of giant garter snake habitat values can be achieved on lands devoted to agricultural production. (EXHIBIT 6, p. 3). No doubt rice farming and land management on NBC preserves is more wildlife-friendly, but certainly not enough to claim a doubling or trebling of habitat values and populations of protected species.

01-24(G)

The draft NBHCP claims that conversion of 25% of NBC lands to managed marsh greatly increases habitat values for GGS (HCP I-19, VII-67), but offers no scientific basis or study or any information that demonstrates that managed marsh will, in fact, multiply habitat values and GGS populations. Severely compromised functional habitat connectivity and habitat fragmentation by urbanization remain as very serious problems which are not addressed by the managed marsh strategy. The assumption that managed marsh, as designed by the NBC and described in the draft NBHCP, will fully mitigate for impacts on GGS arising from destruction of much larger areas of existing occupied GGS habitat, remains an unproven hypothesis, which is too speculative to be the basis for a risky and unproven .5 to 1 mitigation ratio for the taking of a critical population of an imperiled species.

01-24(H)

The .5 to 1 mitigation ratio is made even more unworkable by the incompatible habitat needs of GGS and SWH. GGS is an aquatic snake that is usually in or near the water. SWH is raptor which hunts for small rodents in upland fields. The assertion in the Draft NBHCP, p. V-19, that rice fields can be managed to "greatly increase the habitat value of ricelands" for SWH foraging habitat ignores these basic scientific facts. Rice fields are typically flooded in late spring, shortly after the arrival of the SWH, and are unusable for foraging by SWH until after harvest in September and October, by which time the SWH have departed for Mexico. The rice field edges and fallow fields within rice areas are used as foraging habitat by the low-flying Northern Harrier (Marsh Hawk).

01-25

The NBHCP resolves the incompatibility of habitat needs by dedicating 75% of the mitigation land to GGS habitat (rice and managed marsh), and severely undermitigates for take of SWH habitat by dedicating only 25% of the NBC preserves to upland suitable for SWH foraging, even though the majority of land developed under the NBHCP is SWH foraging habitat. As explained elsewhere in our comments, 25% of a .5 to 1 mitigation ratio does not come close to protecting SWH from development threats. Further discussion of this issue is set forth in the separate comment letter by the Swainson's Hawk Technical Advisory Committee, dated December 1, 2002, and a separate comment letter by the Friends of the Swainson's Hawk.

4. The Draft NBHCP Fails to Protect Aquatic Habitat Connectivity or Mitigate For Disruption Of Aquatic Habitat Connectivity Necessary for the Survival of the Giant Garter Snake

GGS move around to find suitable habitat and food (tadpoles, frogs, small fish) as conditions in the rice fields, marshes, canals, and ditches change, especially during the dry summer months. "Thus connectivity between canals and ditches in different areas and between these systems and other habitat types is extremely important for genetic interchange and ability to find summer habitat." (Draft HCP p. II-13). Some of these canals were destroyed or severely

degraded by urban development under the invalid ITP issued to the City under the former NBHCP. More will be destroyed or made unusable for GGS by development permitted by the MetroAirPark HCP and the Draft NBHCP. The maps of current water drainage and delivery canals in the draft NBHCP, Figures 3 and 17, show a number of irrigation canals within the City and MAP area that, in fact, have already been destroyed or made non-functional due to development. Those canals within the City shown on Figure 17, as "most likely to remain", were severely degraded by urban development and modification permitted by the City's invalid ITP and are no longer functional connectivity habitat. The canals running through MetroAirPark will be destroyed, except for a narrow canal paralleling Lone Tree Rd. See comment letter of Eric Hansen, Giant Garter Snake expert, regarding Metro AirPark HCP, January 20, 2001. (EXHIBIT 9) Environmental organizations have also written a 60 day letter notifying U.S. Fish and Wildlife Service of their intent to challenge the approval of a take permit for Metro Air Park. (See letter, EXHIBIT 10)

The South Sutter County Specific Plan, for 3500 acres of industrial development, adopted April 17, 2002, is within the area covered by the Draft NBHCP. It includes a strip of development one mile wide and four miles long running east-west across Basin from the NEMDC to the North Drainage Canal, creating a barrier across the Basin and destroying wildlife habitat connectivity, particularly aquatic habitat connectivity for the Giant Garter Snake. The barrier is completed by an intended 1400 acre wastewater disposal area between the North Drainage Canal and the Sacramento River. This industrial barrier would prevent GGS from moving between the northern and southern portions of the Basin, and would isolate NBC preserves in Sutter County. The Draft NBHCP requires no buffer between canals and adjacent urban development. It must be assumed that habitat values of remaining waterways passing through Sutter's development will be destroyed by modification and urban impacts. This development-created barrier would likely have major adverse impacts upon GGS and would severely impact the viability of the Natomas population of GGS. The DEIR/EIS fails to address this issue

The U.S. Fish and Wildlife Service, in its comment letter to Sutter County during CEQA review of the Specific Plan, expressed very strong concerns about the potential destruction of wildlife habitat connectivity by Specific Plan development, as did Eric Hansen, Consulting Wildlife Biologist and GGS expert. Copies of these letters, dated December 20, 2001, are included as EXHIBITS 11 and 12.

The Draft NBHCP does nothing to protect aquatic habitat connectivity or to replace habitat connectivity destroyed or degraded by development permitted by the NBHCP. A .5 to 1 mitigation ratio, based on acreage, does not replace or protect destroyed connectivity. Vague and unenforceable measures are discussed at pp. IV-7 - 9, for maintaining connectivity between NBC preserves, including unspecified "appropriate actions", "moving reserve components," "consolidating reserve acquisitions" (meaning, selling preserves and buying new ones with better connectivity), easements and other transactions requiring consent of third parties. The Draft HCP also claims that the land use jurisdictions will promote compact growth, which is belied by Sutter's huge industrial-commercial reserve, and the City's recent "Joint Vision" proposal. The Draft NBHCP fails to address the protection of aquatic habitat connectivity except as to NBC preserves.

The Draft NBHCP proposes various GGS-friendly waterway management techniques for RD 1000 and NMWC, but those agencies withdrew from the NBHCP in February 2002 and have not agreed to implement these measures.

Adoption of the EIR/EIS preferred Alternatives One or Two, increased mitigation to 1 to 1 ratio, would provide better assurance of habitat connectivity because ownership of larger parcels, and increased opportunities to acquire lands that will complete connectivity.

01-25 We defer to the anticipated comment letter by Eric Hansen, Consulting Wildlife Biologist and expert on GGS, for further discussion on aquatic habitat connectivity.

5. Measures For Protection of Habitat Provided by Natomas Waterways and Canals Are Inadequate and Rely On Voluntary Actions of Water Agencies Which Have Withdrawn from the NBHCP

01-26 Natomas drainage and irrigation canals, and land alongside the banks of the canals, provide valuable habitat for GGS. Of critical importance to the survival of GGS is the presence of vegetated cover on the canal banks. (HCP p. I-15). GGS are vulnerable to predation in unvegetated canals. (HCP p. II-10). The NBHCP prescribes various Best Management Practices to be used by RD 1000 and NMWD. However, RD 1000 and NMWC withdrew from the NBHCP discussions in February 2002, and have stated that they will not participate in the NBHCP unless certain issues are resolved to their satisfaction. There is no evidence that they have agreed to implement all of the measures contained in the NBHCP. Implementation of any of the NBHCP's measures by RD 1000 and NMWC would be purely voluntary, and for that reason cannot be relied upon as part of the NBHCP's ongoing conservation strategy.

We defer to the anticipated comment letter by Eric Hansen, Consulting Wildlife Biologist and expert on GGS, for further discussion on the adequacy of measures proposed for management of canals and waterways.

01-27 **6. The Draft NBHCP Fails to Prevent Potential Take of Species and Habitat Due To Contamination By Wastewater Discharge From Sutter County's Proposed Industrial Development Permitted By The Draft NBHCP**

The South Sutter Specific Plan for 3500 acres of industrial development, covered by the Draft NBHCP, allows individual developments to use individual unspecified private "on-site" wastewater disposal facilities indefinitely, until (and if) there is funding to build a conventional public wastewater disposal system. The proposed public wastewater disposal system, if it is ever built, would include a 100 acre unlined effluent basin 16 feet deep, and discharge of treated wastewater onto an area of at least 1,400 acres in Natomas (between the North Drainage Canal and Sacramento River), which would grow corn (to soak up nitrates). See South Sutter County Specific Plan, Infrastructure Master Plan, in the possession of CDFG and USFWS. Relevant pages of the adopted Infrastructure Master Plan are attached as EXHIBIT 13.

Much of the proposed 1,400 acre wastewater disposal areas is outside of the NBHCP's permit area. The 1,400 acre wastewater treatment area is not included in the County's application for "take permit" but would effectively eliminate both wetland and upland species habitat values in that 1,400 acre area. A portion of the wastewater area is within the "Swainson's Hawk Zone" portion of Sutter County, which the NBHCP states will be taken out of urban designation in the Sutter County General Plan.

The South Sutter Specific Plan prescribes no measures to prevent discharges of wastewater into the Natomas Basin ecosystem. Septic systems don't work in Natomas due to impermeable clay soil. Once into RD 1000 canals, wastewater could potentially be circulated throughout Natomas Basin. Wastewater discharges, treated or untreated, from these private facilities and the 1,400 acre wastewater disposal area, would drain into the RD1000 drainage canals that are habitat for GGS and other aquatic animals and which also provide irrigation water to rice fields which are habitat for GGS and numerous other wetland-dependent species.

The content of Sutter's industrial-strength wastewater is unknown, but experience has shown that wastewater, depending upon content, can have serious and long-lasting deleterious effects upon aquatic organisms. Particularly vulnerable would be amphibians and small fish which are the food of the GGS.

Assuming that the Sutter facilities are properly permitted by the Regional Water Board, there is no guarantee that facilities would remove industrial toxins, which would likely include, at minimum, chemicals and industrial solvents used by industries. Accidental discharges from private wastewater facilities and small community facilities are not uncommon, often resulting from negligent or inattentive operation, lack of maintenance, operator error, insufficient capacity, or heavy rainfall or a localized flood which causes overflows. A substantial portion of the South Sutter Specific Plan is located within the 100 year flood plain. Experience elsewhere has shown frequent instances of industrial operators illicitly disposing of toxins by pouring them into the sewage system.

Serious concerns about impacts of discharges were expressed by letters to Sutter County during the CEQA comment period by the Central Valley Regional Water Board, and Reclamation District 1000, and in RD 1000's opening brief in the pending CEQA lawsuit on the Specific Plan. (EXHIBITS 14, 15, 16, 17, 18). The Natomas Basin Conservancy pointed out that there is no market for rice irrigated with sewage, and expressed concerns about potential contamination of Conservancy preserves. (EXHIBIT 19, pp. 2, 4). Poisoning of protected species or destruction of species habitat by contaminants contained in wastewater is unlawful taking under the Federal and California ESAs. The potential for discharge of toxic wastewater from development in the South Sutter Specific Plan poses a significant threat to aquatic species throughout the Natomas Basin, including GGS and prey species eaten by GGS.

There is no financially responsible party to clean up and re-remediate any wastewater discharge that may occur, unless the regulatory agencies trace it to a solvent offender and prevail in an enforcement action.

The wildlife agencies should not issue an ITP for any development which carries the potential to contaminate the Natomas aquatic ecosystem with sewage, and industrial toxins and discharges. Issuance of permits by the Water Board does not assure that there will be no such discharges. Indeed, the Water Board and RD 1000 are very dubious about the efficacy of Sutter's proposals for wastewater disposal; and have urged Sutter's completion of operational community wastewater facilities prior to development.

01-27 The only responsible course is for the wildlife agencies to condition issuance of an ITP to Sutter County only upon Sutter's prior completion of public wastewater collection and treatment facilities which do not discharge into Natomas Basin.

01-28 **7. The Draft NBHCP Unreasonably Jeopardizes the Continued Viability Of Covered Species By Failing to Require Protection Of High-Value Habitat Areas With Known Populations of Covered Species, and By Allowing All Mitigation Acquisitions to Be Located in Sutter County**

Draft NBHCP Figures 12 and 13, maps of records of GGS and SWH, shows the species distributed throughout Natomas Basin, but with records of sightings concentrated at certain locations. These records indicate significant species populations at those locations, largely in Sacramento County. Most SWH foraging habitat is in Sacramento County. Some of these records have been consistent year after year. A logical habitat mitigation program would seek to acquire preserves in these areas of known concentrated species use, particularly where a .5 to 1 mitigation ratio greatly limits what can be acquired. However, this was not done under the former NBHCP until required by the May 15, 2001 Natomas Settlement Agreement.

The NBC's first land acquisitions were 3 adjoining parcels of 338 acres in Sacramento County, next to Sutter County. All subsequent acquisitions, until the August 15, 2000 Federal Court decision, were in Sutter County, totaling 1313 acres, in locations then having minimal records of presence of GGS or SWH, for prices between \$3,600 and \$4,500 per acre. The NBC did not acquire any more land in Sacramento County, because it was more expensive than Sutter County land; nor did the NBC ask the City to increase the mitigation fee so that lands could be acquired in Sacramento County. The NBC was under strong pressure from developers to minimize costs to minimize mitigation fee increases.

The May 15, 2001, Natomas Settlement Agreement required, at plaintiffs insistence, that all habitat acquisitions under the settlement agreement be within Sacramento County, in areas designated as "Zone 1" (Fisherman Lake area) and "Zone 2" (between Sacramento, Sutter County line, NEMDC, and Powerline Road). These areas have documented significant populations of GGS or SWH.

The Executive Director of the NBC repeatedly stated his opposition to the requirement to acquire within designated zones or within Sacramento County because of higher land prices. Nonetheless, 1,145 acres of mitigation reserves, with documented habitat values for GGS and SWH, were acquired in Sacramento County, for prices between \$7,500 and \$11,000 per acre, that obviously would have not been acquired otherwise.

Land prices in unincorporated Sacramento County, will always be higher than in Sutter County, outside of the Specific Plan area, due expectations of development entitlements. The EPS Revised Fee Estimate, October 11, 2002, p. 9, assumes NBHCP mitigation land acquisition prices averaging \$6,000 per acre, which will not buy land in the Sacramento County area of Natomas Basin.

The history of the NBC's land acquisitions, and the low-ball acquisition cost in the Revised Fee Estimate of the NBHCP, leads to the conclusion that if the NBC is allowed to acquire anywhere in the Basin, it will very likely resume its past practice of buying mostly lower-cost properties in Sutter County, to the exclusion of more expensive properties in Sacramento County that may have greater documented biological values. The City states that the requirement of 400-acre minimum size for preserves will require the NBC to acquire more land in Sacramento County, to complete three reserve blocks that are presently less than 400 acres each. However, the NBHCP imposes no timeline for increasing reserve parcels to 400 acres, and the wildlife agencies do not have authority to impose enforceable deadlines for meeting this requirement. The Draft NBHCP allows waiver of the minimum reserve size requirement.

01-28 The EIR/EIS and NBHCP arbitrarily fail to consider the potential impacts of permitting a cost-focused mitigation strategy that would lead to concentration of future acquisitions of mitigation lands in Sutter County, to the exclusion of further acquisitions in Sacramento County. Please refer to additional detailed comments on this issue in a separate letter submitted by Friends of the Swainson's Hawk.

8. The Draft NBHCP Jeopardizes the Continued Existence Of Covered Species In Natomas Basin of By Allowing 20% of Mitigation Acquisitions to be Outside of The Natomas Basin

01-29 As discussed above, the wildlife agencies have found that the Natomas Basin populations of GGS and SWH are critical to the survival and recovery of both species. Failure of the NBHCP to preserve these critical Natomas Basin populations could jeopardize survival and recovery of these species. The .5 to 1 mitigation ratio is very risky. Allowing 20% of the mitigation land to be acquired out-of-Basin effectively reduces the mitigation ratio to .4 to 1, for the Natomas populations of GGS and SWH whose survival is the goal of the NBHCP. There is no reasonable basis for authorizing out-of-Basin mitigation, and increasing the risk to Natomas Basin species populations by allowing it.

The 1997 HCP prohibited acquisition of upland habitat outside the Basin. The 2002 NBHCP does not include this restriction. Please see separate comments by the Swainson's Hawk Technical Advisory Committee and Friends of the Swainson's Hawk on the likely impact of out-of-basin acquisitions of lands intended to mitigate for loss of Swainson's Hawk foraging habitat in the City of Sacramento.

9. The Draft NBHCP Unreasonably Relies Upon The Assumption That Substantial Areas Of Unprotected Private Lands In Natomas Will Voluntarily Remain In Agriculture Despite Urban Development Permitted by the NBHCP

01-30

The Incidental Take Statement in the Draft NBHCP, p. VII-3, states that the greatest impact of urbanization on covered species is the loss of farmland, but that agriculture will continue in the Basin and will to provide habitat for GGS and SWH. The NBHCP and Draft EIR/EIS do not consider the possibility that those effects of urbanization which are detrimental to agriculture (such as restriction or prohibition of aerial seeding of rice fields and aerial application of agricultural chemicals), development ambitions of landowners, and decisions by local government, may lead to severe decline of agriculture, with detrimental impacts on species, as a consequence of the development permitted by the NBHCP. The Draft NBHCP, p. III-17, points out a "trend of property owners in urbanizing areas to fallow rice field in expectation of urban development."

The NBHCP cannot reasonably assume that landowners will voluntarily remain in agriculture as the area urbanizes under the NBHCP. For example, nothing prevents local government from re-zoning agricultural land to small-parcel agricultural-residential ("ag-res") zoning, which would effectively destroy habitat.

10. The Draft NBHCP Conservation Strategy Unreasonably Relies Upon The Assumption That Sacramento County Will Voluntarily Retain Existing Agricultural Zoning In the Swainson's Hawk Zone and Not Permit Development In That Area

01-31

The Draft NBHCP, p. IV-22, says that "the primary strategies to mitigate impacts to the Swainson's hawk . . . are to avoid development in the Swainson's Hawk zone and to acquire upland habitat as Mitigation Land inside the Swainson's Hawk zone." (Incorrectly shown in Draft Figure 13).

However, most of the SWH zone is within the unincorporated area of Sacramento County, which is not a party to the NBHCP. Nothing prevents the County from rezoning for development (hopefully with incidental take permits), or, as is more practicable, rezoning for small-parcel agricultural-residential development, which effectively destroys habitat values. There are numerous ag-res parcels east of Natomas, and in southern Sacramento County. Since the inception of the former NBHCP, Sacramento County has allowed some small-parcel development in Natomas without incidental take permits. (EXHIBIT 1). The NBHCP arbitrarily fails to address the risks and impacts of continued incremental development in Sacramento County's area of Natomas to the SWH.

01-32

11. The Draft NBHCP Conservation Strategy Unreasonably Relies Upon The Assumption That There Will Be Continued Water Supply To the NBC's Reserves Despite Impacts of Urban Development and Decline of Agriculture, and Despite Possibility of Loss of Water Arising from Regulatory Actions or From Water Transfers.

The Draft NBHCP mitigation strategy for GGS relies upon continued habitat connectivity provided by RD 1000 and NMWC canals, and upon delivery of water to NBC preserves and to

rice farms and canals that are GGS habitat. However, the NBHCP p. VII-62, also admits that if urban development occurs at levels that reduce or eliminate agriculture in the Basin, the components of the irrigation system that support GGS would likely also decline, "probably resulting in extirpation of the GGS from the Basin."

Although the NBHCP mitigation strategy relies upon continued canals and water delivery, the NBHCP includes no "cap" on development, or any other measures that would ensure the continued existence of waterways in Natomas sufficient to support GGS. The HCP must address the possibility that development permitted under the NBHCP, plus the pending Sacramento "Joint Vision" (which potentially could convert another 10,000 acres of rice farms to urban development) could lead to very serious decline of the waterways which service rice farming.

The Draft NBHCP, p. IV-32, points out the possibility of long-term water shortages due to potential future regulatory action. Moreover, water users south of the Delta have begun negotiating the purchase of large quantities of water from Sacramento Valley agricultural water users. See EXHIBIT 20, Sacramento Business Journal. There is no evidence that sufficient groundwater would be available to replace surface water if Natomas Mutual Water Company ceased supplying surface water. The DEIS points out that there has been no determination of sustainable yield of the aquifer. Any conclusions on that topic would require complete scientific studies which has not been performed.

Given the demand for water in the State of California and the potential for water transfers out of the Basin, the availability of adequate water supply to support Giant Garter Snake and aquatic species in the Basin is critical. The best way to ensure water availability is for NBC to acquire sufficient land with water rights and accompanying shares of NMWC stock, so that NBC would have a controlling interest in Natomas Mutual Water Company. There is no evidence that ground water could support the preserve system, and surface water is necessary to the connectivity between preserves or to maintain waterways and continued cultivation of rice in Natomas Basin.

01-32

01-33

12. The Draft NBHCP Conservation Strategy Is Infeasible Due To Probable Effects Of Sacramento's Proposed "Joint Vision For Natomas"

The City of Sacramento recently released its proposed "Joint Vision for Natomas", EXHIBIT 5, calling for creation of a Sphere of Influence ("SOI") of 10,000 acres for future annexation and urban growth north of Elkhorn to the County line, and between MetroAirPark and the NEMDC, all of which would be in excess of the 17,500 acres covered by the NBHCP. The USFWS and CDFG expressed major concerns about "Joint Vision" in their joint letter dated September 16, 2002. "Joint Vision" is supported by top-level City and County executives and Councilmembers. It is very likely to be adopted.

It is very clear from the "Joint Vision" documents and draft MOU, and statements by City staff and Councilmembers, that the "Joint Vision" is the first step towards approval of up to 10,000 acres of new development. The cumulative impacts of potential "Joint Vision" development, in addition to the 17,500 acres of NBHCP development, is not considered in the

draft NBHCP and EIR/EIS, nor in the NBHCP's conservation strategy. Three obvious impacts not addressed by the draft NBHCP and EIS/EIR are:

(1) The cumulative impacts of up to 27,500 acres of new development, instead of 17,500 acres, upon species and the environment, and the effect upon the feasibility and implementation of the draft revised NBHCP mitigation strategy designed for 17,500 acres of development.

(2) Development of a substantial portion of the SOI area, in addition to development permitted by the NBHCP, and MetroAirPark HCP, may jeopardize the survival and recovery of the GGS despite any mitigation program. The great majority of locations of GGS records in Natomas, to date, are within the proposed SOI area and the areas permitted to develop under the MetroAirPark and NBHCP (see Draft NBHCP, Figure 12, "Giant Garter Snake Records"). Maintenance of a viable GGS population in Natomas is essential to the survival of the species See USFWS Biological Consultation, March 11, 1994, p. 5, EXHIBIT 3.

(3) It will very likely be impossible for the NBC to acquire mitigation land within the 10,000-acre "Joint Vision" SOI area due to landowner expectations of development entitlements flowing from the proposed Joint Vision MOU.

The latter will have an immediate impact on implementation of the NBHCP because much of the proposed "Joint Vision" SOI is valuable GGS habitat with documented GGS populations, and also provides essential habitat connectivity. During the Natomas Settlement Agreement negotiations, the U.S. Fish and Wildlife Service expressed concern about protection of that area, and suggested designation of a large "GGS Protection Zone" within the SOI Study (which the City failed to do). The NBC owns three disconnected habitat mitigation preserves within the proposed SOI area. Two are less than the minimum 400-acre size required by the NBHCP. Inflated land prices within the SOI area will very likely make it impossible to establish habitat connectivity and expand two of the NBC preserves to the minimum 400-acre size required by the revised NBHCP. Urban impacts of development permitted within the proposed SOI area, in combination with neighboring Sutter County development, will substantially diminish the biological value of the existing NBC preserves within the SOI area.

The "Joint Vision" MOU designates a 10,000 "Area of Concern", ("AOC") west of the City and west of the Airport, of which 4,400 acres is County-owned as Airport buffer and unavailable for NBHCP mitigation. Although City staff say that the "AOC" area will remain permanent open space, the draft "Joint Vision" MOU does not prohibit the County from permitting urban development within the "AOC" or from rezoning agricultural land to small-parcel agricultural-residential use that destroys habitat values. Many, or most, landowners in that area want to sell to developers.

01-33

01-34

13. The Draft NBHCP Fails to Consider the Impacts Of Reasonably Foreseeable Development, Beyond That Permitted by the NBHCP, Upon the Implementation and Efficacy of the NBHCP Conservation Strategy.

The Draft NBHCP and EIR/EIS fail to consider the combined environmental effects of

development permitted under the NBHCP and other development reasonably foreseeable in Natomas Basin, and fails to consider the impacts of other foreseeable development upon the implementation and efficacy of the conservation strategy of the NBHCP. Instead, the NBHCP simply postpones those issues until there is an application for a take permit covering new development.

Foreseeable new development includes "Joint Vision for Natomas", supra, for up to 10,000 acres of new development; County Airport's intended terminal expansion and third runway, needing up to 800 acres of development; construction of new or expanded highway, drainage, and other infrastructure in Natomas Basin; proposed levee improvements by SAFCA; and of course new development authorized by Sacramento County, which is not covered by the NBHCP. The latter could potentially include conversion of existing agricultural zoning to small-parcel agricultural-residential, which would be highly destructive of habitat values.

01-34 Sacramento County has already permitted small-scale projects in Natomas without Incidental Take Permits or mitigation for impacts on species, described in EXHIBIT 1. The County does not intend to discontinue that practice. USFWS and CDFG have taken no action to requires ITP's or mitigation for small County-permitted developments in Natomas. Earlier in 2002, it was discovered that the County had removed nearly 100 trees on biologically valuable lands owned by the County as Airport buffer, including three documented SWH nest trees; and that the County had illegally filled approximately thirty acres of wetlands in Natomas.

01-35 **B. There Is No Basis for the Assertion that the Applicant Will Minimize and Mitigate to the Maximum Extent Practicable (Federal ESA).**

1. The Draft NBHCP Is Environmentally Inferior to Alternatives Analyzed by the DEIR/EIS

The Draft EIR/EIS evaluated five Alternatives. (EIS p. 2-49 – 2-53). Four of these alternatives are environmentally superior to the Draft NBHCP:

Alternative Two: habitat based mitigation, 17,763 acres of habitat reserves to mitigate for 17,500 acres of development, other elements same as Draft NBHCP, found to be the Environmentally Preferred/Superior Alternative.

Alternative One: mitigation ratio of 1 to 1, other elements same as Draft NBHCP.

Alternative Three: mitigation ratio of .5 to 1 and other elements are the same as Draft NBHCP, except that preserve acquisitions must be focused within five designated zones having recognized biological value, 6,500 acres of preserves would be within these zones, the balance anywhere in Natomas Basin. No out-of-Basin mitigation.

Alternative Four: mitigation ratio of .5 to 1, same as Draft NBHCP, except it reduces impacts to species by reducing development from 17,500 acres to 12,000 acres.

The Draft NBHCP is environmentally inferior to the above four Alternatives, because it permits 17,500 acres of development, rather than 12,000, mitigated at .5 to 1, rather than 1 to 1, and mitigation acquisitions can be anywhere within the Basin, with potential for 20% of acquisitions to be out of basin, instead of prioritized on areas of known biological value (Alternative 3)

01-35 The burden is upon the Applicants to show, by substantial evidence, that their Draft NBHCP minimizes and mitigates to the maximum extent practicable, and that none of the environmentally superior Alternatives are practicable. See *NWF v. Babbitt*, (2000), 128 F. Supp. 2d 1274, 1292.

01-36 **2. There Is No Basis for the Assertion that A Mitigation Ratio Greater than .5 to 1 Is Not Practicable. City Has Stated That A Mitigation Ratio of One to One Is Feasible For Subsequent Natomas Development.**

Applicants' claim that a mitigation ratio in excess of .5 to 1 would likely make development infeasible (Draft HCP p. VII-69). This assertion is rebutted by the City's own draft Joint City-County Shared Policy Vision in Natomas dtd September 17, 2002, (EXHIBIT 5, p. 14) which says that development under "Joint Vision" will be required "to provide permanent open space, preserved in the Natomas area, at a mitigation ratio of at least one-to-one." Although "Joint Vision" has not yet been adopted by the City Council, it is a document prepared and approved by top-level City staff. The City Manager and other top-level staff have repeatedly told representatives of environmental groups and the public that "Joint Vision" will require a mitigation ratio of one acre of permanent open space, in Natomas, for each acre developed under "Joint Vision.

Because the City has determined that 1 to 1 open space mitigation is feasible for development under "Joint Vision", there remains no credible basis for the City's assertion that 1 to 1 mitigation is impracticable for the NBHCP. Although "Joint Vision" open space would include both habitat and other potential uses, there is no reason to believe that the cost of acquiring land for "Joint Vision" open space would be different than acquiring land for NBHCP mitigation at a ratio of one to one. Management costs of NBC preserves would not be higher than management costs of other open space uses. Indeed, the Draft NBHCP calls for conversion of only 25% of NBC lands to managed marsh, with 50% of the remainder leased to rice farmers, and 25% as upland habitat, most likely in agricultural use. The proposed Acceptable HCP, for 1.17 acres of habitat acquired for each acre of future development, would cost little more.

The Brookfield Homes/NTI developers, who are seeking development entitlements, outside of the NBHCP, have committed to a one to one mitigation ratio for habitat loss. (EXHIBIT 4).

Increasing the mitigation ratio from .5 to 1 to 1 to 1 (Alternative One) or to a habitat-based mitigation ratio described in Alternative Two (which averages as one to one) does not necessarily result in doubling the mitigation fee. Economies of scale will substantially reduce the per-acre cost of land management and NBC administration. A mitigation ratio of 1 to 1, instead of .5 to 1, would allow reduction of the "managed marsh" component of NBC preserves

from 25% to 12.5% to achieve the same area of managed marshes. This would result in a substantial reduction in the restoration component of the per acre mitigation fee.

Under a 1 to 1 mitigation ratio, the land costs could be reduced further by requiring that mitigation land be acquired before commencement of the development being mitigated. This was required for the beginning and final phases of the development allowed by the May 15, 2001 Natomas Settlement Agreement, and motivated the developers to acquire mitigation land at prices considerably less than what the NBC had been asked to pay. The Natomas Settlement Agreement demonstrated that motivated developers have the ability to acquire mitigation land more readily, and at lesser prices, than the City or NBC. Acquisition "up front" as a condition of development eliminates the need for a large contingency component in the mitigation fee for unexpectedly high land prices, because development would not occur until the mitigation land was acquired. Requiring that mitigation land be acquired within prioritized zones (Settlement Agreement and Alternative 3) and subject to prior approval of wildlife agencies and NBC, would result in development of preserves in desired areas.

The Applicants could further reduce the mitigation fee by announcing that there would be no more development in Natomas beyond the amount allowed by the Draft NBHCP. Inflation of land prices in Natomas is largely attributable to landowner belief that they will someday receive development entitlements. Landowner expectations have been seriously inflamed by the recently proposed City-County "Joint Vision for Natomas" for up to 10,000 acres of new Natomas development, and by pronouncements by top-level City and County executive and elected officials that City and County will plan for major new growth in Natomas beyond that covered by the NBHCP. Mitigation for take of endangered species should not be reduced because of the City's unwise actions.

The median new home sales price in Natomas during the third quarter of 2002 (based on 503 sales) was \$315,990, as reported by the Gregory Group in the Sacramento Bee, October 11, 2002, (EXHIBIT 21), which is much higher than the prices reported by the EPS Economic Analysis of the Draft NBHCP. With an average of approximately five new homes per acre in Natomas, total gross proceeds from development of a single acre, assuming the above per home sale prices, is \$1,579,950. A mitigation fee of \$15,000 per acre (which is \$3000 per home) would be approximately one percent of gross sale prices, and only a small fraction of the very large profits being realized by Natomas developers. A fee of \$20,000 per acre would be 1.3%. The Draft NBHCP's proposed mitigation fee, \$10,000, is 2/3 of 1%. The Applicant's assertion that a mitigation ratio greater than .5 to 1 will make development "infeasible" is ludicrous.

01-36

3. Experts Have Found That A Mitigation Ratio of Greater Than .5 to 1 Is Feasible, and That The EPS "Economic Analysis" Relied Upon By the NBHCP is Deficient

We incorporate by reference the Report letters of Hausrath Economics Group, December 2, 2002, and Center for Natural Lands Management, December 1, 2002 attached to this letter. Hausrath Economics Group has participated in many public planning efforts, including the San Joaquin County HCP. Center for Natural Lands Management manages numerous preserves and conservation easements. Both groups of experts have found that a mitigation ratio of greater than .5 to 1 is feasible, and that the NBHCP's Economic Analysis is deficient.

01-37

C. There is No Basis for the Assertion that the Draft HCP Will Have Less than Significant Environmental Impacts.

01-38

For the reasons stated throughout these comments, there is no basis for the assertion in the DEIS/EIS that the Draft NBHCP will have less than significant environmental impacts. Most of the issues raised in these comments were not adequately addressed or evaluated in the Draft EIR/EIS. Some issues, such as the potential impacts of discharge of Sutter County's wastewater, potential cumulative effects of "Joint Vision" and its effects on implementation of the Draft NBHCP, and the potential impacts of a cost-focused acquisition of mitigation preserves, were not analyzed at all.

D. A SIGNIFICANTLY GREATER MITIGATION FEE, AND A FUNDING GUARANTEE FROM THE LOCAL GOVERNMENTS, WILL BE NEEDED TO ENSURE ADEQUATE FUNDING

1. The Proposed Mitigation Fee Is Inadequate

01-39

The proposed mitigation fee assumes land prices of \$6,000, which may buy land in Sutter County, but not in Sacramento County's area of Natomas Basin, where prices paid for mitigation land ranged from \$7,500 to \$11,000 per acre from May 2001 through September 2002. Landowner expectations of urban development rights due to the City's announcement of the proposed "Joint Vision" will very likely drive up prices further. As discussed earlier, a cost-based conservation strategy which effectively limits preserve acquisitions to Sutter County will not protect the documented GGS and SWH populations using Sacramento County, which are critical to survival of both species in Natomas Basin.

01-40

2. The Draft NBHCP Provides an Inadequate Backup Funding Mechanism to Address Likely Shortfalls

16 USC §1539(a)(2)(B)(iii) states that the Secretary must find "that the applicant will ensure that adequate funding for the plan will be provided." See *NWF v Babbitt* (2000) 128 Fed Supp 2d 1274, 1294. California Fish & Game Code § 2081(b)(4) states that the "applicant shall ensure adequate funding to implement . . ." To "ensure" adequate funding means a financial guarantee by a party to pay whatever it costs to carry out an activity, regardless of the circumstances or the actions of the person or entity who has ensured the funding. See *NWF v. Babbitt, supra.*, 128 Fed Supp 1274, 1295.

The back-up funding mechanism of the Draft NBHCP is the same as the former NBHCP, which was overturned by the Court in *NWF v. Babbitt, supra*, due to inadequate back-up funding. The new Plan added two new features: a 200 acre cushion, and a new party (Sutter County). These minor alterations do not remedy the basic problem identified by the Court in *NWF v. Babbitt*. The Plan unnecessarily relies on future mitigation fee payments by landowners who have made no commitment to participate in the Plan. Once the City and Sutter parcels have been developed, or if development stalls prior to build-out (Sutter's development is anticipated to be much slower than Sacramento's), there may not be any future permittee to whom increased costs

may be shifted, and no entity will be responsible for making up the funding shortfall. This frustrates the statutory requirement that funding for mitigation be ensured, *NWF v. Babbitt*, *supra.*, 128 Fed Supp 1274, 1294.

Funding is a critical issue for HCP's. As an example, the San Diego HCP ran out of money and was rescued by a very substantial bail-out from a statewide parks and habitat initiative measure.

Like the former NBHCP, acquisition of mitigation land, O and M, monitoring, and other measures required by the Draft NBHCP are to be funded by a one-time fee levied upon acreage to be developed, payable when grading permits are issued. The corresponding mitigation land need not be identified and its price need not be known when the fee is paid and the permit is issued. Once the fee has been paid and Urban Development Permits issued, the developer has met its habitat mitigation obligation requirement and may complete construction even if the fee proves to be inadequate to buy the mitigation land. There is no assurance that the fees paid by a developer will be sufficient to acquire the required habitat mitigation parcels in the future. That is so because the mitigation parcels to be acquired are not known at the time the fee is paid. Therefore, the price of the land cannot be known.

It is also impossible to know the actual future costs of restoration, management, and monitoring that are to be paid with the mitigation fee, until the costs are actually incurred at a future time. These components are over 50% of the Draft NBHCP projected fee. Predicting costs of restoration, management, monitoring, operations (including cost of water for wetland preserves and rice farming), and income earned on the endowment component of the mitigation fee, over the next 50 years is extremely unreliable. There have been tremendous changes in prices during the past 50 years.

Under the former and Draft NBHCP, only the Permittees (City and Sutter County) may increase the mitigation fees. USFWS/CDFG/NBC can ask, but not require, that the mitigation fee be increased. However, neither USFWS/CDFG or anyone else, can know the actual price of future acquisitions of mitigation lands, or the actual costs of future O & M, monitoring, and restoration, or the future income earned on the endowment component of the mitigation fee as adjusted for unknown and unpredictable inflation.

If costs prove higher than fees paid, the Permittee can increase the mitigation fees for future developers. Like the former NBHCP, fee increases will apply only to land developed after the need for a greater fee becomes apparent and is implemented. Unless actual costs prove to be equal to costs projected in setting of the fee (which is rare), the Plan's funding mechanism depends on continual infusion of new developable land to provide funding for mitigation necessitated by previous development. If most of the land within the City or Sutter County permit area has been developed by the time the need for additional mitigation funding becomes apparent and implemented, there may be little or no land left to which an increased fee may be applied. *NWF v Babbitt*, 128 F. Supp. 1274, 1295. This is an obvious concern where, as here, mitigation lands may be acquired 12 months after payment of the one-time mitigation fees that is intended to pay for the mitigation lands.

This is also of major concern as to costs of O & M, restoration, monitoring, adaptive management, recovery plans, mandatory conversion of 25% of NBC lands to managed marsh, and other operational costs, which will extend into perpetuity, long after completion of development and payment of mitigation fees. This has potential to get quite expensive, particularly if cumulative impacts of other Natomas development require the NBC to manage its wetland preserves more "intensely" to avoid jeopardy. Water costs could rise very substantially as decline in rice-farming due to urbanization leaves fewer agricultural customers of Natomas Mutual Water company to share the fixed costs of pumping and maintaining the canals.

The absence of a cap on the revised Draft NBHCP mitigation fees does not address danger of funding shortfall if costs in the future exceed what remains unspent from accumulated one-time mitigation fees, and there is little or no new development to pay increased mitigation fees. The former NBHCP fee cap applied only to adjustments made for adaptive management or recovery plans. See former NBHCP, IA §4.5.7(1).

Revocation of a permit for failure to meet mitigation requirements does not affect developers who have already paid their fees. Draft Implementation Agreement § 7.4 prohibits the wildlife agencies from seeking monetary damages to cure deficiencies resulting from inadequate mitigation fees. The participation of two jurisdictions, Sutter County and the City, does not solve the problem – it only affects the acres subject to the permit. Moreover, the failure of one permittee to fulfill its obligations will not affect the Permits of the remaining Permittee, Draft HCP, p. I-31, unless continuation of the Permits would appreciably reduce likelihood of survival or recovery of a protected species. IA § 7.6.5.

The statutory language of 16 USC §1539(a)(2)(B)(iii) and Fish and Game Code § 2081(b)(4), that the applicant ensure adequate funding, requires a funding guarantee by the Permittee land use agencies; although possibly a sufficient bond by a solvent acceptable commercial surety may suffice. Under this statutory requirement, the Permittee land use agencies can greatly reduce their exposure by revising the Draft NBHCP to require that mitigation land be acquired (with NBC and wildlife agency prior approvals) prior to commencement of the development being mitigated; and by establishing an assessment district, as a condition of development approval, to be available to levy special taxes for back-up funding if needed (provided that the special tax is not subject to landowner vote, and the district is not vulnerable to dissolution by landowners' vote).

01-40

01-41

E. THE WILDLIFE AGENCIES CANNOT ISSUE INCIDENTAL TAKE PERMITS BECAUSE THE PERMITTED ACTIVITIES MAY TAKE WHITE TAILED KITE, IN VIOLATION OF CALIFORNIA FISH AND GAME CODE § 3503.5

Taking of the White Tailed Kite is expressly prohibited by California Fish and Game Code § 3503.5. White Tailed Kites are small upland raptors which nest, roost, and forage throughout the entire Natomas Basin, and are present year-around. There is no "mitigation" or permitting for the incidental taking of White Tailed Kite, because the incidental taking of White Tailed Kite is unlawful.

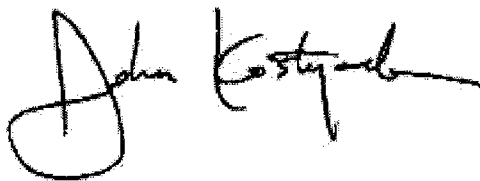
The Draft NBHCP permits development activities which would take individuals, nests, nest trees, roosts, and foraging habitat of White Tailed Kite; but fails to prescribe any measures for avoiding the taking of White Tailed Kite. As far as we can determine, nothing in the Draft NBHCP states that taking of White Tailed Kite is prohibited. For that reason, the Draft NBHCP and proposed Incidental Take Permits are in violation of Fish and Game Code § 3503.5.

The U.S. Fish and Wildlife Service can issue an Incidental Take Permit only for "taking" incidental to activities which are otherwise lawful. ESA § 10(a)(1)(B). The Service cannot issue an federal Incidental Take Permit for an activity which may take White-Tailed Kite, because the taking would violate California Fish and Game Code §3503.5.

O1-41 We strongly suggest that the EIR/EIS and NBHCP be revised to disclose the presence, significance, and characteristics of the White- Tailed Kite in Natomas Basin, the prohibition on taking of White-Tailed Kite, and measures that must be implemented to avoid the taking of White Tailed Kite and bring the NBHCP into compliance with Fish and Game Code § 3503.5.

On behalf of the Environmental Council of Sacramento, Friends of the Swainson's Hawk, National Wildlife Federation, Planning and Conservation League, and Sierra Club, we extend our appreciation to the USFWS and CDFG as well as the applicants for this opportunity to review the proposed Plan and comment.

Sincerely,



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MEMORANDUM

Date: December 2, 2002

To: James Pachl for Friends of Swainson's Hawk and Sierra Club Mother Lode Chapter

Subject: **Comments on the Economic Analysis of the Natomas Basin Habitat Conservation Plan**

At the request of Friends of Swainson's Hawk and the Sierra Club Mother Lode Chapter, Hausrath Economics Group (HEG) has conducted a review of the economic analysis of the July 2002 *Draft Natomas Basin Habitat Conservation Plan (NBHCP)*. The comments set forth in this memorandum are based on consideration of the following documents: Draft NBHCP and Appendices (July 2002), specifically Appendix A: *Final Report—Economic Analysis of Natomas Basin Habitat Conservation Plan*, March 12, 2002 and *Addendum: Economic Analysis of the NBHCP*, May 2, 2002, as well as Appendix I: *NBHCP Fee Update*, April 25, 2002; *Revised Fee Estimate based on Draft NBHCP*, October 11, 2002; and the Draft Environmental Impact Report / Environmental Impact Statement for the Draft NBHCP. Figures illustrating some of the data analyzed in developing the comments are included at the end of the memorandum text.

The purpose of the economic analysis presented in the above-referenced documents is to establish, from an economic perspective, that the NBHCP ensures adequate funding and that the mitigation required is the "maximum extent practicable". The analysis concludes that the revenue base established for the NBHCP provides adequate funding in perpetuity and that the proposed mitigation is close to the maximum extent practicable. HEG has reviewed the analysis to determine whether or not these conclusions are justified.

Does the plan mitigate to the "maximum extent practicable"?

01-42

The economic analysis addresses the economic considerations with respect to the "maximum extent practicable" question. As noted in the analysis (*Final Report*, March 2002, page 19), there are no precise standards in law or guidelines for how to demonstrate this condition.

The economic analysis conducts two tests to analyze the question from the perspective of practicability or feasibility. The first test is a comparison to other habitat conservation plans in surrounding jurisdictions. The second test is a cost burden analysis, again comparing the

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- 01-42 Natomas Basin situation to conditions in surrounding jurisdictions. To assess the implications of additional mitigation requirements, both tests evaluate alternative mitigation scenarios.

The fee comparison test is inconclusive

The first analysis is a simple comparison of habitat fees per acre of development and shows that the NBHCP fee and alternative fees that assume fewer participants or more mitigation are substantially higher than existing or proposed fees in some nearby and other more distant communities. The relatively weak conclusion is that the comparison "does give an indication of impracticability". (*Final Report*, March 2002, page 22.)

- 01-43 The economic analysis itself acknowledges that: "no two habitat plans are alike." (*Final Report*, March 2002, page 20.) Precisely because of the wide variance in key habitat plan factors, this relatively simple comparison does not support any definitive conclusions. Habitat mitigation fees are the result of a series of decisions that reflect biological, real estate market, and political conditions and compromises in each community. Simply because one set of fees is higher than another is not evidence of the feasibility or practicability of those fees. The fees compared in the economic analysis do not cover the same set of costs. Some of the fees were established several years ago and have not been adjusted for inflation. Some fees are based on a conservation easement strategy that results in substantially lower land acquisition components of the total cost. Some of the plans reflect habitat types that require minimal restoration and enhancement. Land values in the plan areas also are quite different. Some fee programs spread the cost burden more broadly, relying on outside sources to fund substantial portions of plan costs. Not much is demonstrated by comparing apples and oranges except that they are different.

Furthermore, the comparison neglects to include fees in other jurisdictions in California that are, in fact, higher, while including fees in jurisdictions such as Bakersfield and Coalinga that do not compete with Sacramento County for development and have substantially lower land values. The comparison does not include San Diego County or other rapidly developing metropolitan areas where land values and, consequently, mitigation costs to new development are more comparable to those proposed for the NBHCP.

- 01-44 **The total burden comparison does not support the conclusion that higher mitigation requirements would be impracticable or infeasible**

To develop a more telling feasibility conclusion, the economic analysis considers the NBHCP fees in the context of the cost burden on new development imposed by both the habitat mitigation fees and the costs assigned to new development for other "backbone infrastructure". The purpose of this analysis is to determine whether or not the total cost burden including the NBHCP fee would be so high as to make new development infeasible.

The discussion of feasibility thresholds minimizes the adaptations that occur in other components of the development feasibility equation

The discussion of feasibility focuses on stated feasibility thresholds: for residential development, backbone infrastructure costs ranging from 15-20 percent of the sale price of the

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house, and, for non-residential development, backbone infrastructure costs ranging from 10–15 percent of the sales price per square foot. No basis is given for these thresholds—although this appears to be the range that results from the subsequent analysis of current cost burdens in North Natomas, South Sutter, and locations elsewhere in the greater market area. These results simply indicate that, under market conditions at this point in time, this is the relationship between backbone infrastructure cost and sale prices for new development.

The feasibility threshold is a limited gauge of whether or not higher mitigation requirements would be feasible. As mentioned in the economic analysis, in response to significant increases in a development cost component such as that for backbone infrastructure, developers will try to increase sales prices to the extent the market will bear, and developers may also reduce their profit margins. (*Final Report*, March 2002, page 24.) These are short-run responses. In the longer run, there are a number of other factors in the development equation that are likely to adjust to accommodate changes in backbone infrastructure costs or some other development cost. In response to significant increases in development costs, developers would offer less for raw land, and willing landowners would eventually accept less per acre. Higher density development products might be tested. These adaptations are not discussed in the economic analysis.

01-44 An accepted methodology for testing the feasibility of development projects evaluates that very land value factor. In “land value residual analysis”, all development costs except land are compared to expected revenues. The result is the “land value residual”, expressed as a per-acre value. If that residual amount is below what the landowner paid for the land or what the market value of the land is in agricultural or an alternative use, development would be determined to be infeasible and not expected to move forward.

Strong and consistent trends in sales prices undercut the static cost-burden analysis

01-45 Residential sales prices have risen significantly in the Sacramento market area over the past five years. Data from 1996 through 2001 show an annual rate of increase approaching 11 percent per year and more current data for 2002 show an even higher increase. The longer term trend is also one of strong increases in residential sales values: between 1982 and 2001 the median sales price increased at an annual compound rate of six percent. Given these market trends, there is room in the feasibility equation for higher mitigation requirements and costs. Figure 1 illustrates trends in residential sales prices in the Sacramento market area. The effect of these higher sales prices on the cost-burden analysis is further illustrated in the following section.

01-46 *Habitat mitigation requirements are not a significant component of backbone infrastructure costs*

Most importantly, the discussion of backbone infrastructure and feasibility does not directly address the main question of the implications for feasibility of this NBHCP. In fact, the extensive cost burden analysis obscures a relatively simple fact that undermines the conclusive statements presented in the summary findings. The NBHCP fee is only a very small component of the overall backbone infrastructure cost analyzed. Figure 2 and Figure 3 illustrate the contribution of the habitat mitigation fee to total backbone infrastructure costs for selected prototypes developed for the NBHCP economic analysis. For residential development, the

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proposed and alternative fees represent three to six percent of the total cost burden. For non-residential development, the proposed and alternative fees range from two to 15 percent of the total cost burden; the highest percentages are for the higher mitigation alternatives in South Sutter (where the overall backbone infrastructure costs are substantially lower).

As presented in the economic analysis of the NBHCP, the habitat mitigation fees are responsible for less than one percentage point of the total cost burden for residential development. Considering a more current house price for North Natomas (\$315,990 in the third quarter of 2002, according to the Gregory Group as quoted in the October 11, 2002 *Sacramento Bee*), the proposed fee and alternatives represent about one-half a percentage point of the total cost burden for backbone infrastructure. For non-residential development, the proposed fee and alternatives represent less than one percentage point of the total burden for retail development and range from one to two percentage points of the cost burden for warehouse / light industrial development, depending on the type and value of the space that would be developed.

The non-residential analysis of cost burdens indicates that the total burdens for North Natomas and South Sutter County are high relative to the stated feasibility threshold of 10 – 15 percent. The burdens are at similar levels in some cases in the comparative development areas, however. This does not support a finding that the NBHCP mitigation fee is the maximum extent practicable. It simply indicates that overall backbone infrastructure costs are relatively high for these newly developing areas, given current market conditions, the large amount of potential supply relative to demand, and resultant obtainable rents and sales prices. The substantially lower land values in the Sutter County parts of the basin are confirmation of this condition. A significant increase in the habitat mitigation component of the fee would not change these conclusions.

As noted in the economic analysis, the “increase in HCP mitigation fees per unit has little impact on the overall fee burden under all scenarios”. (*Final Report*, March 2002, page 24.) This acknowledgement of the relatively small contribution made by the NBHCP fee to the overall cost undermines any conclusion that the proposed fee represents the maximum extent practicable fee. The fees associated with additional mitigation—Scenario 4 (1 to 1 mitigation ratio) and Scenario 5 (75 percent marsh)—make no difference in the cost burden and thus could be implemented without jeopardizing development feasibility.

01-46 In the May 2002 *Addendum*, the economic analysis notes that: “To date, the fee increases have not impacted the financial feasibility of the projects in the Natomas Basin because product sales prices of homes and non-residential development have also increased over time. As long as this trends continues, financial feasibility of development projects in the Natomas Basin will remain intact.” (May 2002 *Addendum*, page 6.) Figure 4 illustrates how closely the land cost component of the NBHCP fees has tracked increases in the sales prices for new homes in Sacramento County.

01-47 *The impact of higher mitigation on competitiveness is not substantiated*

The *Addendum* also implies that increases in the NBHCP fee would make other locations in the market area more competitive if those products could be delivered more inexpensively. It is

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01-47 unlikely that changes in such a small component of the overall backbone infrastructure would reduce the market competitiveness of the Natomas Basin product. As noted above, other elements of the development equation (such as developer profit, product type and density, and land price) could also adjust. Furthermore, open space preservation is not without benefits to nearby development, and these benefits have been shown to translate into higher property values in the long run. Also, while other jurisdictions in the greater market area may not have a habitat conservation plan and associated development impact fee, many development projects in the area are subject to mitigation requirements for impacts to habitat on a project-specific basis. Because there is no associated development impact fee, these development costs do not show up in the cost burden calculation that uses existing fees, taxes, and assessments. They are development costs nonetheless and affect the pace, pricing, and marketing of development.

Potential increases in other North Natomas fees are not material to conclusions about the proposed habitat mitigation fee

01-48 To bolster the feasibility findings, the economic analysis discusses the larger context of the North Natomas Financing Plan shortfalls and mentions that in the North Natomas Financing Plan, city planners and policy makers originally decided to look to other sources besides new development to fund some of the substantial costs of this "greenfield" development, in an attempt to maintain feasibility for new development. Now, however, the ability of the city's General Fund and other regional sources to provide funding is uncertain and limited, and significant increases in North Natomas development impact fees are anticipated. (*Final Report*, March 2002, pages 24-25.) Because of changed market conditions (substantial increases in home sales prices in the area), some increase in the cost burden to new development might be tolerated. The economic analysis also warns, however, that increases in the cost burden could approach the range of infeasibility.

This change related to the balance of the backbone infrastructure needed to develop North Natomas should have no bearing on the finding that the habitat fees considered alone are the maximum practicable fees. As demonstrated above, the habitat mitigation component is a very small part of the total cost burden, and that share is likely to be even smaller with significant increases in other fees and charges. There is nothing that says that the HCP fee should be the fee that—at the margin—bears the burden of the feasibility test.

01-49 **The discussion of the implications of expected future land values is one-dimensional and ignores other conservation strategy options**

Will escalating land prices make higher mitigation infeasible?

After concluding that "the proposed increase in the NBHCP fee from 1999 levels is projected to have minimal impact on the cost burdens of new development" (*Final Report*, March 2002, page 34) and that "the increase in HCP mitigation fees per unit has little impact on the overall fee burden under all scenarios" (*Final Report*, March 2002, page 24), the economic analysis of the "maximum extent practicable" concludes with a discussion of potential increases in land costs. The report concludes that those trends in combination with the inevitable shrinking of the static supply of habitat land as development occurs will result in a significant increase in land prices

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“potentially pushing the development projects out of the realm of feasibility”. (*Final Report*, March 2002, page 36.)

Under the NBHCP as proposed, it is quite likely that land prices will continue to escalate, and that the land acquisition component of the fee will have to be increased. In addition to the fact that there is a static supply of potential reserve land, the conservation strategy essentially earmarks certain locations for subsequent acquisition. The NBHCP conservation strategy requires a 2,500-acre habitat block and minimum sizes of 400 acres for all other reserve lands, as well as connectivity between preserves. This is likely to endow those landowners in the vicinity of existing preserves with a substantial advantage in acquisition negotiations.

At the same time, the potential supply of preserve land is greater than the preserve lands required under the proposed 0.5 to 1 mitigation ratio. This introduces uncertainty in the land market and forces the Natomas Basin Conservancy (NBC) to face landowners whose floor selling price is influenced by the potential speculative value of that land for future urban development. Expectations of competing bids from potential developers in anticipation of future urbanization in an expanded City Sphere of Influence (as proposed under the recent Sacramento City-County Natomas Joint Vision), will only exacerbate the price pressures for potential preserve lands in currently unincorporated Sacramento County.

If, however, the only alternative to selling land for habitat preserves were clearly continued non-preserve agricultural use, floor prices for land sales would likely stabilize at or somewhat above the agricultural land value. This would be the case under a strategy that required a higher mitigation ratio, thereby reducing the residual amount of unprotected land that would otherwise be subject to speculative pressures. Unless there is potential for conversion to higher value crops such as orchards or vineyards, the underlying agricultural land values tend to be relatively stable over time.

Information provided in the Draft Environmental Impact Report prepared for the Natomas Basin HCP supports an assessment of stable underlying agricultural land values in the Natomas Basin. The majority (65 percent) of the farmland resources in the Natomas Basin are prime farmland and patterns of agricultural use have been stable in recent years. The primary crops are rice, sugar beets, safflower, wheat, barley, alfalfa, corn, pastureland, tomatoes, and fruit trees. (*Draft EIR/EIS Natomas Basin HCP*, August 2002, page 3-61.) The *Draft EIR/EIS* cites land sales prices for agricultural land in the Natomas Basin of \$2,500 to \$2,700 per acre in 2000. (*Draft EIR/EIS*, page 4-141.) In the absence of speculative land development pressures inflating the floor price that landowners are willing to accept, preserve land acquisition costs might be closer to these values, as they were in the initial years of the original NBHCP.

01-49

01-50

Alternative preserve acquisition strategies offset some of the concerns about land price escalation

As the land cost component of the fee increases, developers will have increased incentive to take advantage of the dedication provision. Unlike most of the other of backbone infrastructure costs, a significant component of the cost of the habitat mitigation fee can be satisfied through land dedication—substantially reducing the burden of the fee to new development.

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Moreover, it is likely that land developers purchasing large tracts of land would be able to negotiate lower prices than would the NBC. The prices would be lower because the land developers as buyers have the advantages of substantial expertise in real estate transactions and access to market information. Moreover, the developer-buyer is in a more favorable position than is the NBC due to the timing of the land purchase—significantly in advance of development and of the imposition of the mitigation requirement, as opposed to after the fact. In fact, these conditions are evident in the “Brookfield Natomas” community proposed for the expanded Sacramento Sphere of Influence. In that case, the developer intends to dedicate for habitat mitigation significant parts of the land now controlled.

There is often a significant discount in the price per acre for large tracts of land. Hausrath Economics Group found this in analysis of land values Placer County for the Placer Legacy project; it appears to be the case for most transactions undertaken by the NBC. A preserve acquisition strategy focusing on large tracts should realize some economies in acquisition costs as well as in management and monitoring costs.

01-50 The proposed NBHCP fee builds in an allowance for transaction costs and contingency amounting to over 20 percent of the land acquisition cost. While it purportedly reflects the experience of the NBC, this appears to be a very conservative assumption. An acquisition strategy that focused on larger tracts of land would likely enjoy lower transaction and contingency costs.

01-51 *Alternative conservation strategies would reduce the contribution of both the land cost component and potentially other cost components*

In the most recent iteration of the financial analysis for determining a habitat mitigation fee, other cost components increased more significantly than did the land cost component. Figure 5 illustrates the trends in the cost components of the NBHCP over time. The proposed NBHCP conservation strategy appears ever-more costly. This suggests that alternative conservation strategies relying less on high and increasing operating, maintenance, and management costs and more on maximizing the land acquired for habitat would better satisfy the charge to maintain and increase habitat values in the Natomas Basin and would therefore have a more positive effect for covered species.

The proposed NBHCP gives only passing mention to the potential for a conservation easement strategy in conjunction with the fee title acquisition strategy. The economic analysis assumes all acquisition is fee-title. While this may be a conservative assumption, it overlooks potential economies and works to the disadvantage of a strategy involving a higher mitigation ratio.

Most other habitat conservation plans that are based on conserving suitable habitat lands in active agricultural use rely on such a strategy, in combination with a higher mitigation ratio such as 1 to 1. Conservation easements have become a widely used tool to gain a public interest in land—allowing on-going agricultural use and allowing the landowner to retain title to the property while receiving current value for development rights foregone.

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In practice, easement market values are determined by an independent appraisal of the property, evaluating the value of the development rights foregone by the landowner as a result of the easement. Easement values also vary depending on the restrictions placed on the productive value of the land. Research into the typical values for conservation easement purchases reveals a wide range of values reflecting the individualized and negotiated character of such transactions. The experience of the California Department of Fish and Game's (CDFG) conservation easement program for Central Valley wetlands is that easement values range from 25 percent to 75 percent of fee title value. The Marin Agricultural Land Trust (MALT) cites agricultural easement prices ranging from 25 percent to 50 percent of unrestricted market value, averaging between 40 percent and 50 percent.

01-51 A conservation easement strategy would result in economies in other aspects of the habitat mitigation cost and therefore in the fee. Restoration and enhancement costs would be less if more of the habitat were retained in agricultural use and not owned by the NBC. The trade-offs would be less revenue-generating capacity from land owned in fee title and potentially higher monitoring costs, but the end result might be lower net costs overall. Given the escalation in management and operating costs and the endowment required to underwrite these costs in perpetuity, investigation of a less costly operations and management approach for the NBHCP appears warranted.

01-52 **Does the plan ensure adequate funding?**

Unlike many other habitat conservation plans, the NBHCP does not rely on significant sources of outside funding—i.e., state and federal grants, local public revenues, benefit assessments, major landowner dedications. The NBHCP is based on development and land conversion occurring, thereby triggering the habitat mitigation requirements. The funding base for the NBHCP is fees on new development, supplemented by revenues from leasing habitat preserves for rice and other crop farming and from allowing waterfowl hunting on some preserve lands. Interest income from up-front fees placed in an endowment also provides long-term funding. No broader base of general public funding is targeted to supplement these efforts.

There are at least three concerns with respect to ensuring adequate funding. First, the funding plan should be able to respond to changes in costs over time. This is true in the early years, as actual experience results in refinements to original cost estimates. It is also true in the later years, as the land cost component is likely to become a sensitive factor. Second, the funding plan should analyze revenues and expenditures and demonstrate, using conservative assumptions, that costs are covered with some cushion for contingencies. Third, the funding plan should provide for the ability to respond to unforeseen circumstances.

The economic analysis of the NBHCP demonstrates a fairly strong position on adequate funding, short of a public or private guarantee.

The revised NBHCP calls for, at a minimum, annual review of the mitigation fee. Each year, the fee is to be adjusted to account for the actual experience of the NBC in acquiring and restoring preserves, managing the preserve system, and otherwise conducting operations. A financial model has been developed and refined over the years and now appears to provide a relatively

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flexible tool to estimate fee levels based on new assumptions and the actual experience of the NBC. Since the original interim fee was established in 1995, there have been five fee adjustments. Recently, significant increases in restoration cost assumptions and administration, operations, and management cost assumptions have driven the proposed fee increases.

The financial model developed for the NBHCP estimates cash flows over time based on assumptions about the pace of development and fee revenues, the pace of land acquisition and restoration, levels of operating costs and operating revenues, and interest income. In the model, a contingency factor is allowed to accumulate and contingency revenues do not offset expenditures. This is a conservative assumption; if contingency funds were assumed to offset expenditures, this would reduce corresponding fee estimates.

The operations and maintenance (O&M) endowment component of the fee provides for on-going financial support in perpetuity. After all fee revenue is collected, crop revenues and hunting revenues are not assumed to be adequate to fully fund the NBHCP in any given future year. Towards the end of the permit period, a portion of the interest earnings on the O&M Endowment Fund (not the principal amount) supplements operating revenue from crop leasing and hunting revenues. Review of the October 2002 financial model indicates that operating revenues are assumed to fund about one-third of total administration/O&M expenditures in year 50 and beyond, while the drawdown from the endowment fund supports the balance of O&M expenditures. In the latest iteration of the fee analysis, the O&M endowment component of the fee is based on providing a principle amount that generates enough interest to satisfy the required drawdown plus 20 percent. Because of changes in a number of assumptions over time, the O&M endowment fund component of the habitat mitigation fee has increased from \$75 per acre in 1996/97 to \$1,900 per acre in the October 2002 fee estimate based on the Draft NBHCP.

To provide further assurances and to provide the ability to respond to changed circumstances, beginning the 2001, the NBHCP funding plan included a provision for a Supplemental Endowment Fund. The purpose of the supplemental endowment, funded by a separate component of the habitat mitigation fee, is to enable the NBC to acquire land in advance of requirements or at higher land acquisition prices before fees can be adjusted. The supplemental endowment could also provide for the ability to buy the last preserve lands after all fees have been paid, when, given the limited supply options and potentially, the need to fill out preserves to satisfy the acquisition criteria, sellers are able to extract a premium price that is not covered by the available fees. The supplemental endowment component of the fee was first adopted in 2001 and, as of the October 2002 fee analysis, is now more than three times the amount originally adopted. To improve the commitment to ensure adequate funding, this component of the fee could be raised even further without jeopardizing development feasibility.

Alternatively, in conjunction with a plan to preserve proportionally more of the Natomas Basin as permanent habitat and open space through higher mitigation ratios, public funding could be committed to acquiring key preserve lands in advance of mitigation requirements. Spreading the costs of habitat conservation among a broader base of funding sources is often part of the political process of devising an acceptable plan. The general public benefit, as well as a broader public responsibility for past habitat conversion, justifies sharing the burden of current habitat

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01-52

conservation costs. Local, state, and federal sources are often committed to habitat conservation plans as a demonstration of that public interest and public benefit. Preserves targeted for public funding would have high habitat values and would most likely support public access.

Comments on absorption assumptions

01-53

It appears that the absorption assumptions are different in the various versions of the cash flow analysis. This is important because these assumptions determine the pace of fee revenue, the duration of the "out years" when the plan would be dependent on operating revenues and interest income, and the level of endowment fee required to supplement those operating revenues. The March 2002 *Final Report* states that a 15-year development period is assumed. (*Final Report*, March 2002, page 45.) The detailed cash flow schedules for land acquisition and restoration and enhancements in the April 2002 report appear to follow this assumption, showing fee revenue only through year 21 (2016). In the October 2002 update, however, fee revenue continues through year 32 (2027), implying a substantially slower pace of development. None of the economic analysis documents provides the assumed absorption schedule.

Implications of the Sacramento City-County Joint Vision proposal

01-54

Recent actions by local government in the Natomas Basin may have undermined key elements of the proposed NBHCP conservation strategy. Under the proposed NBHCP, 19,400 acres of agricultural lands and other undeveloped lands (canals, grassland, oak groves, ponds, riparian, ruderal, and tree groves) in currently unincorporated Sacramento County account for 70 percent of the potential preserve lands to mitigate for the effects of urban development. (From Table 4.1, *Draft Natomas Basin Habitat Conservation Plan*, Appendix H: "Natomas Basin Habitat Conservation Plan Impacts to Proposed Covered Species", prepared by CH2MHill, July 1, 2002.) The balance of the potential preserve land is in Sutter County and much of that land, while currently zoned for agricultural use, is also designated in the Sutter County General Plan as long-term Industrial-Commercial Reserve.

The proposed Sacramento City-County Natomas Joint Vision would allow 10,000 acres of urban development to occur on the 19,400 acres of agricultural lands and other undeveloped lands identified in unincorporated Sacramento County in 2001. At the same time, the proposed Joint Vision establishes a program for open space preservation within the currently unincorporated area that, to satisfy a proposed 1 to 1 ratio of permanent open space to urban development, would claim virtually all of the remaining agricultural and other undeveloped land in the currently unincorporated Sacramento County parts of the Natomas Basin. This balance between new development and open space/habitat under the proposed Joint Vision effectively removes much of the undeveloped portions of unincorporated Sacramento County from the potential supply of preserve land for the NBHCP. The expectations engendered by this local government proposal will inflate land values for preserves in unincorporated Sacramento County, particularly those areas in the proposed expanded sphere of influence.

A likely consequence of implementation of the Joint Vision as proposed would be that proportionally more of the NBHCP acquisitions would occur in Sutter County or out-of-basin. The land values are substantially lower in those areas because there is more land available and

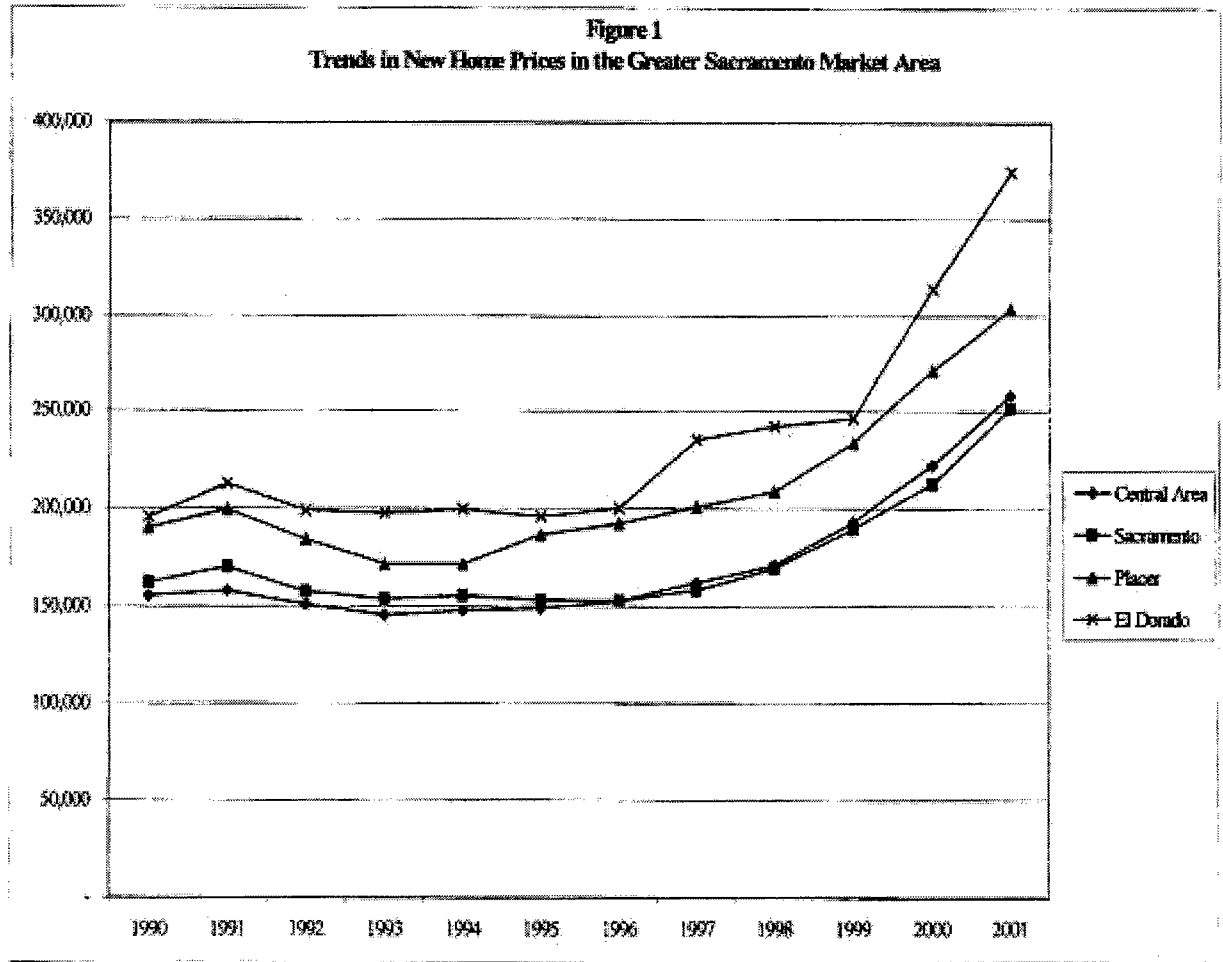
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less development pressure. With lower land costs for habitat land, higher mitigation ratios could be supported.

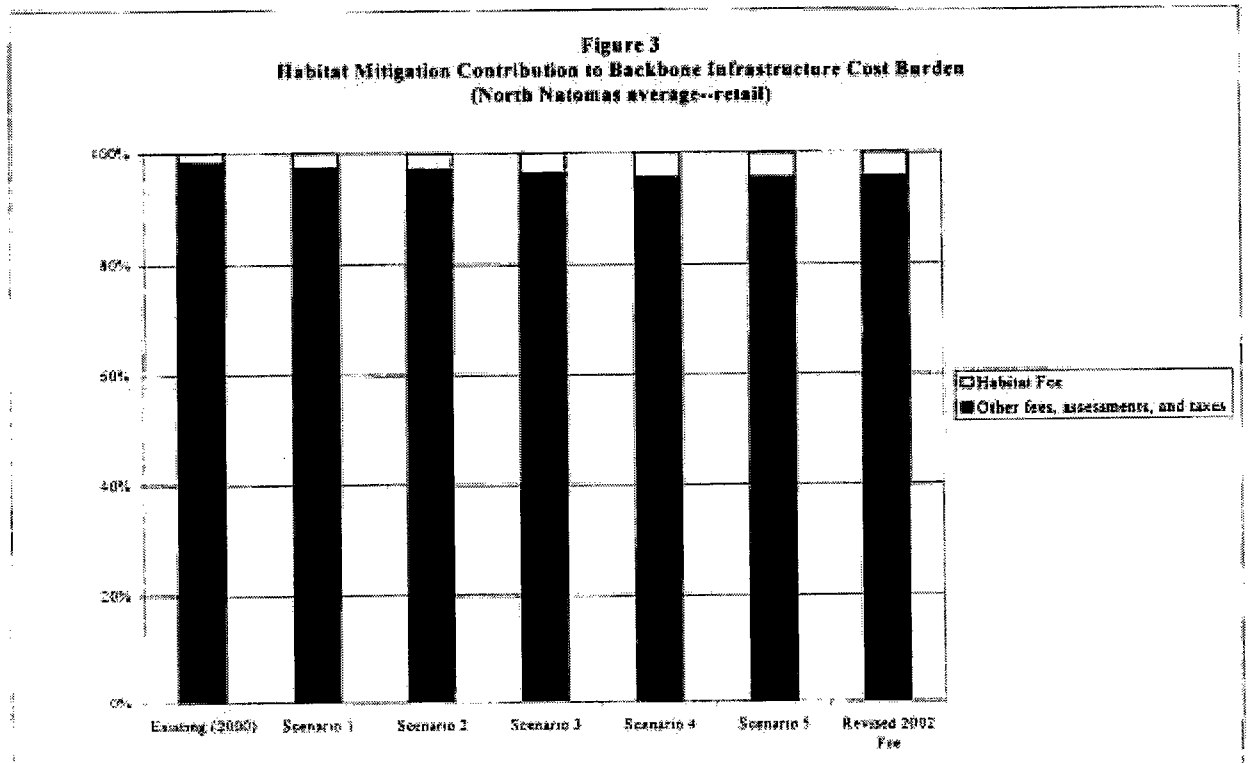
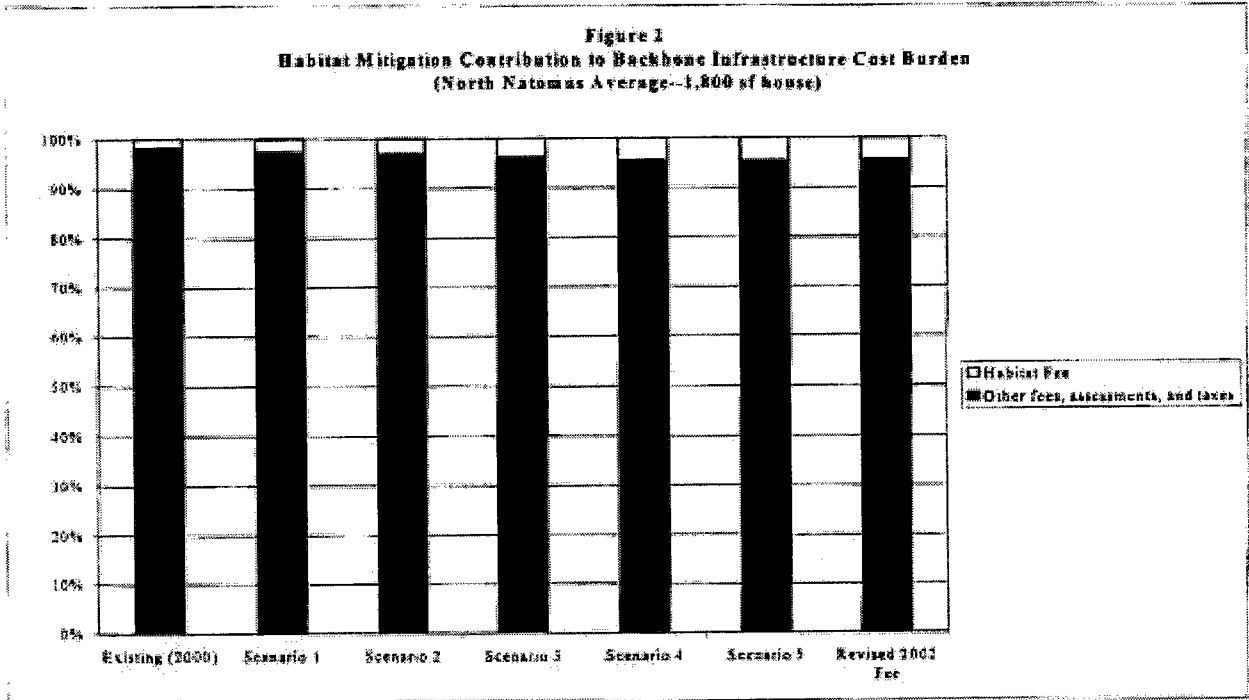
It must be noted, however, that both the prior and the proposed NBHCP require that 80 percent of habitat acquisitions occur within the Natomas Basin, in order to satisfy the goals of protecting and enhancing populations of threatened species found in the Natomas Basin. Up to 20 percent of preserve acquisitions could occur in the designated out-of-Basin Area "B", only if the United States Fish and Wildlife Service and the California Department of Fish and Game find that reserves of adequate size, viability, and habitat value can be established in the area and can support the populations of threatened and other covered species. These lands are not known currently to support the range of species that make their home in the Natomas Basin. To date, no out-of-basin mitigation acquisitions have been permitted.

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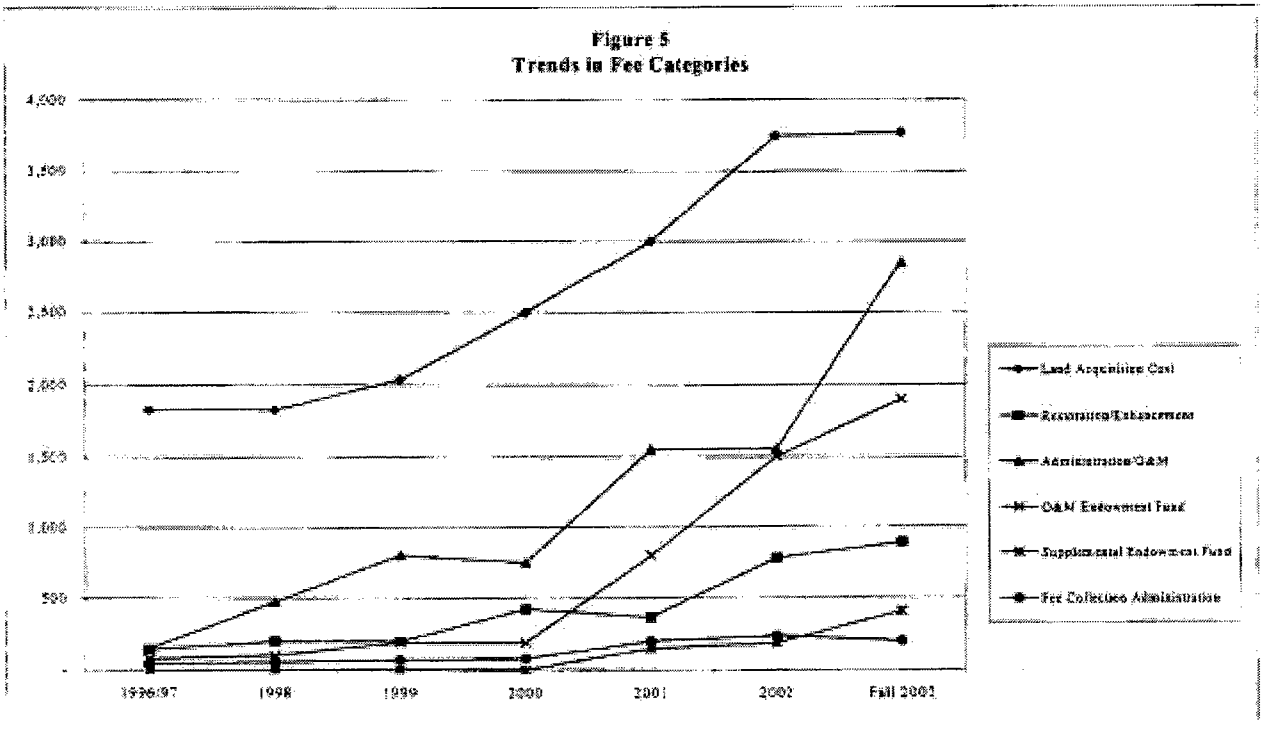
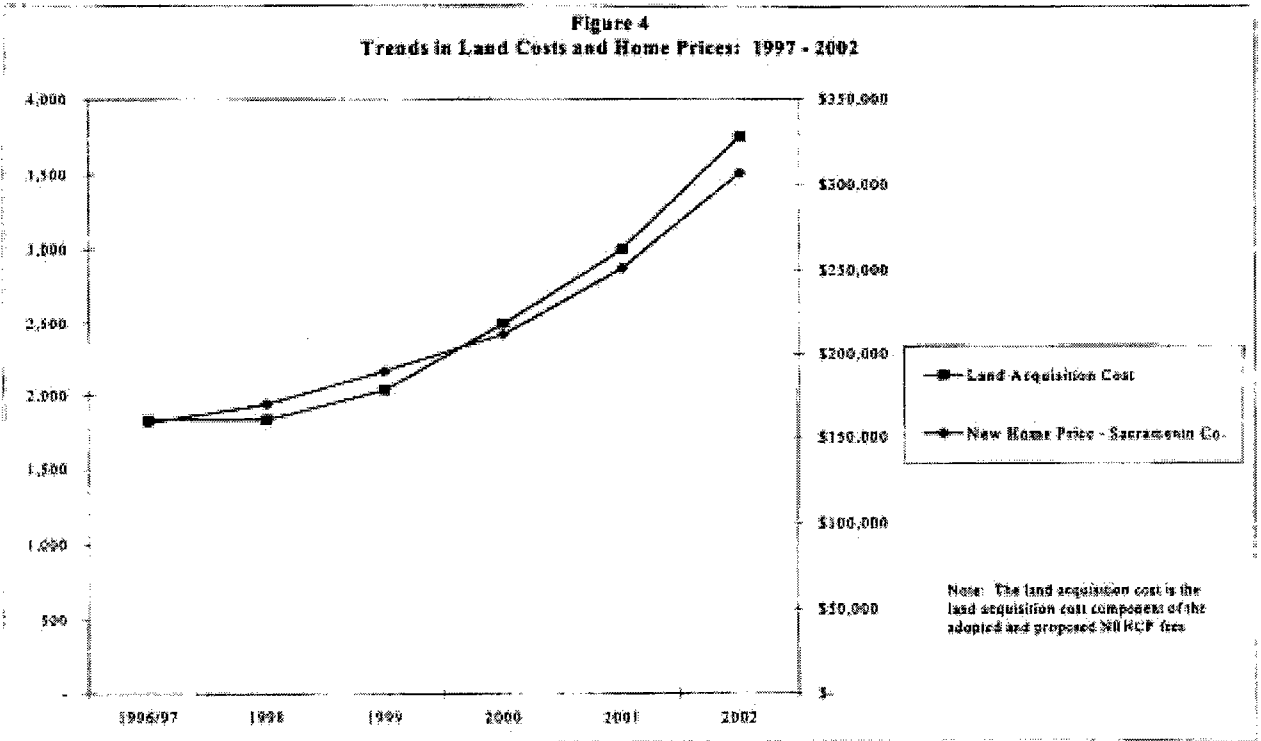
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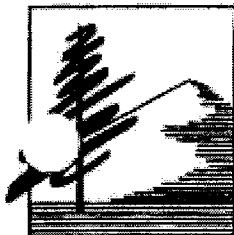


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Center for Natural Lands Management

A non-profit organization for the protection & management of natural resources

December 1, 2002

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James Pachi
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Dear Mr. Pachi:

We understand that you are representing Friends of the Swainson's Hawk and the Sierra Club Mother Lode in their discussions of the Natomas Basin Habitat Conservation Plan ("NBHCP"). The Center conducted a study of the mitigation fee elements in 1997 that reviewed land costs, agriculture and hunting revenues, restoration costs and an endowment for long-term stewardship.

For your reference, the Center for Natural Lands Management is a 501(c)3 nonprofit organization whose mission is the stewardship of endangered species lands and wetlands. The Center organized in 1990 and presently manages 43 preserves and over 50,000 acres as landowner, holder of conservation easements, and under contract with government agencies. My experience with the Center is as administrative director and director of special projects including land acquisition and the Property Analysis Record software which prepares stewardship plans and budgets. My education and previous work was in regional economics as a developer and consultant.

At your request, I am providing a review of the current fee documentation as compared to the goal of achieving "Adequacy of Funding" to the "Maximum Extent Practicable" as defined by the court in its review of the NBHCP. Current fee documentation includes Appendix A, Final Report, *Economic Analysis of the Natomas Basin Habitat Conservation Plan*, March 23, 2002 and the *Revised Fee Estimate* based on Draft NBHCP, October 11, 2002. The components of the fee reviewed here include land, restoration and stewardship.

Fee: Land Component

The land acquisition component of the fee is set at \$3,000 for the 1/2 to one acre mitigation requirement or \$6,000 per acre of land. The only prices reflected in the analysis are for purchases by the Natomas Basin Conservancy. Of these nine parcels, all but three small parcels had been purchased in the Sutter County portion of the Basin and averaged less than \$6,000 per acre.

It is apparent that the proposed fee is questionable after examining more recent

purchases which range from \$7,500 to \$11,000 per acre. The report cites the reason for excluding more recent high prices (Final Report, March 2002) is a "spike" due to the "requirement that the City purchase habitat lands in specified areas within the Basin". It is common, however, for land owners to understand the desirability of their properties and land buyers to seek lands with particular characteristics relating to transportation, neighboring uses and so on. Rather than a spike, it is likely that prices throughout the Sacramento portion of the Basin are increasing in reaction to both development potential and Conservancy guidelines. Neither the Conservancy nor any other land buyer can be expected to select less than desirable property in order to lower land prices.

As an indication that the Conservancy's guidelines have not affected prices is the recognition that these most recent purchases have been made by developers (and donated to the Conservancy) rather than the Conservancy itself. The Conservancy's guidelines, therefore, had no more impact on property prices than development pressures overall.

Since the Joint Vision announcement, many landowners are convinced that development is expected to occur throughout much of the Basin. Since conservation covers only a minor portion of the basin under the present NBHCP, it seems apparent that land prices for development will set the pace. As such the fee component for the NBHCP should be based at minimum upon the actual land sales for the Conservancy and preferably upon land sales in general.

By setting the land component of the fee according to comparable sales in the area, the Conservancy can compete for the parcels that best serve the creation of a meaningful preserve for the specified species. Inevitably over time, the purchases for conservation must concentrate on specific parcels to fill out a preserved area or to provide connectivity. This phenomenon is true of all purchase programs whether for conservation or for private development and regardless of whether the Conservancy or the development community is actually doing the buying. The land component must be sufficient to cope with this eventuality.

In addition, by setting the price at this level, the development community will have an incentive to mitigate by purchasing lands and donating them to the Conservancy. Their greater secrecy, size, and contacts may help them save a portion of the fee. In this case, the landowner has the benefit of a broader set of potential purchasers which better assures a market-driven land price.

Conclusion: To achieve adequacy of funding, the land component should be set at the average of conservation prices AND development prices for the entire area outside the currently permitted development zone.

Fee: Restoration Component

01-56

The restoration component in the original NBHCP in 1997 was \$279 per acre. The Center's report at the time estimated a cost of \$7,694 per acre based on the cost of other wetland projects and understanding the difficulties of erosion, plant maintenance, and invasive-exotic plants. Since that time, the cost of restoration fee has already increased to \$5,200 based upon the experience of

the Conservancy to date in restoring an actual property. However, none of the restoration projects is complete in terms of plant maintenance. It must be expected that a complete restoration project will cost in excess of the Conservancy's costs to date.

01-56 **Conclusion:** To achieve adequacy of funding, the restoration component should be based on historic costs and estimated costs to complete restoration of a site.

Fee: Stewardship Component

01-57 The cost of stewardship in the original NBHCP in 1997 was \$116 an acre. The present prediction is \$756,585 in administrative costs per year plus approximately \$124 per acre in field costs per year based on an estimate of acres under management from cash flow. (See Table 2 which was created because no assumptions for absorption have been provided in the *Economic Analysis*). Field costs are said to be predicated upon the Wildlands report (*Site Specific Management Plans for the Natomas Basin Conservancy's Mitigation Lands, 2000*) which works out to \$119 per acre plus administration. The management costs in the Management Plan estimated by Wildlands uses as a sample a specific group of parcels totaling 1,296 acres described in the table below.

The difficulty here is understanding the how the \$756, 585 per year in administrative time and costs will be spent. Understanding their allocation is relevant since administration is such a large component of management costs—averaging 40% of total management costs over the first 25 to 30 years of operation. Administration as a percent of total management is typically significantly less ranging between 20% and 30%. The higher proportion of administration costs in the *Economic Analysis* may indicate a underestimate of field costs as compared to administrative costs to the detriment of the properties and species.

In fact, the field costs envisioned by Wildlands do exclude several distinct tasks necessary to management. If these items are not included in the administrative costs, the stewardship component would require a significant adjustment. However, the *Economic Analysis* does not address whether these necessary tasks are covered in the budget for administration.

Wildlands Sample Project for Stewardship Estimates

Type	Acres	Proportion
Total	1,296	100%
Restored Marsh	324	25%
Rice Production	648	50%
Upland	324	25%
Managed	475	37%
Unmanaged	821	63%

As shown in the table above, Wildlands envisions no management for the rice lands and much of

the uplands. In fact, just 475 of the 1,296 acres are considered managed of which 325 are wetlands and 150 are uplands. Since there are obviously tasks for the remaining lands, it must be presumed that they are either neglected or that they are conducted by administrative personnel but are not reflected in the NBHCP. Examples of such tasks include the following.

Outreach-As development occurs and as acquisitions take place in Sacramento County, there will be increasing numbers of homes and businesses in the vicinity of the preserved lands. The potential and likelihood for use by neighboring residents will not be controlled by the minimum amount of fencing including in the projected management numbers. Outreach includes involving the community in the management of the preserve through meetings, talks, and materials in order to help protect it.

Visitation-The Plan calls for docents to be trained and to conduct any visitation allowed on the conserved lands at no cost to the program. Most docent training programs involve one and one-half to two persons dedicated to training and management of docents and visitation. Docents are not free.

Hunting-The Plan calls for income from hunting but no costs. In actuality, it is likely that a contractor or staff will be involved in issuing permits, collecting fees, constructing and monitoring the condition of blinds, making and installing signs, and patrolling for compliance with hunting rules, and correcting noncompliant activities. No deduction from anticipated hunting fees is made to account for these tasks if conducted by a contractor.

Rice Farming-The Plan calls for revenue from rice land leasing but includes only a single task encompassing 16 hours per site for field employees covering coordination with the farmer. However, the rice farming program requires far more work including preparing and negotiating lease agreements, collecting rents, patrolling for compliance and potentially enforcing compliance on the occasionally recalcitrant lessee.

Management Plans-Except for the Plan prepared by Wildlands no additional management Plans for additional parcels or updates of management plans are contemplated.

Pest Management-The Plan calls for control of beaver and muskrat, but since the preserves will increasingly be near development, and since giant garter snake is a concern, control of cats will be a necessity.

Water Testing-No item is shown in the Plan for water testing.

01-57 **Conclusion:** To achieve adequacy of funding, it should be determined that the administrative budget is expected to cover these otherwise unfunded tasks or that the stewardship budget should be adjusted.

Salaries

01-58 The level of salaries for field employees may be adequate for untrained personnel but is low for trained personnel experienced with the properties and their history. Salaries including benefits for long-term employees are likely to increase faster than inflation as they gain experience. The cash flow excludes inflation which is appropriate but also excludes any merit gains in salaries.

Conclusion: Staff compensation above inflation should be shown on cash flows.

Economies of Scale

The most effective preserves in terms of their ability to protect species are larger preserves with a high ratio of interior area to the length of edge. For example, a 100 acre preserve could have a minimum ratio of 521 and a 1000 acre preserve would have a minimum ratio of 1650 or over three times the amount of interior area to edge as the smaller preserve. The literature cites the "edge effect" of such things as roads, development, invasive-exotic species, pesticides and pets on species within a preserve. To the extent the edge is reduced, the condition of species populations is improved.

The edge effect is very apparent in the management of the Center's preserves resulting in small preserves costing more per acre to manage and defend than larger preserves. In addition, the Center conducted a study of management costs at existing preserves in 1994 funded by the Environmental Protection Agency that clearly demonstrated the economies of scale of larger preserves. The level of impacts from the edge is directly correlated to management tasks and, therefore, costs. As an indication of the value of economic information on preserve management, EPA has recently funded an updated study of management costs for projects in California, Oregon and Washington.

01-59

Understanding the benefits of economies of scale to both species populations and management costs, the primary goal of the NBHCP to establish a system of preserve that will support viable populations of certain species conflicts with the expectation reflected in the *Economic Analysis* that lands should not be designated for purchase in order to restrain land prices. To develop significant and connected preserves, parcels adjacent to existing preserved lands will inevitably be identified as potential acquisitions. To deny the Conservancy this ability is to prevent the establishment of an effective and efficient preserve system.

The benefits of scale also reflect on the NBHCP ratio of 1/2 acre preserved to 1 acre developed. As acquisitions to date have resulted in spatially disconnected preserve areas, significant new acquisitions will have to occur to develop a system of preserves that will actually protect the species. Whether an effective and efficient preserve system with viable populations of each species can be accomplished under the current ratio without extraordinary management efforts to crowd and manipulate individuals is highly questionable.

Conclusion: Preserve lands should be planned to provide an effective preserve system and efficient management program.

Maximum Extent Practicable

01-60

The requirement under the court order is to establish "adequate funding" to the "maximum extent practicable". The *Economic Analysis* purports to define the maximum extent practicable by comparing the resulting habitat fees of the Natomas area with those in other locations. While the report notes that "no two habitat conservation plans are alike", it is instructive to understand where the differences occur.

The biggest difference between these plans is in the values of the land involved. Most of the HCP's listed are not planning to mitigate in areas under speculative pressures to develop. Many are not even adjacent to land considered developable. For instance, the Metropolitan Bakersfield HCP is purchasing land in the western Kern County where prices range between \$300 to \$500 per acre and is miles from any utilities. Similarly, the Coalinga program is concerned with kit fox habitat in the valley and coastal hills where land is very inexpensive and development pressures even for agricultural uses are minimal.

Neither the Bakersfield or Coaling projects contain wetlands or require restoration of wetlands. Restoration of grasslands may be needed in a very limited way. Even vernal pool programs such as South Sacramento are more interested in protecting existing wetlands rather than restoration of wetlands which reduces the cost of that component in their fee structure.

The only program that is comparable to the NBHCP is San Joaquin County where both development pressures and wetlands are involved. The fee here is over \$9,000 per acre for vernal pool grassland which indicates that such levels are appropriate in the fast growing Central Valley cities.

Conclusion: Fees for programs that are not comparable to the subject are not an indication of the "Maximum Extent Practicable" while fees such as that for San Joaquin County do indicate that a higher fee is, indeed, practicable.

Second, the *Economic Analysis* compares total fee structures in communities to that in Natomas. It should be recognized that the development industry, while not ignoring fee structures, are far more interested in the total cost of the lot which includes land, lot improvement costs, infrastructure and fees. Non-habitat district fees are a particularly inappropriate comparison since they often pay for lot improvement costs and are therefore interchangeable with other costs. One community or project may use more district fees to pay these costs than another but the total lot improvement cost may be identical.

Since land and the rest of lot improvement costs usually move inversely with each other, it is of little import to know either one or the other without knowing both. Therefore, the comparison of fee structures by themselves is of little value in determining the maximum cost practicable to the development industry. Within the wide range of choices for land and lot improvements, builders have a far greater ability to manipulate components to create a marketable product than is apparent from the *Economic Analysis*.

Further the impact on house value is very small. The total of land and land improvements is often considered appropriate if it ranges between 25 and 30% of the total house price. If the price of housing is therefore, \$315,000 on average and the density averages five units per acre, the total lot cost can be \$78,750 to \$94,500. The NBHCP part of the lot cost is 1.5% for Scenario 1 (\$5,993 divided by 5 or \$1,198) and 2.2% for Scenario 5 (\$10,582 divided by 5 or \$2,116). In comparison, builders look for profit margins of about 12% to 15% of the price of the home or

↑
about \$38,000 to \$47,000 per house.

01-60

Conclusion: The very small component of house price represented by the NBHCP fee should not be limited to a figure that does not serve the purpose of the NBHCP overall.

Thank you for this opportunity to review the fee proposal for the Natomas Basin Habitat Conservation Plans. I will be happy to answer any questions you might have.

Sincerely,



Brenda Pace
Special Projects

Table 2
Estimate of Acres Funded and Acres Purchased
Based on EPS Revised Fee Estimate Table 10

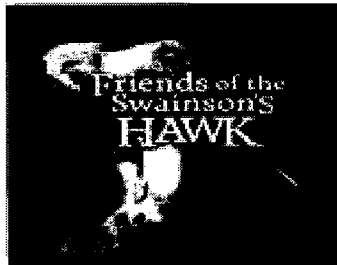
Year	Fee/Price % Transaction	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Total
Land Revenue		55,541	191,866	2,528,057	2,696,904	1,287,471	3,198,070	3,941,346	4,462,910	4,673,471	4,699,365	4,710,522	
Acres	\$3,750	15	51	674	719	343	853	1,051	1,190	1,247	1,253	1,256	
Cumulative Acres		15	66	740	1,459	1,802	2,655	3,706	4,896	6,143	7,396	8,652	
Purchase Land					4,924,998	16,476,666	1,535,905	9,510,155	1,569,213	3,957,054	3,965,422	3,966,422	
Acres	\$7,550				652	2,182	203	1,260	208	524	525	525	
Cumulative Acres					652	2,835	3,038	4,298	4,506	5,030	5,555	6,080	
Restoration Cost							1,060,422	345,161	1,665,073	685,458	1,161,805	950,446	
Acres at 25%							760	1,074	1,126	1,257	1,389	1,520	
Cost/Acre							1,396	321	1,466	545	837	625	
Total Management and Admin Cost				106,930	326,904	541,064	611,155	1,287,789	1,333,577	1,410,131	1,484,040	1,580,843	
Administration Cost								756,585	756,585	756,585	756,585	756,585	
Management Cost				106,930	326,904	541,064	611,155	531,214	576,992	653,546	727,455	824,358	
Management Cost/Acre				301	301	161	201	124	126	130	131	136	
Total Cost/Acre								300	296	280	267	260	

Year		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Land Revenue		4,721,684	2,031,014	1,996,436	2,001,888	2,007,383	2,012,981	1,252,809	1,245,515	1,249,600	1,253,746	1,127,517	
Acres	\$3,750	1,258	542	532	534	535	537	334	332	333	334	301	
Cumulative Acres		8,652	8,652	8,652	8,652	8,652	8,652	8,652	8,652	8,652	8,652	8,652	
Purchase Land		3,966,422	1,634,333	1,634,233	1,634,233	1,634,233	1,634,233	973,199	973,199	973,199	973,199	973,199	
Acres	\$7,550	525	216	216	216	216	218	129	129	129	129	129	
Cumulative Acres		6,080	6,080	6,080	6,080	6,080	6,080	6,080	6,080	6,080	6,080	6,080	
Restoration Cost		859,902	859,902	394,657	394,657	394,657	237,125	237,125	237,125	237,125	237,125	237,125	
Acres at 25%		1,520	1,520	1,520	1,520	1,520	1,520	1,520	1,520	1,520	1,520	1,520	
Cost/Acre		566	566	260	260	260	156	156	156	156	156	156	
Total Management and Admin Cost		1,665,614	1,723,562	1,760,522	1,814,042	1,855,395	1,896,961	1,931,604	1,965,472	2,001,385	2,030,362	2,059,607	
Administration Cost		756,585	756,585	756,585	756,585	756,585	756,585	756,585	756,585	756,585	756,585	756,585	
Management Cost		909,229	966,977	1,023,937	1,057,457	1,098,810	1,140,376	1,175,019	1,208,887	1,244,800	1,273,777	1,303,022	
Management Cost/Acre		150	159	168	174	181	188	193	199	205	209	214	
Total Cost/Acre		274	283	293	298	305	312	318	323	329	334	339	

Year		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
Land Revenue		1,127,517	1,127,517	1,127,517	1,127,517	1,127,517	1,127,517	1,127,517	1,127,517	1,127,517	1,127,517	0	64,621,447
Acres	\$3,750	301	301	301	301	301	301	301	301	301	301	0	17,232
Cumulative Acres		8,652	8,652	8,652	8,652	8,652	8,652	8,652	8,652	8,652	8,652	0	219,226
Purchase Land		973,199	973,199	973,199	973,199	973,199	973,199	973,199	973,199	643,391	0	0	71,339,400
Acres	\$7,550	129	129	129	129	129	129	129	129	85	0	0	9,449
Cumulative Acres		6,080	6,080	6,080	6,080	6,080	6,080	6,080	6,080	6,080	6,080	6,080	
Restoration Cost		237,125	237,125	237,125	237,125	237,125	237,125	237,125	237,125	224,321	199,342	133,649	12,669,102
Acres at 25%		1,520	1,520	1,520	1,520	1,520	1,520	1,520	1,520	1,520	1,520	1,520	
Cost/Acre		156	156	156	156	156	156	156	156	148	131	88	5,363
Total Management and Admin Cost		2,088,129	2,318,934	2,149,033	2,179,435	2,210,147	2,241,160	2,272,543	2,304,246	2,332,706	2,354,519	2,380,753	54,020,953
Administration Cost		756,585	756,585	756,585	756,585	756,585	756,585	756,585	756,585	756,585	756,585	756,585	20,427,795
Management Cost		1,332,543	1,562,349	1,392,448	1,422,850	1,453,562	1,484,575	1,515,958	1,547,661	1,576,121	1,597,934	1,604,168	33,593,158
Management Cost/Acre		219	224	229	234	239	244	249	255	259	263	264	
Total Cost/Acre		344	348	353	358	363	369	374	379	384	387	388	

**Table 1
 Land Price by County and Date
 Acquisition for Natomas Basin HCP**

Sacramento County			Sutter County		
Acres	Date	Price Per Acre	Acres	Date	Price Per Acre
159.20	1999	3,005			
138.99	1999	3,246			
40.29	1999	3,474			
			226.68	1999	3,600
			132.49	1999	3,600
			267.99	1999	4,000
			331.21	1999	4,000
			241.38	2000	4,500
			92.6	2000	4,200
Not Reported As of Revised Fee Estimate Oct. 2002					
44.68	2001	10,000			
96.46	2002	11,000			
311.50	2002	11,000			
575.56	2002	7,500			
50	Pending	8,250			
66.83	Pending	8,250			



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SACRAMENTO WILDLIFE OFFICE

Friends of the Swainson's Hawk
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www.swainsonshawk.org

December 5, 2002

Field Supervisor
U.S. Fish and Wildlife Service
2800 Cottage Way, W-2605
Sacramento, CA 95825

Re: Comments on Draft Natomas Basin Habitat Conservation Plan, dated July 25, 2002 and Associated Draft Environmental Impact Statement/Environmental Impact Report

Dear Sir or Madam:

02-1 Friends of the Swainson's Hawk submits these comments in addition to co-signing the comment letter from five environmental groups. The purpose of this letter is to provide more detailed comment on points made in the joint letter. We urge US Fish and Wildlife and California Department of Fish and Game not to approve the Natomas Basin Habitat Conservation Plan and Authorized Development as submitted.

02-2 1. Conflicts between NBHCP and EIR/EIS with "Staff Report Regarding Mitigation for Swainson's Hawk (*buteo swainsoni*) in the Central Valley of California," dated November 1, 1994, demonstrates NBHCP does not meet the criteria set by CDFG. CDFG criteria in the Staff Report include:

- Project review requires consideration of nest sites within a ten mile radius. (p. 1)

- Project review requires consideration of habitats including alfalfa, fallow fields, beet, tomato and other low-growing row or field crops; dry-land and irrigated pasture, rice land when not flooded and cereal grain crops (including corn after harvest). (p. 2)

- "The prey base (availability and abundance) for the species is highly variable from year to year, with major prey population (small mammals and insects) fluctuations occurring based on rainfall patterns, natural cycles, and agricultural cropping and harvesting patterns. Based on these variables, significant acreages of potential foraging habitat (primarily agricultural lands) should be preserved per nesting pair (or aggregation of nesting pairs)

to avoid jeopardizing existing populations. Preserved foraging areas should be adequate to allow additional Swainson's Hawk nesting pairs to successfully breed and use the foraging habitat during good prey production years." (p. 6)

- "Prey abundance and availability is determined by land and farming patterns including crop types, agricultural practices and harvesting regimes. Estep (1989) found that 73.4 % of observed prey captures were in fields being harvested, disced, mowed or irrigated. (The staff report also includes the foraging habitats listed above from Estep 1989.)

- To mitigate for the loss of foraging habitat (pp. 11-12), projects within 1 mile of an active nest tree provide either a 1:1 ratio (where only 10 percent of the lands are actively managed for the SWH or a .5:1 ratio where all the mitigation lands are actively managed). Projects within 5 miles but greater than one mile provide .75:1 ratio of mitigation lands under fee title or conservation easement. Projects within 10 miles but greater than 5 miles provide .5:1 ratio with lands protected through fee title or conservation easement. Projects must also provide fees for long-term management. (p. 12)

02-2 There is significant conflict between the Staff Report and other reports and comments by Swainson's Hawk biologists on the one hand, and the rationale provided in the NBHCP and the EIR/EIS on the other hand. The NBHCP and EIR/EIS explanations for the Swainson's hawk mitigation program and its value for avoiding reduction of loss and recovery, minimizing take, maximizing mitigation and reducing significant impacts to less than significant lack credibility and scientific backing.

02-3 These conflicts include:

a. The NBHCP and EIR/EIS do not assess the species impact and mitigation programs in light of the Staff Report quoted above, the only existing guideline for assessing mitigation programs for the Swainson's Hawk.

02-4 b. The NBHCP and the EIR/EIS do not look at all nesting sites within 10 miles of the Natomas Basin in order to assess impacts on all affected Swainson's hawk nesting pairs.

02-5 c. While the guidelines consider all agricultural lands used for forage by Swainson's Hawk and do not devalue some in relation to others, the NBHCP and EIR/EIS consider non-rice (row or field crops) as lower quality foraging habitat than alfalfa, pasture and native grasslands. Neither the staff report nor the Estep (1989) study cited support this conclusion.

02-6 d. No consideration is given in the NBHCP or EIR/EIS to the number of foraging acres needed per nesting site to maintain the existing nest sites. With 43 breeding pairs, and assuming that of the 9,000 acres in the Swainson's Hawk zone, 2,187 acres are managed for high quality forage, the per active nest yield is 51 acres. What evidence exists to

02-6 support the conclusion that 51 acres is ample? Does availability of 27.5 acres of marsh edge, distant from nests in unknown locations at some time in the future add appreciably to the per nest forage available? To what extent is the mitigation program dependent upon the voluntary actions of private farmers in the Swainson's Hawk zone, and the County of Sacramento's 4,000 acres of airport buffer lands, to provide the necessary forage to sustain the Swainson's Hawk population? Note that independent biologists in 1992 estimated the habitat need per nest at 2500 acres (see attached).

e. The NBHCP and EIR/EIS identify 62 nesting sites in the Basin. However, only 24 were successful nests in 2001. (Estep found the comparable numbers in 2002 were 70 and 24.) On page III-18, T. Roscoe, CDFG personal communication, is quoted as saying that one in three nest sites are successfully utilized each year. These documents do not identify comparable nesting habitat data for areas adjacent to the Basin.

02-7 The NBHCP and EIR/EIS conclude that: "Foraging habitat is probably not currently limiting because of the large amount of agricultural fields available in the the Natomas Basin and surrounding areas and the ability for Swainson's Hawk to forage over larger distances." This conclusion ignores the fact that there are other nesting populations in the areas adjacent to the Basin that are appropriate for foraging and that other nesting populations may also be using the foraging lands in the Basin. It ignores the fact that other raptors are also using these lands for forage. It also does not address the fact that if only one out of three nesting sites is successful, the nesting habitat is not the limiting factor on the population.

02-8 f. The NBHCP and EIR/EIS document the types of habitat lands in the Basin and describe the amount and type of lands to be acquired for mitigation under the one-half to one mitigation ratio intended to offset all species impacts from development in the Basin. The mitigation for Swainson's Hawk is acquisition and management of upland habitats.

The mitigation ratio for SWH in the NBHCP is well below the recommended mitigation ratio in the Staff Report. The proposed plan requires that within the next 50 years, 2,187.5 acres of upland will be acquired by the Natomas Basin Conservancy for all permittees, City, Sutter and Metro Air Park. This represents 25 percent of all land acquired for mitigation (8,750 acres). These 2,187.5 acres are to be largely (but not exclusively) managed for Swainson's Hawk foraging. In addition, the HCP claims that 1,184 acres of marshland edges will also be managed for Swainson's Hawk foraging (VII-15).

In contrast, the NBHCP and EIR/EIS identify the loss of Swainson's Hawk habitat lands at 8,785 for the authorized development in City of Sacramento and Sutter County (i.e. not including Metro AirPark) (IV-14-15). Of these, 3,844 acres are identified as within one mile of a Swainson's Hawk nesting site (in or along the Sacramento River adjacent to the Basin). [Fallow rice lands and rice land and marsh edges were not included in the estimate of lost lands.]

Therefore the mitigation ratio for the NBHCP for Swainson's Hawk is .25 to 1. Under the CDFG staff report on mitigation, the acquisition of habitat lands to mitigate for impacts on the Swainson's Hawk would have been four to five times as much. Total upland mitigation land acreage likely would have been closer to 8,000 to 11,000 acres if the Staff Report recommendations were followed.

02-8 Independent biologists who have assessed the needs for maintaining Swainson's Hawk population in the Basin have identified the habitat preserve land requirement at 10,000-11,000 acres of land managed in uses compatible with Swainson's Hawk foraging needs. (EIP Associates, *SAFCA Swainson's Hawk and Giant Garter Snake Draft Habitat Conservation Plan*, 1992). This estimate was made prior to current information about the level of nesting in the Basin.

02-9 g. The Staff Report does not address the issue of acquiring habitat lands in areas distant from the affected nesting pairs. The 1997 Natomas Basin HCP required all upland habitat to be acquired in the Basin. However the NBHCP contains no such acquisition requirement. Since up to 20 percent of total required habitat acquisitions can be out of basin in the 2002 NBHCP, up to 1,750 acres may be purchased outside the basin. If all the land purchased outside the basin is upland, this will leave only 437.5 acres of Swainson's Hawk habitat preserved in the basin. The NBHCP and EIR/EIS fail to explain how 437.5 acres of foraging habitat in the Basin can fully mitigate the loss of 8,785 acres of foraging habitat in the Basin. Alternatively, the NBHCP and EIR/EIS could explain why they have not required all upland habitat to be located within one mile of a known nest site for Swainson's Hawk in the Natomas Basin.

02-10 **2. Impacts of Timing of Mitigation on the Swainson's Hawk Were Not Considered in NBHCP and EIR/EIS.**

Most of the impacts on Swainson's Hawk come as a result of City of Sacramento development; 75 percent of the foraging habitat loss (6,925 acres) is in the City of Sacramento and 89 percent of the prime foraging habitat lost is in the City (3,679 acres). The preponderance of nest sites in the Basin are south of Elkhorn Blvd. (31), and most are in close proximity of the foraging habitat that is now or very soon will be lost.

Very few nest sites are close to the Sutter County portion of the basin. The NBHCP at VII-16 states that "Given the relatively low value foraging habitat and the minimal number of existing nesting trees, the Sutter County portion of Natomas Basin is neither critical or unique Swainson's hawk habitat and is not critical to the species survival or recovery." It states at VII-14 that in the City's Permit Area, loss of habitat could potentially adversely affect the continued existence of the species in the Basin, "absent the avoidance, minimization and mitigation measures of the NBCHP."

Neither the NBHCP nor the EIR/EIS assess the impact on the Swainson's Hawk population of the timing of mitigation. No link is made in the NBHCP to ensure that the forag-

ing habitat mitigation measures for the Swainson's Hawk are implemented to precede or be contemporaneous with the loss of foraging lands. In fact, the City under a prior, failed, HCP, has already developed half of its permitted area. It has paved over much of the Swainson's Hawk habitat in its jurisdiction. Yet very little of the preserve land acquired and managed to date is upland in the "Swainson's Hawk zone." Possibly 200 acres could be classified as meeting this criterion. These scattered parcels are part of a 250 acre minimum acquisition in the Fisherman's Lake area required by the Settlement Agreement between environmental groups and the City.

Under the inadequate mitigation ratio of the NBHCP, the City is supposed to have acquired 525 acres of upland to offset the impact of the development already completed. Even had the NBC acquired these lands, they could not have fully mitigated for the loss of thousands of acres of foraging lands that have been paved over since 1997. The Natomas Basin Conservancy has acquired almost 2,800 acres of mitigation land since 1999. Almost all of this land is either rice land or has been converted to managed marsh. At present, NBC does not meet the proposed requirement that 25 percent of the mitigation holdings be upland.

There is no timetable or deadline for achieving upland preserves and enhancement in a way that minimizes the impact of loss of foraging habitat in the City of Sacramento. It is possible given the NBHCP requirements that the acquisition of uplands and enhancement of these lands could be delayed for a number of years. Most of the existing Swainson's Hawk foraging habitat that is not developed or to be developed by the applicants is in Sacramento County and the land purchased to date by the Conservancy (exclusive of acquisitions in Sacramento County required under the Settlement Agreement) is in Sutter County because land prices are cheaper in Sutter County.

During the period of operation of the 1997 NBHCP, NBC acquired 1,651 acres at an average price of \$3,824. [The only upland acquired was located in the far northeast corner of Sacramento County, far from any known Swainson's Hawk nest. It has since largely been reconstructed as a wetland.] The only land acquired in the Swainson's Hawk zone was in the Fisherman's Lake area under the Settlement Agreement. It included approximately 96 acres (mostly in rice but to be converted to upland) at \$11,000 an acre, 40 acres at \$10,000 and 116 acres at \$8,250 an acre. These mostly upland properties are in an area where nesting density is the highest in the basin. These purchases were made only because of the Settlement Agreement requirements.

Given the price differential, there is no reason to believe that the mitigation for SWH habitat destroyed by the City's urbanization will be acquired any time soon absent a requirement to do so in the NBHCP. Under terms of the proposed NBHCP, the NBC could put off buying upland until after the City is fully developed. Should this occur, the substantial impacts of the loss of foraging habitat due to City authorized development would not be mitigated or minimized to the maximum extent practicable, or at all.

There are no guarantees that there will be a market for the Sutter County lands proposed for industrial and commercial purposes. If Sutter does not develop, and City fees

are spent on wetland mitigation lands, the upland mitigation lands would not be acquired. Moreover, if Sutter County does develop, it is our understanding that the major landowners will mitigate with rice lands that they own, rather than pay an acquisition fee. These are plausible scenarios that would leave the City's impacts on Swainson's Hawk habitat largely unmitigated.

Nothing in this plan protects the nesting and foraging habitat in the County of Sacramento portion of the Swainson's Hawk zone. This important area is simply assumed to remain "as is" with the possible exception of acquisition of reserve lands that would be more intensely managed for Swainson's Hawk forage. This assumption relies on voluntary actions by private land owners and the County of Sacramento. These assumptions are unwarranted as evidenced by recent habitat destruction by the County Department of Airports, numerous development approvals by the County of Sacramento in or near the Swainson's Hawk zone, and continuing development applications and expectations by landowners in the Swainson's Hawk zone.

Meanwhile the City has applied for a permit which would include development of 180 acres within the Swainson's Hawk zone. To be consistent with the conservation program proposed, and to provide protection for nesting and foraging Swainson's Hawks in the Swainson's Hawk zone, the regulatory agencies should deny a take permit for any lands west of El Centro Road in the City's application that have not already been developed.

As explained elsewhere, the NBHCP assumes owners of contiguous parcels in the Swainson's Hawk zone to voluntarily sell lands or conservation easements to the NBC at affordable prices. The NBHCP fails to establish any rationale why these voluntary actions are likely to happen, particularly given the history of acquisitions to date, and the proposals for future additional development in the Basin.

02-10 In addition, the NBHCP and EIR/EIS claim that marsh edges will be used for Swainson's Hawk foraging to help mitigate for loss of foraging lands in the City of Sacramento. Again, the timing for availability of marsh edges and their at some distance from Swainson's Hawk nests impacted by development makes reliance on this source of additional prey very questionable.

02-11 **3. Draft NBHCP and EIR/EIS Assertion that Impacts on Swainson's Hawk Will Be Less than Significant Is Not Supported by Evidence in the Documents.**

The draft NBHCP and EIR/EIS assert that the impacts of the authorized development on the Swainson's Hawk and its habitat will be less than significant. The EIR/EIS (4-76) states that :

"few territories. . . are likely to be abandoned as a result of the project

reduction in foraging habitat acreage for the following reasons:

- Loss of potential foraging habitat would primarily occur away from nest sites where it is less valuable to nesting Swainsons' Hawks
- Maintenance of foraging habitat in the Swainson's Hawk Zone would be a focus of the proposed action, and most of the nest sites are located in this zone
- upland reserves would be managed to provide better quality foraging habitat for Swainson's Hawk than is provided in agricultural fields
- Foraging habitat is probably not currently limiting because of the large amount of agricultural fields available in the the Natomas Basin and surrounding areas and the ability for Swainson's Hawk to forage over larger distances.

Lastly, upland reserve sites in the Swainson's Hawk Zone would be acquired with habitat contiguity as a primary consideration. The acquisitions by the Conservancy would ensure that substantial amounts of Swainson's Hawk habitat would be maintained in close proximity to occupied nesting habitat. . . . selected using a strategy that maximizes the Conservancy's ability to maintain Swainson's Hawks in the basin (. . . not randomly selected. . .). For these reasons, the reduction in foraging habitat associated with the covered activity of urban development is not expected to result in the loss of territories associated with nest trees located outside of the development areas. Therefore the proposed Action's conservation program for Swainson's hawks would reduce potential impacts to Swainson's hawks to a less-than-significant level."

Further detail is provided at 4-72 and 4-73 regarding these points. The [unfounded] assertion is made that "Nonrice crops (e.g. row crops) are used less (Estep, 1989; Babcock, 1995) and considered poorer quality foraging habitat for Swainson's hawk than native grasslands, alfalfa and pasture. Upland habitat in the reserves would be alfalfa or native grassland and would be managed specifically to provide foraging habitat for Swainson's hawk."

02-11

The findings regarding the Swainson's Hawk Conservation program in the NBHCP and the findings of the EIR/ EIS are not supported by independent biological expertise, known scientific information, previous findings by the regulatory agencies and the requirements of the NBHCP.

02-11(B)

Assumptions about where and how much habitat for Swainson's Hawk will be acquired are based on assumptions about how the plan will operate not on requirements of the plan. For example, nothing in the NBHCP requires that upland habitat be acquired in

02-11(B)

the "Swainson's Hawk Zone" or that "substantial amounts of habitat would be maintained in close proximity to occupied nesting habitat." These are priorities and preferences and not requirements of the plan. Acquisitions to date do not achieve the standard identified in the EIR/EIS as resulting in less than significant impacts. (See below for discussion of imbalance between upland habitat lost and upland habitat conserved to date.)

02-11(C)

The NBHCP and EIR/EIS do not document that the foraging lands being converted to urban uses are far from the nesting sites served. ("Loss of potential foraging habitat would primarily occur away from nest sites where it is less valuable to nesting Swainsons' Hawks.") The EIR/EIS and NBHCP identify over half of the foraging lands in the Basin as within one mile of a nest. They do not identify the maximum distance of foraging lands from a nesting site. Inspection of the map in the NBHCP and EIR/EIS of nesting sites demonstrates that the foraging lands being destroyed by urbanization of the City are within 2 miles of an 1997 nest site and no part of the Basin is greater than five miles from a nesting site. The foraging lands destroyed by City urbanization are within five miles of the nests along the river. The CDFG Staff Report recommends mitigation up to 10 miles from nesting sites, and requires at least one-half to one mitigation ratio for all Swainson's hawk foraging habitat within 10 miles of a project.

02-11(D)

The NBHCP and EIR/EIS fail to establish any biological basis for the assertion that the lands acquired would be managed to produce the foraging value of the foraging lands destroyed.

Neither the NBHCP nor the EIR/EIS provide documentation that lands in the Sutter County portion of the Swainson's Hawk zone, mostly rice fields, could be managed for high quality Swainson's Hawk foraging habitat when to date they have provided very little habitat for Swainson's Hawks.

02-11(E)

The NBHCP and EIR/EIS rely on judgements about the relative value of different types of foraging lands that are not supported by any evidence. Neither Estep (1989) nor the CDFG Staff Report (see below) support the assertion that non-rice crops have lower foraging value than grasslands, alfalfa and pasture. Nor does the NBHCP and EIR/EIS provide any evidence that 2,175 acres of land managed in grasslands, alfalfa and pasture can provide at least the forage value of all the foraging lands to be destroyed (over 8,000 acres) in addition to the original foraging value of the preserved lands. This amounts to about 5 times the original foraging value of the lost habitat and the preserved habitat lands combined.

While it is possible that upland acquired may be converted from rice lands or orchards, it is also likely that such lands would not be closely located to active Swainson's Hawk nests. Nests are located near the best forage. If habitat land is to be acquired near dense nesting areas, it is much more likely that the upland acquired will have been foraging habitat for Swainson's Hawk. The NBHCP and EIR/EIS do not explain how such lands could be so fully en-

02-11(E)

hanced as to produce five times as much prey as presently produced. Nor do they explain why it would make sense to acquire lands presently not used for Swainson's Hawk forage that are located at a greater distance from prime nesting areas, and invest heavily in them to increase forage values, instead of acquiring lands next to existing nest sites to make sure that habitat values are sustained and improved to sustain existing nesting pairs.

02-11(F)

The NBHCP and EIR/EIS document that very little of the land in Natomas has been used for alfalfa production. One strategy for increasing habitat values would be to substantially increase alfalfa production in the Basin by using preserve lands for that purpose. While most experts agree that alfalfa fields provide high forage value and are attractive to Swainson's Hawks, nowhere in the NBHCP is there analysis of how much land in the Swainson's Hawk zone could be acquired and converted to alfalfa production, and what the resulting habitat improvement would be. Are there barriers to alfalfa production in the basin?

4. New Information in the EIR/EIS Ignored in the Drafting of the NBHCP.

02-12

The new information developed as part of the EIR/EIS process has revealed that underpinnings of the mitigation program in the 1997 NBHCP were not supported by biological evidence. Specifically, the myth that the Natomas Basin was a mix of habitat and non-habitat was not supported by the GIS analysis that documented habitat types in almost all of the Basin that supported either Giant Garter Snake or Swainson's Hawk and other species. In 1997, the regulatory agencies argued that the one-half to one mitigation ratio was acceptable for a Basinwide plan because it included mitigation at the same ratio for every property developed regardless of habitat value. The EIR/EIS alternatives analysis demonstrated that this myth is not supported.

The EIR/EIS also developed information about alternative mitigation programs that would increase the amount of habitat protected. These alternatives were identified as environmentally superior to the proposed plan.

The NBHCP at I-25 to I-27 summarizes the changes made in the NBHCP between the 1997 and 2002 versions. However, the revisions addressing the mitigation ratio and other basic assumptions of the NBHCP are conclusory rather than analytic, and do not make use of new information to explain the findings made.

02-13

The court-ordered redrafting of the NBHCP and preparation of an EIR/EIS have provided new information to the design of a habitat conservation plan for Natomas Basin. The NBHCP at I-23 to I-24 summarizes the chronology of NBHCP preparation since August 15, 2000 when Judge Levi held that the record did not support the Service's findings in issuing an ITP to the City of Sacramento. Missing from that chronology are events indicating that political pressure was applied to ignore the new information, accelerate completion of the NBHCP and address only a limited set of questions in the revisions.

We are appending a letter dated December 14, 2001 from Sacramento area Congressional representatives, Robert Matsui and Doug Ose, to US Fish and Wildlife Service. The letter, appended, called for the Service to limit its analyses. One of these Congressmen, Doug Ose, has a personal financial conflict of interest on matters affecting regulatory actions in the Natomas Basin. Environmental groups wrote to the Congressmen asking them not to interfere in the regulatory process (letter appended). Mr. Ose did not respond to the letter, but previously told environmental representatives that he does not believe his partnership in 1200 acres of Natomas land for which development entitlements are being sought precludes his active involvement with regulatory issues in the Natomas Basin.

02-13

Our analysis of the documents circulated for public review indicates that although substantial new information was available, applicants gave little thought to the new information available and the opportunity to assess alternative mitigation programs. Instead, they and landowners in Natomas asked Congressmen to pressure the US Fish and Wildlife Service to expedite approval of the revised NBHCP and confine changes to a very limited set of issues.

02-14

Thank you for this opportunity to review the Natomas Basin Habitat Conservation Plan 2002 draft and the associated environmental documents. We believe substantial changes must be made for the NBHCP to conform to legal requirements, including permanent habitat protection near existing nesting sites of at least 11,000 acres of well managed Swainson's Hawk foraging habitat.

Sincerely,



Judith Lamare, President
916-447-4956



James P. Pacht, Legal Counsel
916-446-3978

Attachments

Friends of the Swainson's Hawk is an educational organization dedicated to the survival of this species. *Los amigos del aguililla de Swainson es una organizacion educativa dedicada a la sobrevivencia de dicha especie.* Less than 1,000 Swainson's Hawks have survived in the Sacramento-San Joaquin Valley, 90 percent nesting within 50 miles of downtown Sacramento. These hawks migrate south to winter in Mexico, and beyond.

**Executive Summary
Sacramento Area Flood Control Agency
Swainson's Hawk Giant Garter Snake
Draft Habitat Conservation Plan**

Prepared by

**EIP Associates
Sacramento, California**

February 1992

Economics and Implementation

- **Recht Hausrath
Urban Economists
Oakland, California**
- **Ralph Brown
Conservation Partners
Menlo Park, California**

Biological Background

SWAINSON'S HAWK

- **Sid England, Davis, California**
- **Peter Bloom, Santa Ana, California**

GIANT GARTER SNAKE

- **George Hansen, Sacramento, California**

Cover Art and Design: Bronwyn Hogan, EIP Associates

Photographs: Peter Bloom, Jim Estep, George Hansen

DFG000734

**TABLE 5-4
NATOMAS BASIN ALTERNATIVES EVALUATION SUMMARY**

Alternatives	Biological Criteria					Compatibility with Airport Operations
	Risk	HCP Goals and Objectives			Consistency with Local Plans	
		Maintain Permanent Population Within Study Area	Impact Avoidance ¹	Non-Threatened Species Habitat		
1. MINIMAL MANAGEMENT	<ul style="list-style-type: none"> Substantial risk to Swainson's Hawk due to loss of foraging habitat. Substantial risk to GGS due to loss of habitat (rice/wetland mimic) and edge effects from urbanization. 	<ul style="list-style-type: none"> Will ensure permanent population of both species within study area. Complete Swainson's Hawk foraging corridor along river maintained. Large blocks of interconnected GGS habitat maintained. 	<ul style="list-style-type: none"> 11,355 acres of Swainson's Hawk foraging habitat preserved; 50% preserved. 13,020 acres of GGS habitat preserved; 55% preserved. 	<ul style="list-style-type: none"> Provides substantial upland and "wetland" habitat in association with Swainson's Hawk foraging and GGS "wetland" habitats. 	<ul style="list-style-type: none"> Swainson's Hawk lands generally consistent with adopted and proposed plans. GGS lands generally consistent with adopted plans but substantially inconsistent with proposed plans. 	Compatible
2. HIGHLY MANAGED	<ul style="list-style-type: none"> Substantial risk to Swainson's Hawk due to loss of foraging habitat. Severe risk to GGS because of greater loss of habitat than Alternative 1 and increased habitat to edge-effects ratio. 	<ul style="list-style-type: none"> Permanent population maintained for both species but smaller GGS population than Alternative 1. Presumes success of Swainson's Hawk and GGS habitat values, management and habitat creation. Complete Swainson's Hawk foraging corridor along river maintained. 	<ul style="list-style-type: none"> 10,040 acres of Swainson's Hawk foraging habitat preserved; 37% preserved. 6,110 GGS acres preserved; 26% preserved. 	<ul style="list-style-type: none"> Provides substantial upland habitat. Provides substantial, but considerably less "wetland" habitat than Alternative 1. 	<ul style="list-style-type: none"> Lands for both species generally consistent with adopted and proposed plans. 	Compatible
3. ON-/OFF-SITE COMBINATION	<ul style="list-style-type: none"> Severe risk to Swainson's Hawk due to foraging habitat reduction and discontinuous corridor along Sacramento River. Very severe risk to GGS due to extirpation of most of Natomas population and uncertainty of off-site feasibility. 	<ul style="list-style-type: none"> Permanent but smaller population maintained for Swainson's Hawk than Alternatives 1 or 2. Incomplete corridor along river. No significant on-site GGS population maintained. 	<ul style="list-style-type: none"> 9,100 acres of Swainson's Hawk foraging habitat preserved; 34% preserved. 0 on-site GGS acres preserved; 20,350 off-site acres preserved (84% preserved). 	<ul style="list-style-type: none"> Reduces upland habitat and eliminates all on-site wetland habitat. Up to 20,350 acres of off-site wetland habitat preserved. 	<ul style="list-style-type: none"> Lands for both species generally consistent with adopted and proposed plans. 	Compatible

¹ See Table 5-2 for detailed analysis.

Congress of the United States
House of Representatives
Washington, DC 20515

December 14, 2001

The Honorable Gale Norton
Secretary of the Interior
1849 C Street, N.W.
Washington, D.C. 20240

Dear Secretary Norton,

We are writing to seek your assistance in assuring that the Natomas Basin Habitat Conservation Plan (HCP) is completed on time. As you may know, four public entities in California have been working over the past year in partnership with the Sacramento Ecological Services Office of the Fish and Wildlife Service to revise the Natomas HCP to meet requirements set forth by a federal judge in August 2000.

The Natomas HCP is a high-profile regional HCP that if not completed on time could significantly tarnish the image of the HCP program in the eyes of the development community. In fact, HCP's are strongly bi-partisan initiatives that provide a highly workable approach to making environmental protection and economic growth compatible. Failure to complete the Natomas Basin HCP process on a timely and fair basis could adversely impact one of the few effective tools available to protect the environment.

While cooperation among the involved federal and local governmental agencies has been positive, signs are emerging that the agreed-upon date for completion of the revised HCP and issuance of Incidental Take Permits may slip for the third time.

We are concerned that the Service is taking actions that go well beyond the requirements set by the judge. Considerable review indicates that there is no need to substantially rewrite the Plan. Rather, the Plan should only be revised to address the following concerns raised by the judge:

- The record needs to support the Service's finding that the Plan minimizes and mitigates take of protected species to the maximum extent practicable. In the judge's words: "the record should provide some basis for concluding, not just that the chosen mitigation fee and land preservation ratio are practicable, but that a higher fee and ratio would be impracticable."
- The record needs to demonstrate that the Permittee(s) will "ensure" adequate funding. The judge held that, "in light of the City's explicit refusal to 'ensure' funding in the event of a shortfall," the Service's funding that the HCP can be

- implemented by some individual permittees, but not by others without affecting the conservation program, is not supported by the record.
- The record needs to demonstrate that the Plan will not jeopardize the continued survival of the species if only some jurisdictions seek a permit (No Jeopardy Finding). The judge held that the no jeopardy findings were valid if all jurisdictions participate, but that the Service failed to adequately consider whether the no jeopardy finding could be made if only the City was issued a take permit.
 - The Service needs to prepare an Environmental Impact Statement in conjunction with approval of the Plan and issuance of any permits.

Above all, we want to make certain that the FV/S managers understand the importance of completing the Natomas HCP on time. If we fail to meet the May 1, 2002 deadline, there will be unacceptably large economic, environmental and financial consequences on the City of Sacramento, Sutter County and other entities in the Natomas Basin area.

Already, delays in completing the HCP revisions and reissuing the Incidental Take Permits are leading to rapidly escalating acquisitions costs for mitigation lands. Further delays could lead to a significant reduction in the quantity of lands acquired under available Section 6 funding, reductions in the quality of mitigation lands acquired, and unnecessary increases in mitigation fees that are passed on to the home-buying public in the region. Approximately 1.5 billion dollars has been invested in infrastructure in North Natomas. Much of this is a product of bond financing, placing the City's economic credibility is on the line.

We very much appreciate your efforts to insure that the May 1st deadline is met and that the Natomas HCP process receives the support it deserves.

Sincerely,


ROBERT T. MATSUI, M.C.


DOUG DSE, M.C.



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Mother Lode Chapter

Northern California and Northern Sierra Nevada



Environmental Council Of Sacramento Friends of the Swainson's Hawk

January 21, 2002

Congressman ROBERT MATSUI
Congressman DOUG OSE
House of Representatives
Washington, D.C. 20515

fax: (916) 444-6117
fax: (202) 226-1298

RE: Your letter to Honorable Gale Norton, Secretary of the Interior, regarding Natomas Basin Habitat Conservation Plan, dated December 14, 2001.

Dear Congressmen Matsui and Ose,

Our organizations were among the plaintiffs who successfully sued in Federal District Court to set aside the defective Natomas Basin Habitat Conservation Plan, August 15, 2000. After the Judgment, the plaintiffs negotiated a Settlement Agreement, approved by the Federal Court on May 15, 2001, that allowed the City of Sacramento to permit up to 1,668.5 acres of grading in North Natomas pending completion of the revised Natomas Basin HCP. Approximately 1,063 acres has been graded under the Settlement Agreement; and the remaining 600 acres can be graded this Summer if the City continues to carry out its obligations under the Agreement.

In January, we heard of a letter from Congressmen Matsui and Ose to Secretary of Interior Gail Norton. We received a copy on January 15, 2002. The Congressmen demanded that the NBHCP be completed by May 1, 2002, which would be impossible to do even if the draft NBHCP were perfected today, due to the public review requirements of NEPA, CEQA, and the Federal and State Endangered Species Acts. Having been excluded from the discussions, the environmental community does not know the causes of the delay. However, rumors point to differences amongst multiple parties, complex biological and land use issues that may be in dispute, and very serious understaffing of the Sacramento Fish and Wildlife Service Office.

We were shocked and dismayed at much of the Congressmen's letter, which made demands that were clearly improper and unethical. We are also shocked that Congressman Ose participated in this letter despite his clear conflict of interest.

1. Conflict of Interest of Congressman Ose

Conflict of interest is a serious issue because the Congressmen's letter of December 14, explicitly seeks to influence the content of the revised NBHCP by

directing the U.S. Fish and Wildlife Service to revise the prior NBHCP only to address certain concerns stated in their letter, and to make no other changes in the prior Plan. (“ . . the Plan should only be revised to address the following concerns . .”).

It is a serious conflict of interest when a Congressman attempts to limit the content of Habitat Conservation Plan and Incidental Take Permit that may have a substantial direct financial impact upon 1,118 acres of valuable land owned by one or more members of the Congressman’s immediate family, including the Congressman’s father.

Ose Land Company No. 2 owns approximately 62 acres (Parcels 225-0030-033, -35, -36, -38) within the City of Sacramento North Natomas Community Plan, which would be covered by the revised NBHCP when completed. This Ose land is very valuable due to its location bounded by the intersections of two main highways and two major roads. Although it is one of the parcels that could be graded under the Settlement Agreement (if the City carries out its obligations under the Agreement), its potential for development and market value may greatly increase if and when a revised NBHCP is approved which authorizes build-out of the entire City North Natomas area. If this Ose property is developed after the revised NBHCP is approved, the mitigation fees payable by the owner(s) of this Ose property, and other mitigation measures affecting development of the property, will be determined by the revised NBHCP, which Congressman Ose seeks to influence by the Congressmen’s letter of December 14, 2001.

Ose Land Company No. 3 owns 1,056 acres (Parcels 201-180-14, -18, 201-220-39) in unincorporated Sacramento County, Natomas Basin, east of Hwy 99, between the City’s North Natomas Community Plan area and the proposed South Sutter County Specific Plan (industrial development to be covered by the revised NBHCP). This area is agricultural, but Ose Land and neighboring landowners are actively seeking designation for urban development. Issuance of a revised NBHCP covering the City and South Sutter development area, and the resulting development of these areas, may greatly increase prospects for future development of this Ose land, and thus could greatly increase the market value of that land. The content of the revised NBHCP, including the biological analysis in the EIS/EIR and Biological Opinion, may affect the ability or inability of this Ose land to obtain Incidental Take Permits in the future.

The principal of the Ose Land Companies is Mr. Enloe Ose, a major land developer and the father of Congressman Ose. Eventually, Mr. Ose’s Estate Plan may cause these properties, or their proceeds of sale, to pass to Mr. Ose’s beneficiaries, who may include the Congressman. Congressman Ose worked for the Ose Properties for eight years, until 1985, as a project manager. Congressman Ose’s intervention is a clear conflict of interest, made serious by the letter’s attempt to influence the content of the revised NBHCP which may substantially affect the value and marketability of the Ose properties in Natomas Basin.

We are not alleging that any member of the Ose family, other than the Congressman himself, solicited or participated in the Congressmen’s letter or committed any impropriety; and we are not criticizing the Ose family.

In February 2001, Congressman Ose intervened to "put on hold" a federal grant to the Natomas Basin Conservancy to preserve wildlife habitat in Natomas Basin. At that time, Sierra Club and Friends of the Swainson's Hawk, in a letter to Congressman Ose dated February 26, 2001, suggested:

"--- it could be a serious conflict of interest for you or your office to intervene with Federal agencies on Natomas Basin issues, or to otherwise attempt to influence the actions of Federal agencies affecting the Natomas Basin and lands within the Natomas Basin. Of particular sensitivity are Federal decisions as to protection of threatened and endangered species within Natomas Basin, which may affect land uses and property owners within Natomas Basin."

We call upon Congressman Ose to explain to the public, to his constituency, and to Secretary Norton why he thinks that he does not have a conflict of interest in attempting to dictate the content of an NBHCP which will directly affect the value and marketability of 1,118 acres of valuable property owned by one or more members of his immediate family. Why did Congressman Ose fail to disclose his conflict of interest to Secretary Norton in the Congressmen's letter to her?

2. The Congressmen Are Improperly Urging U.S. Fish and Wildlife Service to Unlawfully Violate NEPA by Attempting to Limit the Content of the Revised NBHCP Without Public Review

As stated above, much of the Congressmen's December 14 letter improperly directs the U.S. Fish and Wildlife Service to revise the prior NBHCP only to the extent necessary to address certain concerns stated in their letter, and to make no other changes to the prior NBHCP which was found deficient by the Federal Court.

By doing so, the Congressmen are urging the U.S. Fish and Wildlife Service to violate NEPA, which precludes an agency from committing to a particular course of action prior to completion of NEPA analysis (the EIS), and the extensive public review required by NEPA and CEQA. The Service must take into account all that NEPA requires in project review. USFWS cannot lawfully limit their review of issues to those identified in your letter; nor can the EIS be a rubber stamp for approval of a decision made prior to completion of NEPA review. 40 C.F.R. 1502.2(g). As you know, the NEPA review of the prior NBHCP cannot be relied upon for the revised NBHCP because it was found to be defective by the Federal Court.

It is unconscionable that Congressmen would pressure the Department of the Interior to stop working on difficult issues and shove the Plan out the door with minimal changes.

Quite bluntly, the Congressmen's attempt to dictate the content of the revised NBHCP, which has not been subject to legally-required public review by their constituencies, is an outrageous violation of their duties to their constituencies and to the public, and as Congressmen.

3. Significant and Difficult Issues Must Be Solved before the NBHCP and Incidental Take Permits Can Lawfully be Approved.

The Congressmen seem to believe, mistakenly, that the former NBHCP need not undergo any revisions other than four items listed by the Congressmen's letter. They misunderstand the Federal Court's decision and clearly are unfamiliar with some very basic facts and issues which must be taken into consideration and resolved to create a revised NBHCP that is biologically and legally sound. A few are listed below.

The only applicant on the former NBHCP was the City of Sacramento. The other jurisdictions in Natomas Basin did not participate and had no input. Sutter County, Reclamation District 1000, and Natomas Mutual Water Company are now among the applicants, and Sacramento County Airport now reportedly wants NBHCP coverage. The MetroAirPark HCP (if approved) will merge into the revised NBHCP. There are issues and concerns as to each applicant and jurisdiction which must be solved by the revised NBHCP, which were not addressed, or were addressed inadequately, in the prior NBHCP.

Moreover, the revised NBHCP must comply with new Federal and State regulations and new governing State law (Fish and Game Code Section 2081) which did not exist on December 31, 1997.

Several years of experience with the former NBHCP and its mitigation program, new scientific information about species in Natomas Basin, and development proposals and activities outside of the City's North Natomas Community Plan have raised many more issues which were not addressed in the former NBHCP, or were addressed inadequately, but which must be solved if the revised NBHCP is to be biologically and legally sound. This list includes fragmentation of species habitat; inappropriate siting of development; failure to protect habitat connectivity and connectivity between the NBC preserve lands; severe impacts upon species, particularly Giant Garter Snakes, due to major modification of waterways (Giant Garter Snake habitat) to accommodate development; the possibility of cessation of agriculture (species habitat) in the Basin due to the impacts of development; and others. We will gladly provide more information upon your request.

Of particular concern is the proposed South Sutter County Specific Plan, for 3,500 acres of industrial development, pending before the County Planning Commission, which is to be covered by the revised NBHCP. The proposed South Sutter Specific Plan has such serious environmental and legal deficiencies that it cannot be lawfully covered or permitted by any HCP or Incidental Take Permit. It violates the Federal and State Endangered Species Acts, the legal prohibitions against the discharge of contaminated wastewater into groundwater and surface water (impacting Natomas species, particularly the threatened aquatic Giant Garter Snake), CEQA, California planning laws, and federal air quality requirements. Federal and State Incidental Take Permits can be issued only for projects that are otherwise lawful, which the South Sutter project, in its present form, is not.

On January 11, 2002, James Pachl, Attorney, a signatory of our letter, gave to the Congressmen's representatives copies of some of the formal comment letters on the

South Sutter Specific Plan and Draft EIR submitted by a number of government agencies, organizations, and scientists with major concerns. We respectfully urge the Congressmen to review and consider the issues raised by those commenters before contemplating any further intervention for approval of a revised NBHCP. Major deficiencies must first be cured.

We do not know what issues are being addressed and resolved (or not addressed or resolved) by the draft NBHCP because the draft documents have been withheld from the public and the environmental community excluded from the discussion.

4. Escalating costs for acquisition of mitigation lands occurred before the NBHCP was invalidated, and have been encouraged by local governments

The Congressmen's letter claims that "delays in completing the HCP revisions and reissuing the Incidental Take Permits are leading to rapidly escalating acquisition costs for mitigation lands." In fact, land costs in Natomas escalated during the period when development proceeded under the old, invalidated HCP.

Unwise actions by Sutter County and staff of the City of Sacramento have persuaded many Natomas owners of farmland that they may eventually receive urban development entitlements in the distant future, and that therefore their land is now worth a great deal. High-level staff of the City of Sacramento, and others, are proposing that the City plan for the future annexation and urbanization of approximately 6,000 acres of presently unincorporated Natomas farmland. The Sutter County General Plan designates 10,500 acres of farmland in Natomas Basin, Sutter County, as an "Industrial/Commercial Reserve", although cumulative development in excess of 3,500 acres would require a General Plan amendment.

Development of much these lands is economically infeasible, unless taxpayers subsidize the high infrastructure costs, but local governments seem either more interested in currying favor with the landowners (some of whom are speculators) than in protecting the public, or perhaps merely reluctant to be the bearer of bad news to the landowners. Whatever their motivation, because local government is telling landowners that they may eventually receive urban development entitlements, the landowners understandably do not want to sell their land to the Natomas Basin Conservancy for depressed agricultural land prices.

Sutter County has gone even further. At the December 5, 2001, Planning Commission hearing, attended by undersigned James Pacht, on the proposed South Sutter Specific Plan, a farmer, whose land is within the 10,500 acre "South Sutter Industrial/Commercial Reserve", but is outside the proposed 3,500 acre Specific Plan, asked the Commission if he could sell his farmland to the Natomas Basin Conservancy. The Sutter County Director of Planning publicly told him that the County strongly discouraged sale to the Conservancy because the County intends for future development of the entire 10,500 acres.

Moreover, the proposed South Sutter Specific Plan includes actions which will have severe direct impacts upon three of the existing Natomas Basin Conservancy Preserves. These impacts are stated in the letter of the Natomas Basin Conservancy to

Sutter County, December 21, 2001, which is among the documents given to your staff members Julie Adair and Kim Vann on January 11, 2002.

Ironically, approval of a revised regional HCP, which the Congressmen seek, may further escalate the price of mitigation land, because the development permitted by a revised NBHCP will generate market demand for mitigation land. We have repeatedly advised landowners and their representatives that it would be cheaper to acquire mitigation lands now, rather than later.

The Settlement Agreement of May, 2001 puts in place a land acquisition strategy that ensures high quality habitat is acquired in areas that otherwise will degrade and be vulnerable to future urban expansion. It ensures that these lands are acquired at market value. This is a way to control the cost of acquisition of land for habitat preserves.

5. The Congressmen's Claims that Further Delay In Approving the NBHCP will Cause Economic Loss For Are Unsupported by Facts

The Congressmen's letter claims that "if we fail to meet the May 1, 2002 deadline, there will be unacceptably large economic, environmental, and financial consequences on the City of Sacramento, Sutter County, and other entities in the Basin area." The Congressmen fail to point out (or were not told) that another 600 acres of development is permitted by the May 15, 2001 Settlement Agreement provided that the City continues to carry out its obligations under the Agreement.

The City used a similar argument in its unsuccessful attempt to persuade the Federal Court to not enter judgment in the Federal case; and the plaintiffs showed that this claim was spurious.

Costs of development of the City's North Natomas infrastructure are paid for by Mello-Roos bonds which are repaid exclusively by Special Taxes levied upon properties in Community Facilities Districts comprised of the lands which benefit from the infrastructure. The bonds expressly exempt the City's general fund from liability. The City wisely planned its Natomas financing by creation of multiple overlapping small Community Facilities Districts which correlate with the planned stages of development. Construction of infrastructure and bonding for infrastructure costs are carefully correlated with stages of development and the boundaries of the Community Facilities Districts that are to be served by the infrastructure; and construction of infrastructure is timed and correlated with the development. As a result of the City's prudent strategy, most of the Mello-Roos bond indebtedness is supported by tax-generating development, either completed or underway, that was permitted by the former NBHCP or the May 15, 2001, Settlement Agreement. It is not unusual for long-term development projects, such as Natomas, to be interrupted for reasons not related to HCP's, and the City prudently planned accordingly. The Congressmen's claim that "the City's economic credibility is on the line" is simply not believable for anyone who knows the facts.

Developing North Natomas has been a profitable business venture for the City. The major retail shopping areas developed under the former NBHCP are producing large sales tax revenue for the City; and substantial property tax revenues are gleaned

from the high-priced homes that comprise most Natomas residential development. North Natomas is a cash cow for the City of Sacramento.

To the best of our knowledge, the Counties of Sutter and Sacramento have incurred no costs or obligations for future development that needs an NBHCP to go forward. Natomas Mutual Water Company and Reclamation District 1000 are in no hurry. The Congressmen should not intervene to benefit speculators who are trying to "pump up" the value of their land or who may have over-mortgaged raw land.

6. What Can the Congressmen Do That Is Constructive?

USFWS is severely understaffed. Important work needs to be completed as soon as possible for our region to have a workable regional HCP. We very much would like to see additional resources at the USFWS Sacramento office to work on endangered species and habitat issues in our region. In particular we are concerned that no sustained effort has been made to use the federal funds already granted for the Natomas Basin, to help acquire habitat protection in Natomas.

However, your letter doesn't ask for additional staff or resources to be assigned to the task. Instead, your letter implies that all that is needed is a "sign-off" on issues even though environmental groups and the public have not even been heard, and there has been no public review.

The Congressmen can encourage Sutter County to fix its proposed South Sutter County Specific Plan so that it is environmentally sound and in compliance with law. The Draft EIR for the South Sutter project, pp. 3-42 through 3-45, permits development without Incidental Take Permits if the NBHCP is not approved before Sutter wants to start developing. Independent sources state that Sutter County in fact intends to proceed without Incidental Take Permits, even though the project area is occupied habitat of species protected by the Federal and State Endangered Species Acts. We respectfully ask the Congressmen to discourage Sutter County from taking this precipitous and unlawful course of action, and to support the U. S. Fish and Wildlife Service if that agency needs to undertake enforcement action against Sutter County.

Please understand that your constituencies and responsibilities as Congressmen are not limited to the developers and their representatives.

Representatives of our organizations are more than willing to meet with you to discuss issues and facts concerning Natomas Basin. We request that you do so before you send any more letters of this type to regulatory agencies or otherwise intervene in connection with the Natomas Basin HCP.

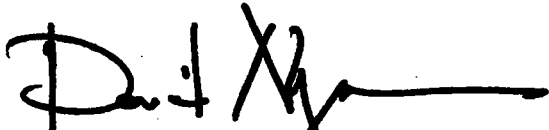
Sincerely,



VICKI LEE,

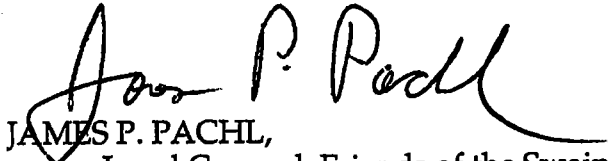
Chair, Sierra Club - Mother Lode Chapter
1414 K Street, Suite 300, Sacramento, CA 95814

(916) 447-3672



DAVID MOGAVERO,
President, Environmental Council of Sacramento
2012 K Street, Sacramento, CA 95814

(916) 443-1033



JAMES P. PACHL,
Legal Counsel, Friends of the Swainson's Hawk
817 - 14th Street, Suite 100, Sacramento, CA 95814

(916) 446-3978

cc: Honorable Gale Norton, Secretary of the Interior
Wayne White, Cay Goude, U.S. Fish and Wildlife Service
Robert Hight, Director, California Department of Fish and Game



Institute for Ecological Health

409 Jardin Place, Davis, California 95616 • Ph/fax 530-756-6455 • ieh@cal.net

December 4th 2002

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DEC 11 2002

SACRAMENTO
FISH & WILDLIFE OFFICE

Re: Comments on the Draft Natomas Basin HCP

Dear Sir:

I would like to submit the following comments on behalf of the Institute for Ecological Health, a state-wide non-profit sustainable land use organization.

03-1 [Overall, the biological and conservation provisions of this Draft Plan are seriously inadequate. There are a number of major assumptions that are not justified. No scientific documentation is provided for many issues and statements. The 20 species in addition to the Giant Garter Snake and the Swainson's Hawk that are proposed for permit coverage have minimal treatment and conservation strategies and so should not be covered by this Plan. Very major revisions are necessary, and I request that a revised version have a public comment period.

03-2 [We are also concerned that land use decisions under consideration by the City of Sacramento and the County of Sacramento will undermine what chance this HCP has for success and recommend that the Service not issue a 10(a)(1)(B) incidental take permit until this situation is resolved satisfactorily.

I.C. Conservation Goals and Objectives

03-3 [While these items have an array of important requirements, they lack a number of elements that are absolutely essential for this HCP to work. Substantive revisions to the HCP are necessary in order to overcome these shortfalls.

I.C.1 Overall Goals, Overall Objectives, Wetland Species Objectives, Upland Species Objectives

03-4 [The overall goals have no time horizon, a very serious omission.

03-5 [Goal 1 "A biologically sound and interconnected habitat reserve system that mitigates impacts...." is not the same as ensuring the survival, in perpetuity, of the covered species in the Plan area.

03-6 [This HCP should have an additional goal of ensuring the survival of the covered species over the long term in the Plan Area.

03-7 [The Service's Five Point Policy (Federal Register, June 1 2000) explains the need for measurable objectives. These objectives are not measurable and need to be reworked.

03-8 [The objectives do not address the certain issues that are especially important given some of the reserves will be small (400 acre minimum).. They include:
- countering problems of edge effects,
- maintaining and enhancing ecological functions and ecosystem processes
The objectives for connectivity and for increasing diversity and abundance of covered species and revising reserve design and management based on the most current biological data do not adequately address these issues

II.C.4 Other Covered Species

03-9 [These species are not adequately addressed and for most there is very minimal information on the ecological requirements, species-habitat nexus, conservation needs, data gaps, references to the scientific literature, etc and vague conservation strategies (IV.C and V.B.4) with no specific goals and objectives for each species.

03-9 [Conservation of the existing Tricolored Blackbird nesting colony site, including adequate foraging habitat (see below) is particularly important.

The additional species should not be covered by the HCP until they are properly considered, including appropriate analysis of all pertinent biological issues and the development of effective conservation strategies, including measurable objectives.

03-10 [If these additional species are addressed, this Plan should include all special status species that are known to occur in the Basin (eg: the Northern Harrier, which requires special management measures for ground nesting birds.)

03-11 [Species not likely to occur in the Plan Area, such as the California Tiger Salamander, should be dropped from the Plan. Furthermore, several of these should be considered "no take" species (eg: Sacramento Orcutt Grass).

03-12 [In addition, the Central Valley is a critically important area for wintering shorebirds and waterfowl. In mid-winter, shorebirds are documented as occurring almost exclusively in rice fields. In October 2002, the Western Hemisphere Shorebird Reserve Network designated the Sacramento Valley as a Shorebird Site of International Importance. For the Plan to adequately address biological issues in the Basin it should address, and provide for, the needs of these species to the extent that they currently utilize the Basin.

III.C Potential Development

- 03-13 [The Sacramento County General Plan allows the building of individual units according to the zoning map that dictates the minimum parcel size. For example, the Garden Highway along the Sacramento River is deemed a Rural Residential area (1 - 10 acre parcels). Most of the Sacramento County land in the Basin that is zoned for agriculture has a 40 acre minimum parcel size. Sutter County will very likely be similar.
- 03-13 [There are recent cases in the region of individuals not in agriculture turning considerable parcels (eg: 40 acres) in the region into home sites. So there is significant potential for construction of individual homes (ranchettes) in many locations throughout the agricultural area. These homes will impact the biological resources and also have the potential to impact agricultural operations. This situation severely undermines the Draft Plan's assumptions regarding the basin's non-preserve agricultural acreage. The Plan must be revised to address the potential impacts and necessary conservation.

III.C.1. South Sutter County Specific Plan

- 03-14 [The HCP should require amendment of this plan to remove the area, including the proposed Sutter County Specific Plan wastewater disposal area, within the Swainson's Hawk Zone from the County's Specific Plan.

III.C.2 Conversion of Agricultural Lands

- 03-15 [The Draft Plan is dependent on agricultural lands not protected though the Conservancy's reserve system remaining in suitable agricultural production. This requires a variety of crops for the Swainson's Hawk foraging areas and rice fields for the Giant Garter Snake. The Draft Plan has no way of ensuring that suitable agriculture will continue in perpetuity on these non-reserve lands. Current potential problems including conversion of row crops to orchards and sale of water rights. The Plan should address the potential for individual farmers to sell water / water rights to urban water purveyors such as the Metropolitan Water District, the impacts of such actions (on the biological values of fields, on the economic viability of agriculture in the Basin, and on possible development pressure on these lands). [See also comment on Changed Circumstances]

IV.C.1.a Basis for the 0.5 to 1 Mitigation Ratio

- 03-16 [The arguments for such a low mitigation ratio are not convincing. Issues include:
- 03-17 [Essentially all of the areas slated for development in the General Plans are either Swainson's Hawk foraging habitat or Giant Garter Snake habitat. Other plans, such as the preliminary draft Yolo County HCP, provide a basic 1:1 mitigation ratio for loss of any Swainson's Hawk foraging habitat.
- 03-18 [The Draft Plan does not adequately address the biology of species other than the Swainson's Hawk and the Giant Garter Snake and these other species should be dropped from the Plan unless there are extensive revisions.

- 03-19 [It is not clear that it will be possible to consolidate the TNBC reserves into large, biologically viable, units. The Draft Plan does not provide a map showing the locations of existing TNBC reserves (which are all small to very small at present and not biological viable if their landscape context changes to urban development) and their relationships to proposed development.
- [The are many scientific issues of individual reserve size, edge effects and ecological functions which put the in perpetuity effectiveness of the proposed reserve system in question.
- 03-20 [The Draft Plan proposes that buffers be within the reserve lands, not outside, (IV.C.1.c) which significantly reduces the biological efficacy of the reserve acres.
- 03-21 [The Draft Plan is dependent on continued, suitable, agricultural production on non-reserve lands - this is not assured.
- 03-22 [The effectiveness of the proposed wildlife value enhancements of reserve lands is speculative.
- 03-23 [The Plan should be revised to provide a minimum of 1:1 mitigation. In all likelihood, a higher ratio will be require to address the buffer and connectivity issues (see below).

IV.C.1.b Preparation of Site Specific Management Plans

- 03-24 [The concept "improve and manage reserves in a manner that will, to the maximum extent practicable, benefit all Covered Species" is confusing. Does this refer to the overall system of reserves or to each reserve? It is very likely that this is not an effective approach to the management of individual reserves, especially given their current very small size, since it will result in small habitat fragments. If the Plan is revised to adequately address the additional 20 species, there will be instances where management for one species is detrimental to another species.

IV.C.1.c Buffers Within Reserve Lands

- 03-25 [This requires buffers around reserve lands that are modified to create improved wetland habitat, giving a value of "typically 30-75 feet". There is no consideration of the need for buffers for other reserve lands (including existing wetlands and uplands), no documentation of the scientific literature to justify the 30-75 feet figure, no discussion of the various factors that require buffering (eg: run-off from roads), or of needed buffer widths. Factors to address when considering buffer needs include all factors that will affect ecosystem functions in the preserves, not just factors that will have direct impacts on a covered species.
- [There is an extremely extensive scientific literature on buffers and buffer widths issues. This topic should be thoroughly addressed and documented in the Plan. Buffer widths should be scientifically justified and defensible. The discussion should include documented information from the agricultural industry as to what buffer widths the industry deems necessary to (a) minimize and (b) avoid impacts on adjacent landowners.

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03-25

The Plan should require buffers of sufficient width for the specific factors being buffered in individual locations. In most cases these buffers will be significantly more than 30-75 feet. The mitigation ration should be revised to incorporate the more extensive within reserve buffer needs.

IV.C.1.d Connectivity

03-26

The Draft Plan states that "if adequate connectivity is provided for giant garter snake, then it is anticipated that other Covered Species will also be afforded adequate opportunities to migrate within the Basin." This section refers to "the backbone drainage system within the Basin and would be retained regardless of urban development." But it refers to Map 17, Connections Between Reserves, whose legend categories the major canals as "drainage canals most likely to remain during permit period."

The Natomas Basin reserve system will require in perpetuity connectivity in order to be viable. This connectivity is not just drainage canals. The connectivity needs for each Covered Species should be specifically analyzed and provided for. The TNBC should ensure the in perpetuity conservation and operation of these connections through purchase of easements and any other necessary steps. The Draft Plan mitigation ratio should be adjusted so that TNBC can carry out essential additional steps. Without these actions the Plan will not assure biologically effective connectivity that is essential to the success of the reserve areas.

IV.C.1.e Minimum Habitat Block Size

03-27

The biological effectiveness of 400 acre reserves depends on the landscape context. For example, a 400 acre reserve surrounded by similar agricultural habitat is likely to be biologically effective, while one with ranchette development around it will be far less effective. The Plan should properly discuss and document reserve size issues and justify the long term viability of a 400 acre reserve.

In addition, there are specific species needs that must be addressed. Thus the Swainson's Hawk population requires adequate foraging areas near nesting sites in an agricultural landscape. If the Tricolored Blackbird is covered, it will be essential to provide adequate foraging habitat close to the existing nesting colony site. It is not documented how these essential biological needs will be met through this combination of 400 acre minimum reserves plus one 2,500 reserve.

IV.C.2.b. Out-of-Basin-Reserves

03-28

There is no discussion of how up to 20% of the reserve lands can be outside the Natomas Basin and the Plan still meet its goals for species conservation in the Basin. Leaving that for future justification by the Conservancy is not adequate.

How will this approach impact maintaining a long-term viable Giant Garter Snake population in the Basin? How will this impact conservation of sufficient foraging habitat for the existing Swainson's Hawk territories in the Natomas Basin?

IV.C.3. Conservation Strategy for Wetland Habitat

03-29

This strategy should clearly explain what is needed to conserve the Basin's Giant Garter Snake Population and how the Plan will meet this need.

If the final Plan addresses other species that utilize wetlands habitat it should provide similar explanations for those species.

IV.C.4. Conservation Strategy for Upland Habitat plus V.B.4. Conservation Strategies for Individual Species

03-30

This strategy is very unlikely to succeed for the Swainson's Hawk. Section VII.D.2 details very extensive impacts from planned urban development on existing Swainson's Hawk foraging habitat in the Basin. In order to aid the recovery of this species (section I.D.), the Plan must at least provide for the conservation of the current number of nesting pairs in the Basin. This Draft Plan is very unlikely to achieve that goal and so will contribute to the further decline of the species, rather than aid its recovery.

The Conservation Strategy should explain how a one-mile Swainson's Hawk zone can provide sufficient foraging habitat for the existing nesting Swainson's Hawk population, the extent of conservation or modification of existing agricultural practices needed to provide this amount of habitat, and how the Plan will ensure that this acreage remains in suitable agricultural production (including addressing the potential for ranchette development.)

As indicated in this Draft Plan, Swainson's Hawks will fly several miles while foraging. Each nest site needs sufficient available prey within the foraging area. Exact locations will vary from year to year as crop rotations, field margin management and fallow or ruderal patches vary from field to field. Factors such as these make reliance on the one mile zone tenuous.

03-31

It is necessary to have an effective, achievable conservation strategy for each Covered Species. Section V.B.4, Conservation Strategies for Individual Species, provides some of this but the strategies are not adequate and not related to measurable objectives.

For example, the conservation strategy needs to include specific actions to conserve the foraging habitat of the Tricolored Blackbird colony, and to ensure that this habitat is in compatible uses. A Tricolored blackbird colony requires considerable foraging habitat within a 2-mile radius of the colony site. The foraging strategy in V.B.4.c assumes that foraging habitat will be provided by reserves, but does not require incorporation of adequate foraging habitat into the reserve system. A component of this strategy should be to identify the foraging habitat for the existing Tricolored Blackbird habitat, to ensure that it is protected in the TNBC reserve system and managed for Tricolored Blackbirds

IV.C.5. and V.A.4 Conservation Strategies for Vernal Pool Species

- 03-32 [These are totally inadequate and fail to utilize existing scientific knowledge of the design and management of vernal pool preserves. These sections need to be either completely redone, with specific strategies for effective vernal pool habitat conservation and for each Covered Species, or all of the vernal pool associated species should be dropped from the Plan.

V.A.5.b (1) Measures to Reduce Cumulative Impacts to Swainson's Hawk Foraging Habitat

- 03-33 [This approach will not succeed because it fails to address the likely impacts of ranchette or rural residential development, mainly on 1 to 40 acre lots, or the potential for conversion of suitable agriculture on non-reserve lands to agriculture that is not suitable for the Swainson's Hawk.

VI.E.2b Biological Effectiveness Monitoring

- 03-34 [This appears to address only the numbers of individuals of covered species, except for some very vague language in the first paragraph of VI.E.3.a. Monitoring of ecosystem health and ecological function attributes that are important indicators is also necessary. For example, the overall invertebrate fauna, as opposed to just the covered species, is an important indicator for the health of vernal pools. This section should include guidance for developing a monitoring system that includes such issues, as appropriate for each covered species. The monitoring program should also allow for the future inclusion of additional items as our scientific understanding increases.

VI.F.1. Adaptive Management

- 03-35 [Item (1) of the list of significant uncertainties should include future research on other pertinent biological issues (eg: ecosystem functioning, landscape ecology). Our current knowledge in many fields is expanding rapidly and the Plan should utilize a broad array of future scientific advances.

VI.K.2. Changed Circumstances

- 03-36 [This should include sections on climate change, failure to conserve essential connectivity between reserves, and changes in agricultural practices outside the reserve system, and sale of water or water rights to out of Basin users by landowners outside the reserve system

*

The Section 10(a)(1)(B) incidental take permit

- 03-37 [While the Draft HCP states repeatedly that the effectiveness of the HCP depends on limiting total development in the Natomas Basin to 17,500 acres, the current "Vision" proposal of Sacramento City and County involves about 10,000 acres of additional development beyond that envisioned in this

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Draft Plan. In addition there is the potential for widespread ranchette style rural development in the portions of the Basin presumed to be protected by agricultural zoning and General Plan designation.

03-37 We strongly urge the Service to withhold approval of this HCP and issuance of an incidental take permit until the City and County of Sacramento agree not to expand the urban development acreage in the Basin, since this City/County action would make the HCP severely deficient. In addition, the Plan should be revised to adequately address the potential for low density development in rural areas.

Thank you for your consideration of these comments.

Sincerely,


John Hopkins, Ph.D.
President



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SACRAMENTO
FISH & WILDLIFE OFFICE

November 1, 2002

Division Chief, Conservation Planning
U.S. Fish and Wildlife Service
Sacramento Fish and Wildlife Service Office
2800 Cottage Way, W-2605
Sacramento, CA 95825

SUBJECT: Revised Draft Natomas Habitat Conservation Plan

Dear Division Chief,

O4-1 [The following are comments from the Swainson's Hawk Technical Advisory Committee (TAC) on the revised Draft Natomas Habitat Conservation Plan (revised Plan) and revised Draft Environmental Impact Report/Environmental Impact Statement (revised EIR/EIS) in response to the Notice of Availability dated August 16, 2002. The TAC fully supports the concept of regional planning for resource protection, including regional habitat conservation planning to protect and sustain Swainson's hawk populations in the Central Valley; we appreciate the opportunity to provide comments on these important documents as they will guide development and habitat preservation in the Natomas Basin for many years.

INTRODUCTION

The TAC provided comments on the currently permitted Natomas Basin Habitat Conservation Plan (permitted Plan) in 1997. Many of our comments provided here are consistent with those submitted for the permitted Plan. We have focused our comments on several fundamental issues regarding the long-term sustainability of the Swainson's hawk population in the Natomas Basin.

O4-2 [Despite our concerns with the revised Plan, the TAC has been, and continues to be, very supportive of the efforts of the Natomas Basin Conservancy (NBC) during implementation of the permitted Plan. The NBC has been successful in their implementation efforts, and in acquiring and managing conservation lands in the Natomas Basin. We hope these efforts will continue and be as effective during implementation of the revised Plan.

O4-3 Although the revised Plan is a multi-species plan, our comments are restricted to issues regarding the Swainson's hawk. In addition, although Swainson's hawks require both suitable nesting habitat and foraging habitat for survival, our comments, and the habitat analysis below, does not include an attempt to quantify the loss of available nest trees in and around the basin. The loss of nest trees due to development in and around fisherman's lake, the Sacramento International Airport, and along the Sacramento River will be detrimental to the species long before trees planted on restoration sites reach maturity and usefulness to Swainson's hawks. The loss of nest trees is a significant immediate threat. The loss of foraging habitat constitutes a long-term and permanent threat with irreversible consequences from which the species will be unable to recover. Thus, our comments focus primarily on the issue of foraging habitat loss.

SPECIES CONSERVATION ANALYSIS

O4-4 Long-term preservation of the Swainson's hawk, or any species, in the context of a regional habitat conservation plan requires three fundamental steps: 1) identifying the affected population; 2) assessing the effects of the habitat conservation plan on the affected population and the regional population, including determining what portion of that population will be retained (target population) under the habitat conservation plan; and 3) establishing a management program that will sustain the target population in perpetuity.

The Affected Population

O4-5 The NBC has successfully implemented the monitoring provisions of the permitted Plan such that the affected Swainson's hawk population in the Natomas Basin has been identified. Using this information along with current and projected land-use information, it is possible to estimate the extent of potential take on this species.

Effects of the Revised Plan on the Swainson's Hawk

O4-6 The revised Plan and EIR/EIS fail to adequately assess and describe the effects of plan implementation on the Swainson's hawk. With regard to foraging habitat in the Basin, the analysis provided in the revised Plan is cursory and inaccurately characterizes the extent of long-term habitat loss and protection. Goal Number 1 of the revised Plan (Page I-14) states that the Plan will "establish and manage in perpetuity a biologically sound and interconnected habitat reserve system that mitigates impacts on Covered Species resulting from Covered Activities and *provides habitat for existing, and new viable populations of Covered Species*" (emphasis added). Our interpretation of this statement is that the goal of the revised Plan is to provide sufficient habitat to maintain existing population levels. This interpretation is also consistent with the revised Plan and EIR/EIS in that a sustainable target population is not identified. Therefore, we assume that the goal of the revised Plan is to maintain existing population levels.

O4-7 The revised Plan acknowledges information from annual surveys conducted by the NBC and identifies the nesting population. The revised Plan also estimates an amount of habitat that is expected to be lost through covered activities. It does not, however, address cumulative habitat

O4-7 loss from all planned, proposed, and projected activities throughout the Basin. The revised Plan also fails to address how this habitat loss will affect the nesting population and whether the implementation of the revised Plan will result in take of Swainson's hawk. In addition, the finding of "less than significant" in the revised EIR/EIS (page 4-73, Summary) suggests that the authors of the revised Plan do not expect a decline in the nesting population due to habitat loss from covered activities. We disagree with the finding that the number of Swainson's hawks in the Natomas Basin will not decline as a result of the revised Plan, and CEQA requires a finding of significant environmental affect if there is a reduction in numbers of a Threatened species (Section 15065a).

O4-8 To more fully address this issue, the TAC conducted an analysis of the effects of the revised Plan and EIR/EIS on the 40 to 50 nesting pairs of Swainson's hawks that rely directly on basin resources for reproduction.

O4-8 In our analysis, we found that the quantification of land use types in the basin between 1993 and 2000 was consistent with the analysis of 1997 land use in the revised Plan (the HCP baseline). However, we divided land use into specific categories based on its suitability as Swainson's hawk foraging habitat. The revised Plan concludes that there would be a loss of 32% of useable foraging habitat due to development/preservation ratios proposed, and suggests that the loss would be compensated through land management practices on mitigation land. We have identified the following significant flaws in this analysis.

O4-9 1. The 32% reduction in foraging habitat identified in the revised Plan (which the TAC finds is underestimated) is based on the loss of Plan-covered Swainson's hawk foraging habitat as a percent of all available foraging habitat in the Basin; this by itself is misleading, as it applies only to cumulative impacts in the Basin. Since the revised Plan only covers a portion of the Basin, and by itself cannot protect other land in the Basin, the reduction of foraging habitat should also be calculated for the land covered the revised Plan and EIR/EIS only. The TAC calculated the actual foraging habitat reduction below.

O4-10 2. The revised Plan and EIR/EIS justifies a less than 1:1 mitigation ratio for Swainson's hawk foraging habitat by stating that foraging habitat on the mitigation preserves will be upgraded to a higher foraging habitat value, either to alfalfa from other upland crops, to upland crops from rice, or in the placement of preserves to maximize the foraging habitat's availability to Basin Swainson's hawks. These are inaccurate conclusions because growing alfalfa in the Basin appears economically, and probably physically, infeasible; soils that support rice do not easily support appropriate upland crops; and acquiring preserve lands is subject to land prices and availability, which reduces the likelihood of optimal placement of preserved Swainson's hawk foraging habitat.

O4-11 3. The change in available habitat is based on a 1-mile-from-nest calculation. Although both the TAC and the Department of Fish and Game consider foraging habitat within 1 mile of a nest as vital, it is not considered "more important" as the revised EIR/EIS states. Many

- 04-11 nesting pairs would not be able to achieve reproductive success if they had to rely solely on foraging habitat within 1 mile of the nest. Suitable foraging habitat is not necessarily contiguous and is based on seasonal and annual crop patterns, leading to foraging ranges that require flight distances much greater than 1 mile from the nest. This is a particularly important consideration where multiple nests are clumped in close proximity as they are in the Basin. It is very likely that all suitable habitat in the Basin is used by foraging Swainson's hawks, even if a nest site does not exist within several miles. Even a distance of 4 miles, a moderate flight distance for most foraging Swainson's hawks, from known nest sites encompasses 100% of available foraging habitat in the Basin. Thus, all suitable habitat in the Development Zones should be included in the analysis.
- 04-12 4. The analysis in the revised Plan and EIR/EIS does not address the loss of foraging habitat immediately adjacent to and surrounding existing Swainson's hawk territories. At least ten territories would lose a significant portion of their foraging habitat that is now adjacent to their nest trees. This loss of immediately adjacent habitat in association with a significant increase in human disturbance would likely result in a 50 to 100% loss of those existing territories.
- 04-13 5. The analysis in the revised Plan and EIR/EIS assumes that the relatively small patches of grassland habitat surrounding restored marsh and other mitigation lands is equivalent to cultivated upland crops. This is not an accurate characterization of the foraging value of different cover types. Large contiguous cultivated fields of hay, grain, and row crops provide the highest foraging habitat value to Swainson's hawks because of the large rodent prey populations they support and the increase in prey availability from seasonal farming operations (i.e., cultivating, harvesting). Grassland habitats do not support similar prey populations and are not subject to farming activities that enhance prey availability for Swainson's hawk use. Also, many of the preserve lands that will support these small patches of foraging habitat are likely to be surrounded by rice and urban development. It is less energetically practical for foraging Swainson's hawks to find, then hunt, on these small plots of relatively unproductive land. The current reproductive success of the Swainson's hawk population in the Natomas Basin population is based on the availability of large, contiguous tracts of more suitable habitat adjacent to nest sites.
- 04-14 **Loss of Habitat from Implementation of HCPs**
Our analysis of habitat loss in the Basin includes separate calculations for the City of Sacramento and Sutter County portions of the revised Plan, and the Metropolitan Air Park HCP. In each case, the net loss of foraging habitat is calculated by dividing the number of Swainson's hawk foraging acres that will be lost within each development zone by the total foraging acres affected by the development (developed + preserved). No credit is given for improvements to forage value on the preserved lands as there is no requirement in the revised Plan to do so.
- 04-15 **City of Sacramento.** Based on the land use analysis in the revised Plan and EIR/EIS combined with the TAC's crop analysis, the City's planned urban development area (8050 acres) contains approximately 6,000 acres of good quality foraging habitat for Swainson's hawks. The quality of

04-15 the habitat is evidenced by the large number of Swainson's hawks that nest in and near the City's development zone. The City proposes mitigate its development impacts by setting aside 4,000 acres of open space/habitat outside the development zone. Of the 4,000 acres preserved, 2,000 will be retained/converted to rice, 1,000 will be converted to managed marsh, and 1,000 will be maintained as upland reserve. Approximately 25% of upland habitat will be grassland/woodland associated with the restored marsh, leaving 750 acres as potential Swainson's hawk foraging habitat. Fallow rice fields are also usable foraging habitat for Swainson's hawks, and approximately 10% of mitigation rice will be fallow per year, adding an additional 200 acres of foraging habitat. Given that there are 6,000 acres of good Swainson's hawk foraging habitat in the proposed City of Sacramento development area that would be lost, and 950 acres of currently usable foraging habitat would be preserved outside the development zone (for a total of 6,950 currently existing, suitable acres), the net loss of Swainson's hawk foraging habitat in City's development/preserve area would be 86% (6000/6950).

04-16 **Sutter County.** The Sutter County plan area contains 2,800 acres of good quality Swainson's hawk foraging habitat. Sutter County proposes to develop approximately 7,500 acres, and set aside 3,750 acres of mitigation land outside their development zone. Of this, approximately 1,875 acres will be retained in rice, 935 acres will be restored to marsh habitat, and 935 acres will be managed as upland habitat. Approximately 25% of the upland habitat will be grassland/woodland associated with the restored marsh, reducing the mitigation land available for managed Swainson's hawk foraging habitat (appropriate cropland) to 700 acres, plus 190 acres of fallow rice fields. Given that there are 2,800 acres of good Swainson's hawk foraging habitat in the proposed Sutter County development area that would be lost, and 890 acres of currently usable foraging habitat would be preserved (for a total of 3,690 existing suitable acres), the net loss of Swainson's hawk foraging habitat would be 76% (2800/3690).

04-17 **Metropolitan Air Park.** The Metropolitan Air Park (MAP) project area includes 550 acres of good quality Swainson's hawk foraging habitat. MAP intends to develop 2,000 acres and will mitigate by protecting 1,000 acres of habitat outside the development zone. About 500 acres will be set aside as rice fields, and 250 acres will be restored marsh habitat. About 25% of the remaining 250 acres of upland habitat will be grassland/woodland associated with the restored marsh, resulting in approximately 190 acres available for managed Swainson's hawk foraging habitat, plus 50 acres of fallow rice acreage. Given that 550 acres of good Swainson's hawk foraging habitat in the proposed MAP development area would be lost, and 240 acres of currently usable forage would be set aside (for a total of 790 existing suitable acres), the net loss of usable Swainson's hawk foraging habitat is 70% (550/790).

04-18 Overall, activities associated with both Natomas Basin HCPs would result in the loss of 9,350 acres of suitable Swainson's hawk foraging habitat, and protect 2,080 acres of habitat that currently exists, constituting an 82% reduction of suitable foraging habitat (9,350/11,430). In addition, the 9,350 acres of Swainson's hawk foraging habitat that will be lost in the development zones represent 45% of the available foraging habitat that now exists in the Basin (described below). With this extent of foraging habitat loss, a decline in the nesting population would be expected. Due to the location of the nesting population and existing and planned

O4-18

development, and assuming all other factors remain stable, our conservative estimate suggests that this amount of habitat loss will likely result in a decline of the Natomas Basin Swainson's hawk population of at least 25%.

Predicted Basin-wide Habitat Reduction

Using similar logic and ratios provided for under the existing HCPs, the TAC also calculated a predicted Basin-wide loss of habitat assuming development would continue outside of the existing HCP areas. The TAC found that the Basin landowners provided approximately 21,000 acres of usable foraging habitat per year for Swainson's hawks between 1993 and 2000. Approximately 21,000 acres of rice and orchards, and an additional 4,000 acres of upland crops such as corn, safflower, and melons were excluded from the total usable acreage because these cover types provide little or no foraging habitat value for Swainson's hawks. The total useable acreage is a conservative estimate, as low-value upland crops are used to some extent by Swainson's hawks, and may be rotated into higher value crops depending on market influences.

O4-19

Using the 0.5:1 habitat compensation ratio, of the 53,500 acres in the Basin, approximately 18,000 acres would be left in habitat/open space. Of that, 9,000 acres would be left in rice, 10% of which we assume will be fallow each year consistent with the above analysis. Of the 9,000 acres not in rice, 4,500 acres will be restored to marsh and 4500 acres will be designated as upland reserves. An estimated 25% of the upland reserves would be grasslands and woodlands associated with the restored marsh habitat, which would provide only marginal foraging habitat value for Swainson's hawks. Thus, along with 900 acres of fallow rice, a total of 4,275 acres would be available to foraging Swainson's hawks, constituting an 80% overall reduction of suitable foraging habitat in the Basin.

Given the conservative assumptions that, 1) no foraging habitat is lost outside the Basin, 2) no Swainson's hawks outside the Basin rely on in-Basin foraging habitat, and 3) all mitigation land will be in-Basin, an 80% reduction of Swainson's hawk foraging habitat in the Basin would likely result in a 30 to 50% decline in the Basin's nesting population. In fact, habitat outside the Basin will decline as a result of other land use changes, some mitigation habitat obtained for the Natomas HCPs will likely occur outside the Basin, and at least 5 Swainson's hawk territories will potentially be lost due to direct development impacts. Thus, the actual decline in the nesting population would likely exceed 50%.

O4-20

In summary, the revised Plan and EIR/EIS fail to accurately characterize the extent of foraging habitat loss and the potential for take as a result of Plan implementation or the cumulative loss from other planned, proposed, or predicted activities in the Basin. It is clear that a compensation ratio of 0.5 to 1, and a management requirement that allows for only a small proportion of mitigation preserves to provide high value foraging habitat, will result in substantial losses of Swainson's hawk foraging habitat throughout the Basin. Without adequate foraging habitat, the nesting population will find it exceedingly difficult to successfully reproduce and over time will abandon traditional nesting territories. Clearly, our determination is in sharp contrast to the determination in the revised Plan and EIR/EIS that suggests that Plan implementation would have no affect on the Swainson's hawk.

Sustaining the Target Population in Perpetuity

- 04-21 [Because the revised Plan and EIR/EIS consider Plan implementation to have no affect on the Swainson's hawk, they also fail to provide a management strategy that adequately provides for long-term sustainability of a target population. Initially, using information from the habitat analysis, levels of take should be accurately described and a target population should be identified. Next, a management strategy should be developed that indicates how the target population will be managed over time to assure sustainability.
- 04-22 [Currently described management consists of providing relatively small areas of suitable habitat within preserves and assumes (without any indication of certainty) long-term preservation of certain areas of the Basin (as Swainson's hawk foraging habitat), such as the lands surrounding the Sacramento International Airport and the conceptual 1-mile Swainson's hawk zone along the Sacramento River. Preserve requirements focus primarily on giant garter snake habitat and other wetland habitats. The amount of land managed for Swainson's hawk is dramatically insufficient to provide for long-term sustainability of the population, which violates the intent, principles, and guidance provided under Section 10 of the federal Endangered Species Act.
- 04-23 [In order to successfully maintain this population over the long-term, a management strategy should be prepared and implemented that clearly describes how habitat throughout the Basin and the integrity of target nesting territories will be maintained.

RECOMMENDATIONS

The TAC recommends the following to more fully address the effects of Plan implementation on the Swainson's hawk and to provide mitigation sufficient to sustain a target population over the long term.

- 04-24 [• Revisit and revise the 0.5:1 habitat compensation ratio. This ratio is inconsistent with California Department of Fish and Game guidelines and other regional HCPs in the Central Valley. This alone would result in a two-thirds reduction in overall landbase in the Natomas Basin available for conservation. There is little chance of sustaining Swainson's hawk populations or other biological resources in the Natomas Basin by compensating at this level.
- 04-25 [• Revisit and revise the site-specific habitat ratios for preserves. Effective management of Swainson's hawk populations will require a greater proportion of mitigation sites retained as suitable upland habitats.
- 04-26 [• Conduct a more thorough analysis of the effects of Plan implementation on the Swainson's hawk. Identify levels of impact, determine level of take, and identify a target population for long-term conservation.
- 04-27 [• Establish commitments from the local jurisdictions and landowners to retain suitable habitat within the 1 mile Swainson's hawk zone in perpetuity, and limit preserve management to upland crops in that zone.
- 04-28 [• Focus conservation efforts for Swainson's hawk on lands west of the I-5/State Route 99

- 04-28 [corridor to make foraging areas more easily accessible to the nesting population, maximizing foraging efficiency and use.
- 04-29 [• Increase minimum preserve size to 1,000 acres, and provide for adequate acreage of suitable upland cover types. Large agricultural tracts allow for maximum foraging efficiency, as well as reducing human disturbance-related avoidance in the species.
- 04-30 [The TAC has identified several fundamental issues related to the long-term sustainability of a Swainson's hawk population in the Natomas Basin. Implementation of the revised Plan will likely result in substantial habitat losses in the Basin followed by abandonment of nesting territories and a significant reduction in the Natomas Basin nesting population.


We appreciate the opportunity to provide these comments and hope the revised Plan can be updated to reflect our concerns. If you have any questions concerning our comments or if the TAC can be of any assistance, please contact:

Michael Bradbury
3251 S Street
Sacramento, CA 95816
(916) 227-7527

or

James Estep
2600 V Street
Sacramento, CA 95816
(916) 737-3000

Sincerely,



Michael Bradbury
Swainson's Hawk Technical Advisory Committee

102 RIVER
2007/09/20

1084

Draft Natomas Basin Habitat Conservation Plan and Draft EIS/EIR Public Information Workshops and Open House

- Monday, September 23 (4:00-6:00 pm)
- Monday, September 23 (7:00-9:00 pm)
- Wednesday, September 25 (4:00-6:00 pm)
- Wednesday, September 25 (7:00-9:00 pm)

Please fill out the following so we can be sure to keep you on our mailing list and to document the author of comments received. Thank you.

Name:

CHRIS CHADDOCK

Address:

P.O. BOX 969 ELVERTA, CA 95626

Organization:

SELF

Phone:

916-768-0158

1-1

Please provide us with your written comments on the Draft HCP or EIR/EIS.

ES-3 STUDY AREA SHOULD INCLUDE ALL AREAS DISTURBED AS IN RD-1000 DISCHARGE EAST OF NATOMAS BASIN AS THERE FED DISCHARGE PERMIT LETS THEM DUMP TOXINS FROM AGLAND AND RUN OFF FROM RESIDENTIAL + COMMERCIAL LOTS INTO STEEL CREEK WHICH ROCKS UP AND ONTO ESSENCIAL + CRITICAL HABITAT VERNAL POOLS, GIANT GARDNER SNAKE HABITAT, SWAINSON'S HAWK FORAGING HABITAT, BURROWING OWL AND OTHER IDENTIFIED ENDANGERED SPECIES FROM CALIF ENERGY DECKETS

Written Comments are due on October 28, 2002

FIELD SUPERVISOR
U.S. FISH AND WILDLIFE SERVICE
2800 COTTAGE WAY W-2805
SACRAMENTO, CA 95825-1846
(916) 414-6711 FAX

(92AFC-2), 01AFC-1 (EBSO), FOSTER WHEELER ENV. CORP. THERE FOR MITIGATION SHOULD BE SO OUTSIDE OF NATOMAS BASIN + AREA B SUCH AS AREA SOUTH OF ELVERTA RD, Y NORTH OF ELK HORN BLVD EAST OF BASIN

OVER

SIGNATURE:

Chris Chaddock

(Use back of form if you would like to provide more information)

1-1 AS THE 90AC: FORMER POWER PLANT SITE IS FOR SALE AND PERMANENT FARM LAND/WETLANDS OWNED BY JOHN TAYLOR AND OTHER ARE WITHIN THE 1 MILE BOUNDARY FIG #13

1-2 HOW WILL 4.3 RD-1000 PREVIOUS REQUIREMENT TO HOLD RUN OFF AFTER TOXIN APPLICATION FOR 2 WEEKS OR LONGER IF IT EXCEEDS FED DISCHARGE STANDARDS BE MET, WHO WILL HAVE MONITORING REQ. AND HOW WILL RD-1000 TREAT CONSTANT CONTAMINATION FROM RESIDENTIAL & COMMERCIAL RUN OFF?

1-3 1.4 WHAT TYPE OF MITIGATION FOR LOSS OF WETLANDS IN STEELHEAD CREEK AND ITS FED. TRIBUTARIES IF REDUCED PUMPING IN TO STEELHEAD CREEK AT EAST PUMP STATION BETWEEN ELK HORN BLVD. AND ELBERTA RD. OCCURS?

1-4 WHAT TYPE OF MITIGATION FOR POSSIBLE EMERGENCY PUMPING FROM NATOMAS BASIN ONTO PRIVATE PROPERTY?

304

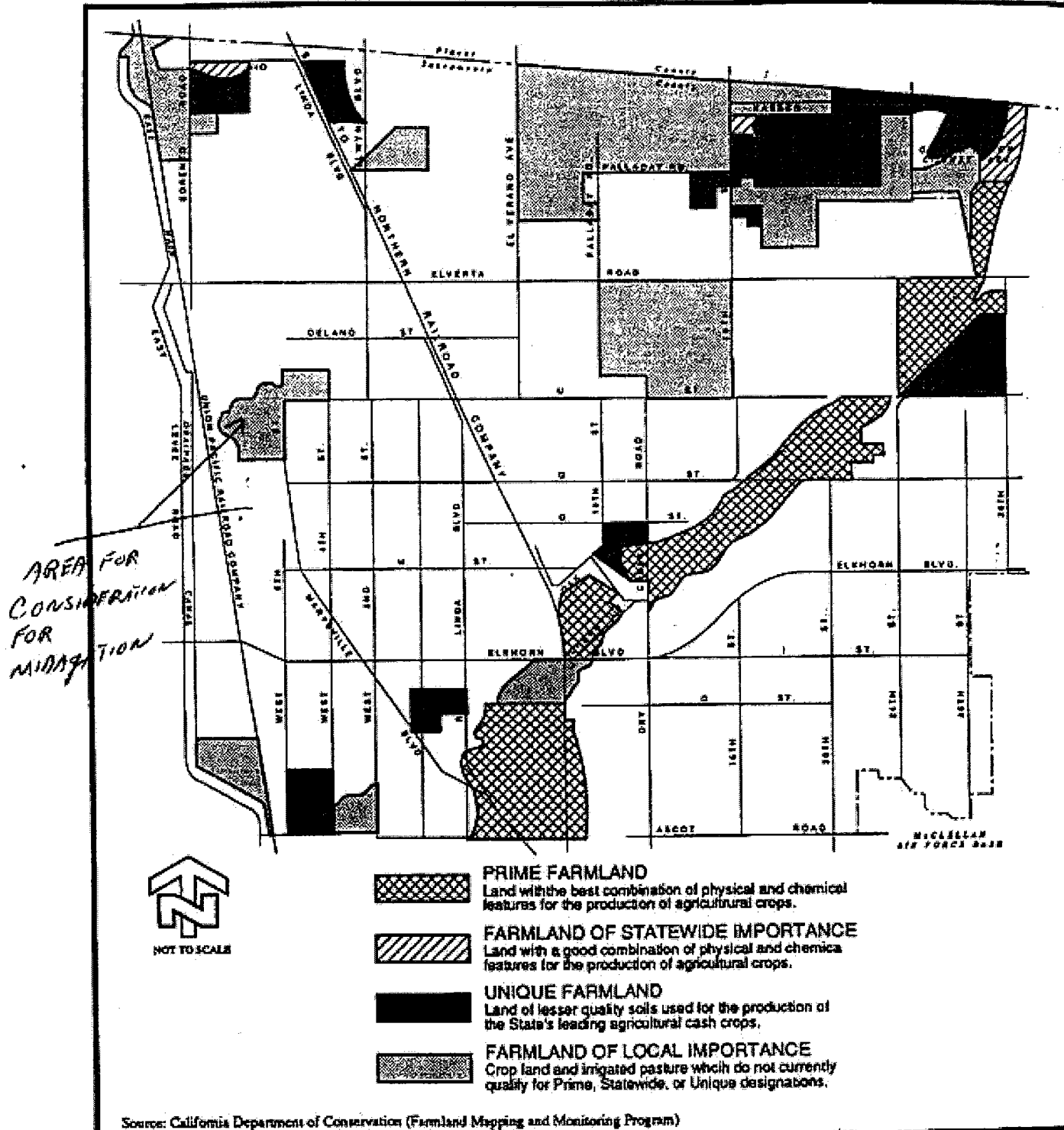


Figure 2
 Important Farmland Map

Prepared by the Sacramento County Planning and Community Development Department

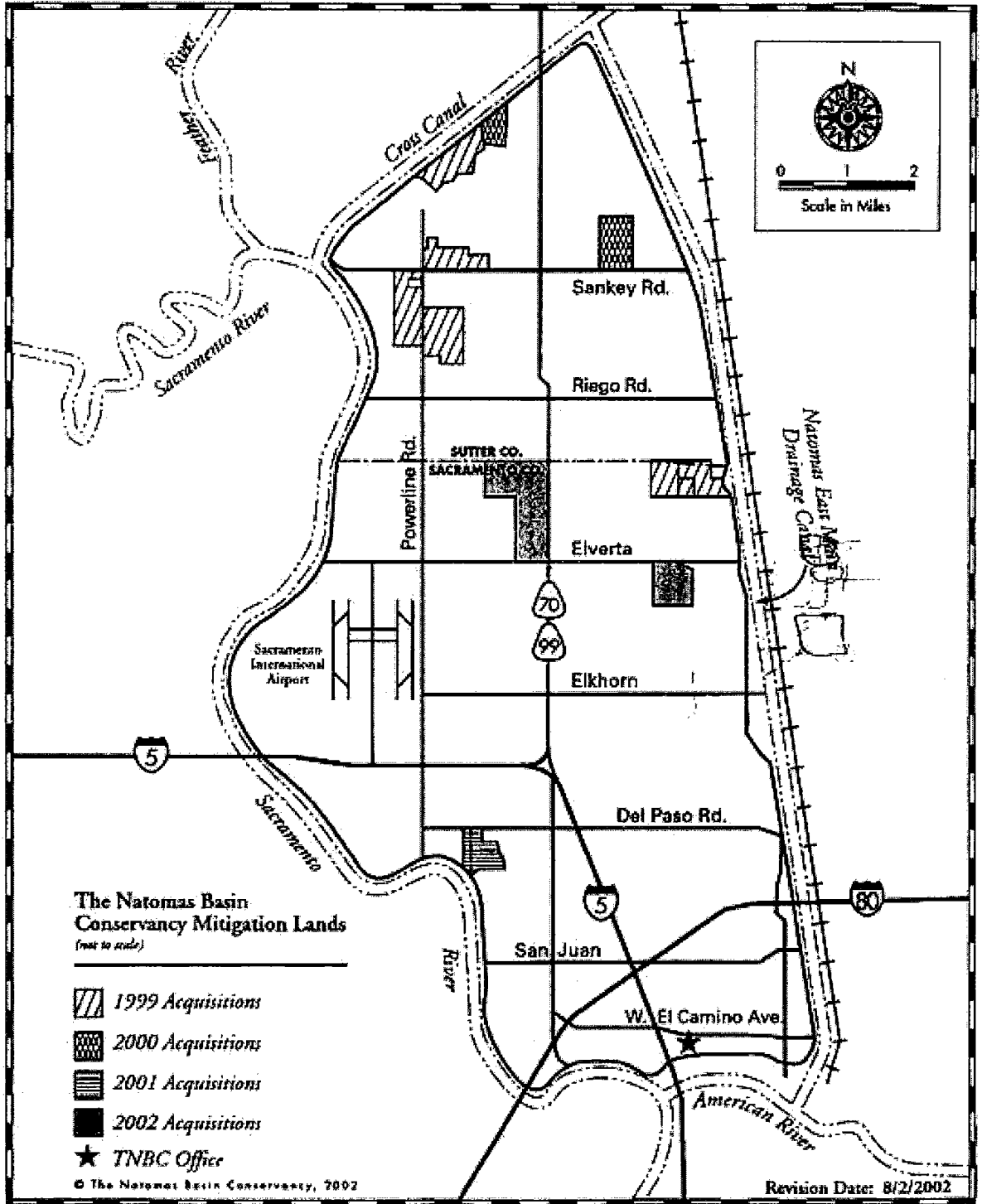
FOSTER WHEELER ENVIRONMENTAL CORP.
OLD SEPCO PROJECT 92 AFC-2 (C.E.C.)
NEW RLEPP 01 AFC-1 (C.E.C.)
DEAD PROJECT 8/02

2094

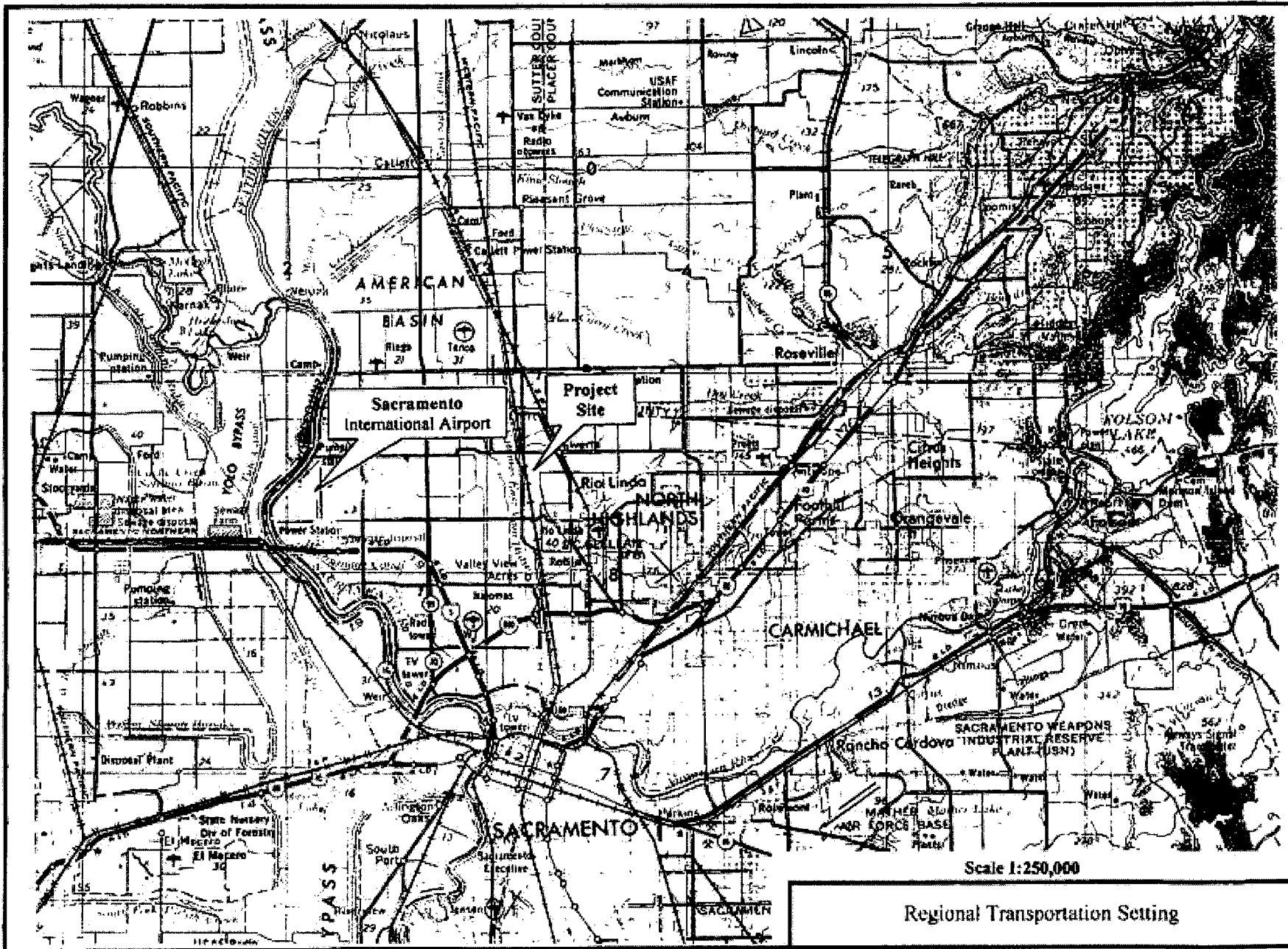
THE NATOMAS BASIN CONSERVANCY

2002

Base Map



404



RECEIVED

DEC 2002

THE DIEPENBROCK LAW FIRM
A PROFESSIONAL CORPORATION

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JEANINE C. BOYERS

R. JAMES DIEPENBROCK
(1929-2002)

December 5, 2002

Via Facsimile - (916) 414-6713

U.S. Fish & Wildlife Service
Attn: Ms. Cay Goude
2800 Cottage Way
Sacramento, CA 95825

**Re: Draft Natomas Basin Habitat Conservation Plan
Draft Environmental Impact Report/Environmental Impact
Statement**

Dear Ms. Goude:

Our office represents the Tsakopoulos Family Trust with regard to approximately 450 acres (the "Property") within the North Natomas Community Plan area, south of Del Paso Road and west of El Centro Road. The Natomas West Drainage Canal forms the western boundary of the Property, including the area commonly known as "Fisherman's Lake".

We have the following comments on the Draft Natomas Basin Habitat Conservation Plan (the "Draft NBHCP") and the Draft Environmental Impact Report/Environmental Impact Statement (the "Draft EIR/EIS"). From time to time I will refer collectively to the Draft NBHCP and the Draft EIR/EIS as the "Documents".

1. **Technical Correction.**

In various places in the Documents, it is stated that the North Natomas Community Plan created a 250 foot buffer along the east side of Fisherman's Lake. In fact, what the North Natomas Community Plan says on page 59 is that the 200 foot (not 250 foot) buffer is an **agricultural buffer** located "along the west side of the plan area". This **agricultural buffer** can be used for

12-1

THE DIEPENBROCK LAW FIRM

U.S. Fish & Wildlife Service

Attn: Ms. Cay Goude

December 5, 2002

Page 2 of 5

"pedestrian and bikeways, linear parks and open space, drainage canals or detention basins, irrigation canals, public roads and maintenance roads." See pages 58 and 59 of the North Natomas Community Plan. In the May 10, 2001 Agreement to Settle Litigation (the "Settlement Agreement"), the City of Sacramento agreed to initiate an amendment to the 1999 North Natomas Financing Plan to provide for the acquisition of an additional 50 foot buffer.

12-1

We would appreciate your amending all references that state that the North Natomas Community Plan itself created a 250 foot buffer. I enclose a copy of City Attorney William P. Carnazzo's May 30, 2002 memorandum regarding the width and location of the agricultural buffer in this location, which we consider definitive on this topic.

12-2

We would also appreciate a specific reference acknowledging that an outfall structure from an appropriate location on our client's Property into the West Drainage Canal is contemplated and not objectionable. This is a critical point as is being certain the outfall can be built during the construction season.

12-3

Finally, at page VII-15 of the Draft NBHCP, please correct the reference suggesting that the buffer is between Fisherman's Lake and urbanized uses. The buffer begins at the plan border.

2. Riparian Habitat.

12-4

In the documents there are various references to some 23 acres of riparian habitat along the eastern edge of Fisherman's Lake. Our client's consultant, Mr. Jim Stewart of ECORP Consulting, has estimated the riparian habitat adjacent to our client's property comprises approximately 16 acres. This riparian habitat is bordered on the east by the RD 1000 maintenance road. We assume here that in identifying 23 acres of riparian habitat along the City's side of Fisherman's Lake that "Fisherman's Lake" includes the portions of Fisherman's Lake north of Del Paso Road up to the junction with the channelized portion of the West Drainage Canal.

Please correct the Documents to correctly state the amount of riparian habitat located next to Fisherman's Lake on our client's Property.

THE DIEPENBROCK LAW FIRM

U.S. Fish & Wildlife Service

Attn: Ms. Cay Goude

December 5, 2002

Page 3 of 5

3. Buffer Increase.

12-5 [There are various references in the Documents to increasing the size of the buffer adjacent to Fisherman's Lake from 250 feet to 800 feet. Not all of the references are accurate. In the Settlement Agreement, the City of Sacramento agreed to initiate an amendment to the North Natomas Community Plan to consider whether the buffer should be increased from 250 feet to 800 feet. That process has not yet occurred and the City Council has not yet made any decision. We would appreciate your correcting the Documents by referring to the exact language in the Settlement Agreement. We also want to be sure that all parties understand that the width of the buffer may or may not be increased, depending on the City Council decision. The analysis in the Documents should not depend on the buffer increasing in width.

4. RD-1000 Ownership.

12-6 [At various places in the Documents, there are references to the land that is owned by RD 1000 in and around Fisherman's Lake. We would appreciate the Documents being corrected to state that RD 1000 has an easement on portions of the land along the east side of Fisherman's Lake. The easement was granted for flood control purposes and all uses not inconsistent with flood control were reserved to the Tsakopoulos Family.

5. Fisherman's Lake is Part of a Flood Control System and Is Not a Habitat Preserve.

12-7 [Fisherman's Lake and surrounding land owned by RD 1000 (and the easement owned by RD 1000) are part of a major flood control system owned and operated by RD 1000 and are specifically not a habitat or nature preserve. We think this is an important point which should be specifically identified in the Documents.

6. Expansion of Buffer.

12-8 [While we respectfully acknowledge that opinions vary on this topic, we do want to note that in our view, expansion of the buffer area to 800 feet on the east side will do little to enhance habitat for the Giant Garter Snake in that the added land would not be riparian upland habitat or other area likely to enhance habitat values for a primarily aquatic creature. The primary basking areas are on the west side of Fisherman's Lake, and, as part of the Settlement

THE DIEPENBROCK LAW FIRM

U.S. Fish & Wildlife Service

Attn: Ms. Cay Goude

December 5, 2002

Page 4 of 5

12-8 [Agreement, they are being enhanced by planting of native grasses and other appropriate vegetation.

12-9 [As to the Swainson's Hawk, again, we do not believe that increasing the buffer from 250 feet to 800 feet will provide any benefit to the Swainson's Hawk commensurate with the enormous cost of increasing the buffer to this width, which cost our client estimates at over \$6 million.

12-10 [The landowners within the North Natomas Community Plan have already funded the acquisition of significant additional habitat land on the west side of Fisherman's Lake and under the Settlement Agreement, there will be not less than 400 acres of land acquired next to Fisherman's Lake. We respectfully suggest that these added areas will provide a far more attractive area for hawk foraging than an increase of buffer at enormous cost in an area immediately adjacent to residential development. We also note that as part of the enhancement of the riparian habitat along the west side of Fisherman's Lake, RD 1000 has agreed to the planting of a certain number of trees appropriate as nesting sites for Swainson's Hawk. When these trees reach sufficient size and maturity, we hope Swainson's Hawks will find this location next to a substantial foraging area suitable for nesting.

7. Additional Covered Species.

12-11 [The Draft NBHCP suggests that additional Covered Species may experience habitat loss under the Plan. We ask that you delete the references to adding potential new species to the Basin. See, for example, the reference at IV-14 of the Draft NBHCP.

8. Control of Water Supply and Availability.

12-12 [We note a reference on page IV-28 of the draft NBHCP stating that "management activities can include: (1) control of water supply and availability ...". Does this mean that water supply and availability to properties within the North Natomas Community Plan area can be restricted or otherwise controlled? This would not be acceptable to landowners and would be a matter of grave concern. We would appreciate clarification of this important point.

9. Correction of Figures 7, 10 and 13.

12-13 [In Figure 7 (Flood Prone Areas), we suggest clarification as the aerial topos of our client's Property indicates that it is not in the 100 year floodplain.

THE DIEPENBROCK LAW FIRM

U.S. Fish & Wildlife Service

Attn: Ms. Cay Goude

December 5, 2002

Page 5 of 5

12-14

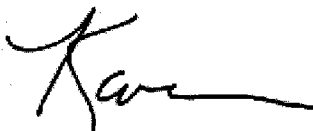
In Figure 10 (1997 Habitat Types Map), what is the origin of this map? The Property appears to be identified as "riparian", when it certainly is not. In Figure 11, what is meant by "Ruderal"? Finally, in Figure 13, an active hawk's nest is shown on our client's Property at a location where there are no trees. This needs to be corrected.

Thank you for the opportunity to comment and for your substantial efforts to create a Habitat Conservation Plan acceptable to all.

Very truly yours,

THE DIEPENBROCK LAW FIRM

By



Karen L. Diepenbrock

KLD/jmg

interoffice

MEMORANDUM

to: Carol Shearly, Natomas Manager Thomas Lee, Deputy City Manager

cc: Karen Diepenbrock, Attorney at Law

from: William P. Carnazzo

re: Width/Location of Agricultural Buffer on Westerly Edge of the NNCP Area

date: May 30, 2002

I have completed review of the relevant North Natomas documents possibly containing references to the agricultural buffer along the westerly edge of the NNCP area—and in particular, along that portion of the West Drainage Canal known as "Fisherman's Lake".

My review included the following documents:

1. Draft EIR, North Natomas Comprehensive Drainage Plan (December, 1996).
2. Final EIR, North Natomas Comprehensive Drainage Plan (March, 1997).
3. 1986 North Natomas Community Plan.
4. Draft EIR, 1986 North Natomas Community Plan.
5. Final EIR, 1986 North Natomas Community Plan.
6. Findings and Statements of Overriding Considerations, 1986 North Natomas Community Plan.
7. 1994 North Natomas Community Plan.
8. Supplement to the 1986 North Natomas EIR.
9. Findings and Statements of Overriding Considerations, 1994 North Natomas Community Plan.
10. Mitigation Monitoring Plan, 1994 North Natomas Community Plan.
11. Natomas Basin HCP (1997).
12. Implementation Agreement, Natomas Basin HCP (1997).
13. 1994 North Natomas Finance Plan.
14. Nexus Study, 1994 North Natomas Finance Plan.
15. 1999 North Natomas Finance Plan Update.
16. Nexus Study, 1997 North Natomas Finance Plan Update.
17. 1986 North Natomas Settlement Agreement.
18. 2001 North Natomas Settlement Agreement.

from the desk of...

William P. Carnazzo
Chief Assistant City Attorney
City Attorney's Office
980 Ninth Street, Suite 1000
Sacramento, CA 95814

(916) 264-5346
Fax: (916) 264-7455

The results of my inquiry are set forth below. I have attached a copy of all pages excerpted from the various documents.

A. **Documents having no relevant references to the buffer.** The following documents contain no relevant reference to the buffer:

1. The Draft and Final EIRs for the Comprehensive Drainage Project.
2. The Natomas Basin HCP and Implementation Agreement.
3. The 1994 North Natomas Finance Plan and Nexus Study.
4. The 1999 North Natomas Finance Plan Nexus Study.
5. The 1985 North Natomas Settlement Agreement.

B. **Documents containing references to the location and/or width of the buffer.**

1. **1986 NNCP.**

- a. Figure 3. This map shows the westerly buffer located to the east of Fisherman's Lake. The map is not helpful as it is a schematic of poor quality.
- b. Page 12, Table 2. The "greenbelt" is listed as 770 net acres. The pertinent footnote states: "Refers to greenbelt abutting agriculture on the norther and western borders of the incorporated study area."
- c. Page 59. A policy statement is made: "To create a strong edge between the community and adjacent areas of permanent agriculture, develop a greenbelt along the norther and wester boundaries of the incorporated portion of the planning area."
- d. Page 103. The page 59 policy statement is repeated. Another policy statement is made: "The greenbelt will average in width 500 feet to separate residential and agricultural uses."
- e. Page 116. A statement is made regarding the source of the 500 foot width: "According to information from the County Agricultural Commissioner, a buffer of 500 feet in width will meet this objective."

2. **1986 NNCP Draft EIR.**

- a. Exhibit A-14. This is a spreadsheet showing the greenbelt area associated with a variety of alternatives and positions. The relevant footnote states: "Refers to greenbelt abutting agriculture on the norther and western borders of the incorporated study area."
- b. Exhibit A-20. Another spreadsheet depicting greenbelt area associated with 5 alternatives. The relevant footnote is the same as the previously mentioned note.
- c. Exhibit A-21. This is a land use map for Alternative A (no project), which shows a buffer on the east side of the westerly city boundary, in the vicinity of Fisherman's Lake.
- d. Page D-53. There is a discussion of the relative benefits of buffers

and their management.

- e. Page D-57. There is a discussion of the need for buffers.
 - f. Page H-48. There is a discussion of buffers in general, and a reference to them as "land abutting agriculture on the northern and western borders of the incorporated study area."
 - g. Page L-78. There is a statement that: "Criteria for determining the width and use limitations of the buffer area include compatible low intensity, uninhabited uses such as open space/recreation or public utility uses."
3. **1986 NNCP Final EIR.**
- a. Page 221. There is a general discussion of the buffers in a response to a comment.
4. **1986 Findings and Statement of Overriding Considerations.**
- a. Page 105. Open space buffers are proposed as a mitigation measure "where the Study Area is contiguous to agricultural lands."
 - b. Page 183. The following statement is made: "The buffer area should be wide enough to effectively separate the conflicting land uses and should only contain compatible non-agricultural uses. According to information from the County Agricultural Commissioner, a buffer of 500 feet in width will meet this objective. Inclusion of drainage canals, freeways, artererial streets, utility corridors, etc., could lower the net acreage that would be needed in the buffer areas."
5. **1994 NNCP.**
- a. Page 10. Table 1 contains a reference to "Ag and Fwy Buffers", listing the acreage as 320.9. Regarding the agricultural buffers, footnote 5 states: "Refers to ag buffers on the N and W borders of the study, but not ag land."
 - b. Page 11. Table 2 is similar to Table 1, with the same footnote.
 - c. Page 52. There is a statement that "Open Space includes agricultural buffer areas along the north and west boundaries of the plan area."
 - d. Page 53. Table 13 shows Agricultural Buffer at 195.9 acres. Footnote 5 states: "Includes acreage along west and north boundaries of the plan used to buffer the agricultural uses from the urban uses."
 - e. Page 55. Figure 14 depicts a buffer along the westerly edge of the NNCP area, of undetermined width. Although the map is a schematic, the buffer appears to be located inside of the city limit, east of the West Canal.
 - f. Page 58. There is a policy statement regarding creation of linear open space to buffer agricultural lands.
 - g. Page 59. There is a statement that: "The buffer along the west side of the plan area is 200 feet wide and allows the same uses as the

- northern buffer.”
- h. Page 82. There are the following statements: “Develop a greenbelt along the northern and western boundaries of the planning area.”; and “The greenbelt will be a minimum of 250 feet in width, not including the Elkhorn Boulevard right of way and irrigation canals and maintenance roads on the north side of Elkhorn, which brings the total width to 500+/- feet.” **Observation: this statement is ambiguous. It is not possible to tell whether the 250 feet width refers only to the northern buffer or is intended to refer to both the northern buffer and the western buffer.**
5. **Supplement to the 1986 NNCP EIR.**
- i. Page 2.0-5. Mention is made of the use of the buffer as open space.
 - j. Appendix A, page 10. This is a chart showing the buffer to be 320.9 acres (net), with a footnote similar to those quoted above.
 - k. Appendix A, page 55. Figure 14 depicts the buffer as being along the westerly city boundary near Fisherman’s Lake. It is shown inside the city limit, to the east of the West Canal.
 - l. Appendix A, page 58. The buffer is described as 200 feet in width.
 - m. Appendix A, page 821. The same ambiguous statement is made (see 4.h. above).
6. **Final Supplement to the 1986 NNCP EIR.**
- a. Page 2. There is a statement in a comment letter that “Many communities have considered 300 feet as a sufficient buffer....”
 - b. “Letter 2.” In a response to a letter from the Department of Conservation, the following statement is made: “The buffer along the west side of the plan area is 200 feet wide and allows the same uses as the northern buffer.”
7. **1994 Findings and Statement of Overriding Considerations.**
- a. Page 13. The statement is made that “These measure require the use of a greenbelt along the northern and western boundaries of the Project area to create a strong edge between the community and adjacent areas of permanent agriculture. This greenbelt must be a minimum of 250 ft. in width, not including the Elkhorn Boulevard right-of-way.” **[Observation: these two sentences, when taken together, are ambiguous. The first sentence relates to both buffers, and by itself is clear. The second sentence could be interpreted as applying only to the Elkhorn buffer, but could also mean that both buffers are to be 250 feet in width. This conflicts with previous statements that the west side buffer is to be 200 feet in width.]**
8. **1994 Mitigation Monitoring Plan.**

- a. Page 2. The statements quoted in 7.a. above are repeated here.
9. **1993 Draft NNCP.** This draft plan was not adopted. The following statement appears on page 58: "The plan calls for an agricultural buffer along the north and west boundaries of the plan area. The north buffer along Elkhorn Boulevard includes a 250 foot wide strip of land along the south side of Elkhorn Boulevard, the 136 foot wide public right-of-way of Elkhorn Boulevard, and any maintenance road or irrigation canal on the north side of Elkhorn Boulevard....The buffer along the west side of the plan area is 200 feet wide and allows the same uses as the northern buffer."
10. **Land Use Map Attached to 1994 NNCP.** This map depicts the westerly buffer as a 38.8 acre strip commencing at the easterly edge of the West Drain. There is no explanation as to why it commences at that point, as opposed to the center of the canal which is the city boundary.
11. **1999 North Natomas Financing Plan.**
 - a. Figures I-4 and IV-2. These figures show the "Ag and Freeway Buffers" as acquisitions under the "Public Facilities Land Acquisition Fee."
 - b. Page IV-18. Agricultural buffers are named as part of the public land to be acquired under the Land Acquisition Program and Fees.
 - c. Page V-1. In the introduction, buffers are named as being part of the land acquisition program.
 - d. Page V-3. The statement is made that "Open space and land buffers are required throughout the area along the I-5 and I-80 freeways, as habitat buffers along Fisherman's Lake, as a buffer to agricultural land along the south side of Elkhorn Boulevard and open space along the western City limits. [Observation: this statement is somewhat inaccurate in its depiction of the nature of the buffers.]"
 - e. Page V-5, figure V-1. This map appears to depict the westerly buffer as beginning at the city limit line. However, the map is not intended to be precise; rather, it is illustrative only and relates to financing plan issues.
 - f. Page V-6, Figure V-2. This chart includes 105.2 acres of agricultural buffer in the estimates of land acquisition cost.
 - g. Page F-1, figure F-1. This chart includes 85.75 acres of agricultural buffer. There is no explanation of the acreage difference between this chart and Figure V-2.
11. **2001 HCP Litigation Settlement.** On page 12, the following statement is made: "City agrees to initiate (1) an amendment to the NNFP to provide for the acquisition of an expanded buffer of 250 feet (i.e., 50-foot increase

along the East side of Fisherman's Lake (to be consistent with the Mitigation Monitoring Plan for the North Natomas Community Plan)...."

- C. Conclusions.** Based on the above information, it is reasonable to conclude:
1. As to the location of the westerly buffer, virtually all text references specify that is to be located "along the westerly edge" of the plan area. The 1994 NNCP map places it at the easterly edge of the West Drain, without explanation. Other diagrams, although fuzzy and poorly drawn, appear to place the buffer at the westerly edge of the West Drain, again without explanation. The latter location does not appear reasonable, as it would amount to the city dictating land use outside of its jurisdictional boundary. The 1994 map conflicts with the uniform references found in the text of the various documents reviewed. The most logical location appears to be to the middle of the West Drain, since that is the city boundary and comports with the text references placing the buffer "along" the westerly edge of the plan area—which would be the city boundary.
 2. As to the size of the westerly buffer, the ambiguities outlined above create an issue as to whether the buffer is 200 feet or 250 feet in width. While the settlement agreement appears to require processing of a plan amendment to settle the issue, the governing documents trump implementation documents if they conflict. The governing documents are the various editions of the community plan, where references to the westerly buffer width consistently specify 200 feet. The ambiguity found in the implementation documents (the findings and the MMP), which lump the Elkhorn and westerly buffers together at 250 feet each, stemmed from an erroneous reading of the community plan by staff and/or consultants.

12/05/02 17:07

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ECORP CONSULTING

002



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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DEC - 5 2002

SACRAMENTO
FISH & WILDLIFE OFFICE

December 5, 2002

Angelo Tsakopoulos
Tsakopoulos Investments
7423 Fair Oaks Blvd., Suite 10
Sacramento, Ca 95608

RE: Fisherman's Lake - Natomas Basin

Dear Mr. Tsakopoulos:

On a recent site walk conducted by you and ECORP staff on your property within Natomas Basin, we assessed the eastern shoreline of a portion of Fisherman's Lake. The existing RD1000 road was used to gain access to the lake edge.

I2-15

When assessing the extent of riparian habitat on the Tsakopoulos property, we were aware that the Draft Natomas Basin Habitat Conservation Plan (DNBHCP) referenced 23 acres of riparian habitat along the eastern edge of the lake. It appears that this acreage includes the margins of lake that extend beyond Del Paso Boulevard to the channelized portion of the West Drainage Canal. Preliminary assessment of the Tsakopoulos property has identified 16± acres of riparian habitat along the western edge of the site. The riparian habitat on the property is co-terminous with the shoreline of Fisherman's Lake and the RD 1000 road.

After review of the DNBHCP we have general comments on three issues:

I2-16

- The adaptive management provision as described on page I-37 of the DNBHCP should be further refined. Due to the dynamic and evolving characteristics of open space/habitat preserve areas, it is acknowledged that a static monitoring program would not adequately assess the functions and values of the habitat. However, it may not be appropriate to require the property owner to bear the burden of overseeing an ever-evolving management plan for an open space area that may be changing through influences unrelated to activities on the adjacent properties. It may be appropriate to establish limits of participation in a management plan by the Natomas Basin owners, which addresses conditions related to basin land use practices.

12/03/02 17:08

916 782 9134

ECORP CONSULTING

003

I2-17

- The controlled introduction of new species into an open space preserve, protected by conservation easements, is a biological sound approach to wildlife management and long-term viability of a species. However, it would be appropriate to implement a 'grandfather clause' that would ensure that the approved uses on property outside of the open space areas, not be unduly burdened by management practices that are modified as a result of the introduced species.

I2-18

- A main objective of a Habitat Conservation Plan (HCP) is to facilitate the recovery of a species. By participating in the HCP process, the Natomas Basin property owners are duty bound to comply with the provision of the plan, in addition to the terms and conditions of the various regulatory agency permits. However, modifications to flora and fauna within the open space preserve which may impede the recovery of a species which is not attributable (directly or indirectly) to land use practices within the basin should not be the responsibility of the property owners. A direct linkage between the property owners and recovery of the species must consider the source of the adverse impact and not hold the property owners accountable for recovery of a species by factors out of their immediate control.

If you have any questions, please call me at (916) 728-9100.

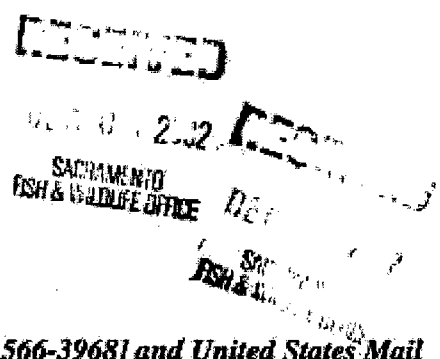
Sincerely,


Jim Stewart
President



ATTORNEYS • LLP
Established 1926

555 CAPITOL Mall
NINTH FLOOR
SACRAMENTO, CA 95834-4636
TELEPHONE (916) 441-0131
FAX (916) 441-4021



PATRICK G. MITCHELL
(916) 441-0131, X6319

Via Facsimile [(916) 566-3968] and United States Mail

December 2, 2002

Wayne White
Field Supervisor
United States Department of the Interior
Fish and Wildlife Service
2800 Cottage Way
W-2605
Sacramento, CA 95825

Re: Natomas Basin Habitat Conservation Plan and Draft EIR/EIS

Dear Mr. White:

On behalf of Reclamation District No. 1000 ("RD 1000") and Natomas Central Mutual Water Company ("Natomas Mutual") (collectively, the "Water Agencies"), I am writing to provide comments on the Natomas Basin Habitat Conservation Plan ("NBHCP") and its Draft Environmental Impact Report/Environmental Impact Statement ("Draft EIR/EIS").

To assist you in your review of these comments, we have separated our comments into sections. General comments that address several sections of the Notice of Availability dated August 16, 2002 ("NOA"), the NBHCP, and the Draft EIR/EIS are included in the main text of this letter. Specific comments that address more limited sections are included in Appendix A, which is incorporated by reference into this letter.

I. DISCUSSION

A. The Notice of Availability, the NBHCP, and the Draft EIR/EIS Misrepresent the Water Agencies' Current Participation in the NBHCP.

13-1

The NOA, the NBHCP, and the Draft EIR/EIS consistently misrepresent the Water Agencies' participation in the NBHCP by suggesting that the Water Agencies have chosen not to participate in the NBHCP and that RD 1000 has

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chosen not to be a co-lead agency for the Draft EIR/EIS. The NOA incorrectly states that “[a]t this time, RD 1000 and Natomas Mutual have chosen not to submit an application for an incidental take permit. They may decide to apply at a later time and commit to the terms of the Plan and through issuance of a permit by the USFWS, join as full permittees at a future date.” [NOA at 4]. Similarly, the NBHCP and the Draft EIR/EIS both state that, “[i]n March 2002, the Boards of Directors of both Water Agencies elected not to continue participation in the joint HCP...” [NBHCP at I-8; Draft EIR/EIS at I-9, I-10, I-21, 2-12, 4-12].

In fact, since the United States Fish and Wildlife Service (“USFWS”) announced for the first time on January 4, 2002 that the USFWS would not provide coverage for incidental take resulting from pesticide use, the Water Agencies have consistently stated that they wish to remain as applicants, and that RD 1000 wishes to remain as a co-lead agency, to seek incidental take coverage for the Water Agencies’ operations and maintenance activities. The Water Agencies have consistently expressed their request in the following documents:

- (a) A letter dated January 10, 2002 from Pat Mitchell to you, in which the Water Agencies requested that the USFWS exercise its authority to provide, within the incidental take permits issued pursuant to the NBHCP, coverage for the Water Agencies’ take resulting from pesticide use.
- (b) A letter dated February 4, 2002 from Pat Mitchell to Bob Thomas and Larry Combs, in which the Water Agencies stated that they were not authorizing the City of Sacramento (“City”) or Sutter County (“County”) to modify the NBHCP in any manner that narrowed the Water Agencies’ request for coverage for take resulting from both mechanical and pesticide related activities.
- (c) A letter dated March 1, 2002 from Pat Mitchell to Bob Thomas and Larry Combs, in which the Water Agencies confirmed the substance of February 8, 2002 and February 12, 2002 telephone conversations with the City, County, and USFWS. Specifically, the Water Agencies confirmed that the Boards of both RD 1000 and Natomas Mutual had voted to pursue incidental take coverage for take resulting from both mechanical and pesticide related activities and to remain within the NBHCP.
- (d) A letter dated June 5, 2002 from Patrick Mitchell to Cay Goude of the USFWS, providing additional material to support the Water Agencies’ request for incidental take coverage for pesticide use.

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- (e) A letter dated October 8, 2002 from Wendy Anderson to Carol Shearly, correcting statements in Ms. Shearly's July 17, 2002 letter to the Water Agencies; which July 17, 2002 letter erroneously suggested that the Water Agencies had chosen to withdraw from the NBHCP. [The above five letters are incorporated herein by reference.]

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As illustrated above, since January 4, 2002, the Water Agencies have repeatedly reasserted their intention to remain within the NBHCP and for RD 1000 to remain as a co-lead agency. Nonetheless, the City and County have proceeded with the NBHCP, modifying text specific to the Water Agencies despite the Water Agencies' objections [see letter from P. Mitchell to B. Thomas and L. Combs dated February 4, 2002]. These modifications will be addressed in more detail, below.¹ These modifications, and the references to the Water Agencies' alleged decision to withdraw from the NBHCP process, must be modified to accurately reflect the Water Agencies' full participation in the NBHCP.

B. The NOA, the NBHCP, and the Draft EIR/EIS Misrepresent the USFWS' Authority to Provide the Water Agencies' Coverage for Incidental Take Resulting From Pesticide Use.

13-2

The NOA, the NBHCP, and the Draft EIR/EIS inaccurately state that the USFWS does not have the authority to provide coverage for incidental take resulting from pesticide use. [See, e.g., NBHCP at I-8 (stating that take coverage for pesticides and rodenticides is "prohibited or limited by the regional USFWS guidance policy (USFWS, *Inclusion of Pesticide and Herbicide Applications as a Covered Activity in and [sic] Endangered Species Act Section 10(a)(1)(B) Permit*, July 1998 ["July 1998 Region 2 Guidance Statement"]").

In fact, as explained in the Water Agencies' January 11, 2002 letter to you, the July 1998 Region 2 Guidance Statement does *not* limit the USFWS' authority to provide the Water Agencies coverage for pesticide and rodenticide take. The July 1998 Region 2 Guidance Statement states:

Effective immediately, pesticide and herbicide applications will not be considered for inclusion as a covered activity in future

¹ In addition, the NBHCP and the EIR/EIS fail to mention that the City is rejecting the Water Agencies from the NBHCP for the second time. [See NBHCP at I-21 to I-24]. In December of 1997, without the authorization of the Water Agencies the City restructured the NBHCP for the City's use only, leaving the Water Agencies to prepare a separate habitat conservation plan. In a letter dated December 1997, the Water Agencies identified fourteen problems with the City's version of the NBHCP. Seven of the fourteen items were substantive errors and reflected the City's failure to consult with, or respond to, RD 1000 and Natomas Mutual concerns. The City NBHCP was approved in late December 1997, ignoring the Water Agencies' comments.

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incidental take permits, *with the exception of those Habitat Conservation Plans (HCPs) that address this topic and that have already been submitted to the Fish and Wildlife Service with an official section 10(a)(1)(B) permit application.*

July 1998 Region 2 Guidance Statement (emphasis added).

The NBHCP was submitted to the USFWS, along with an official 10(a)(1)(B) permit application *in December of 1996*. As specified in a letter from Pat Mitchell to the California Department of Fish and Game ("CDFG") and USFWS, RD 1000 and Natomas Mutual proposed to use the November 1997 Natomas Basin Habitat Conservation Plan ("1997 NBHCP") as the basis for their application. [See NBHCP at I-22 (stating that on December 1997, the Water Agencies submitted their separate Habitat Conservation Plan, Implementation Agreement, Incidental Take Permit Application, and 2081 application to the Service and to the CDFG); letter from P. Mitchell to D. Zezulak and W. Lehman dated September 8, 1998 (stating that, "My clients propose to use the November 1997 Natomas Basin HCP approved for the City of Sacramento on December 31, 1997..."). The 1997 NBHCP includes RD 1000 and Natomas Mutual as Permittees (1997 NBHCP at IV-3,4), *and expressly includes herbicides, as well as fumigants for rodent control.* [See 1997 NBHCP at IV-15, 16]. Accordingly, a habitat conservation plan submitted prior to the date of the July 1998 Region 2 Guidance Statement includes coverage for RD 1000's and Natomas Mutual's use of pesticide use, which therefore should be grandfathered under the July 1998 Region 2 Guidance Statement.

Moreover, even if the 1998 Region 2 Guidance Statement applies to the Water Agencies request for coverage for pesticide take, the USFWS need not require that the Water Agencies provide more than the best scientific and commercial data available. The July 1998 Region 2 Guidance statement expressly provides that the USFWS may provide coverage for incidental take if an applicant "insists." [July 1998 Region 2 Guidance Statement]. Caselaw and the USFWS' regulations allow the USFWS to issue coverage based upon the best scientific and commercial data available. For instance, in *National Wildlife Federation v. Babbitt* (August 15, 2000), Judge Levy invalidated the USFWS' incidental take permits issued to the City of Sacramento pursuant to the 1997 NBHCP on the ground that the USFWS' issuance of the permits assumed the participation of entities that were not permittees. [See *National Wildlife Federation v. Babbitt* (2000) 128 F. Supp. 2d 1274, 1295]. Despite Judge Levy's invalidation of the permits on those grounds, Judge Levy upheld the USFWS' reliance upon the best scientific and commercial data, even if that data did not provide the USFWS with absolute certainty as to the 1997 NBHCP's effectiveness. Judge Levy wrote, "[t]he Service is *obligated by regulation* to 'develop its biological opinion based

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upon the best scientific and commercial data available regardless of the 'sufficiency' of that data." [citing 51 Fed. Reg. 19926, 19951 (final rulemaking with respect to 50 C.F.R. § 402)]. [*National Wildlife Federation*, 128 F Supp. 2d at 1300]. Moreover, Judge Levy specifically stated that it would not be reasonable to require detailed quantitative information of impacts upon the Giant Garter Snake, in particular.

Plaintiffs contention appears to be that the ESA required detailed quantitative information as to each of these factors [the Giant Garter Snake's baseline conditions and the effects of the HCP] prior to the issuance of a permit, but plaintiffs cite no authority for such a requirement, and such a requirement would not be reasonable. *For the Giant Garter Snake, for example, a reclusive species, it would be extraordinarily difficult to count the number of individual snakes, determine their habitat and habitat, and reach conclusions as to their genetic makeup and variability.* Instead the 1997 Biological Opinion makes certain assumptions about the species based upon potential loss of habitat, which is a reasonable approach.

National Wildlife Federation, 128 F. Supp. 2d at 1296-1297
(emphases added)

13-2 Accordingly, the USFWS' position that it does not have the authority to issue the Water Agencies coverage for pesticide take holds the Water Agencies' pesticide use to a higher standard than all other activities covered by the NBHCP and thereby exceeds the USFWS' authority under the Endangered Species Act ("ESA") and caselaw. After a review of the existing scientific literature, the Water Agencies submitted to the USFWS a summary of all currently available scientific literature addressing the Water Agencies pesticide use's impacts upon the Giant Garter snake. [See June 5, 2002 letter from P. Mitchell to C. Goude]. This submission provided data that *exceeded* the level of detail for all other impacts analysis within the NBHCP. This submission has received no formal response from the USFWS despite the fact that it was submitted *more than six months ago*. Consequently, the NOA, the NBHCP, and the EIR/EIS must be modified to accurately reflect the USFWS' authority to issue incidental take coverage for pesticide use.

C. **The NBHCP and the Draft EIR/EIS Misrepresent the "Management Plans."**

13-3 The references in the NBHCP and the EIR/EIS to the Water Agencies' submission of the management plans to the Natomas Basin Conservancy's ("NBC") Technical Advisory Committee ("TAC") for review and approval must be deleted. [See, e.g., NBHCP at 1-35 (stating that the Water Agencies will

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present vegetation management plans to the NBHCP TAC on a three year basis for review and approval). *See also* V-27, V-31]. The Water Agencies never suggested that management plans be required, and, in fact, expressly rejected management plans when they were suggested by the USFWS for the first time in Spring of 2002. The management plans defeat the purpose of the Water Agencies' application for incidental take coverage and provide the Water Agencies with no certainty that their operations and maintenance activities will be covered, as the plans require the Water Agencies to obtain approval from the TAC every three years for the Water Agencies' operations and maintenance activities. RD 1000 will not cede its authority as a governmental entity to a non-elected TAC entity. All references to the management plans must be deleted.

D. The City, County, and USFWS Must Make The Changes Requested Above.

13-4

The NBHCP and the Draft EIR/EIS must be revised per the modifications requested above in Sections B and C. If, at a minimum the requirement for Management Plans is not deleted as discussed in Section C above, the NBHCP will not be usable by the Water Agencies.

There is no evidence that the City, Sutter, and the USFWS' mitigation strategy would be effective without the Water Agencies' systems and participation in the NBHCP. Although the NBHCP and Draft EIR/EIS purport to analyze the effectiveness of each Permittee's mitigation strategy independent of any other Permittee's mitigation strategy, the NBHCP and the Draft EIR/EIS never analyze whether the mitigation strategy would be effective without the Water Agencies' system of ditches and canals. [NBHCP at I-31 (explaining what would happen if one of the land use agencies were not to participate in the NBHCP but providing no analysis of what would happen if the Water Agencies were not to participate in the NBHCP)].

Although neither the NBHCP nor the Draft EIR/EIS analyze whether the NBHCP would be effective without the Water Agencies' participation, the NBHCP depends upon the Water Agencies' ditches and canals, and upon Natomas Mutual's water, to ensure that sufficient water is in the mitigation areas to support wetland habitat for the Giant Garter Snake and other wetland species, and to ensure connectivity among the wetland mitigation lands. [See NBHCP at IV-30 to 32; Draft EIR/EIS at 2-19 (stating that "[t]he combination of primary drainage channels (drainage channels anticipated to remain through the term of the ITPs), secondary drainage channels (that tend to remain unless affected by urban development), and irrigation channels provide connectivity between the existing habitat reserves"). *See also*, Draft EIR/EIS at 2-20, 2-21, 2-25, and 2-37)]. In fact, the NBHCP states that the NBC will consider converting wetland mitigation sites to upland mitigation sites if the NBC does not locate adequate alternative

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I3-4

water supplies to those of Natomas Mutual. [See NBHCP at IV-32]. Thus, despite Judge Levy's admonitions, the City, Sutter County, and the USFWS continue to rely upon entities that are not clearly participants within the NBHCP for the City's, Sutter County's, and the USFWS' mitigation strategy. [See *National Wildlife Federation*, 128 F. Supp. 2d at 1299, (stating that, "the record does not suggest that the Service considered whether the monitoring and adaptive management provisions of the regional Plan could be effective if the City is the sole permittee.")]

II. CONCLUSION

The Water Agencies look forward to working with the City, Sutter County, and the USFWS to resolve the concerns expressed herein and to process the requested modifications. Please call me if you have any questions.

Sincerely,

DOWNEY, BRAND, SEYMOUR & ROHWER LLP


Patrick Mitchell

cc: James N. Clifton (RD 1000)
Peter J. Hughes (Natomas Mutual)
John Mattox (CDFG)
Bill Carnazzo (City)
Carol Shearly (City)
Larry Combs (Sutter County)

Appendix A

Specific Comments

- I3-5 [1. NBHCP page I-36. The NBHCP's explanation as to which "dredging" activities are not covered by the NBHCP is confusing and should be rewritten as follows: "Dredging, Except as necessary provided for the Water Agencies' channel maintenance for the Water Agencies' operations and maintenance activities, dredging is not a Covered Activity under the NBHCP and the NBHCP Permits."
- I3-6 [2. NBHCP page II-5. The definition of "Ponds/West Areas" includes "[w]etland/marsh areas including Pritchard's Lake and several isolated locations throughout the Natomas Basin." In fact, there is no Pritchard's Lake. Is this definition intended to refer to the North Drain or the P-6 Canal?
- I3-7 [3. NBHCP page II-6. What was the assumption regarding the width of the Class I canals?
- I3-8 [4. NBHCP page III-4. The first full paragraph on page III-4 stated that, "[t]he residual rice straw in the fields after harvesting is typically burned. This is incorrect. The burning of rice straw has largely been replaced by the tilling and/or flooding of rice straw.
- I3-9 [5. NBHCP page III-7 and III-8. These pages provide three different numbers for the acreage. Page III-7 identifies 1,512 acres as belonging to the "Airport" land use class, while Page III-8 identifies there being 2,800 acres under use by the airport and, alternatively, the airport facilities including 1,515 acres.
- I3-10 [7. Draft EIR/EIS page 2-43, Section 2.4.6.3. The last sentence of the first paragraph of Section 2.4.6.3 should be modified as follows: "RD 1000 and Natomas Mutual carry out these activities to provide agricultural water to irrigated lands, address public health and safety concerns, and to minimize damage to planted crops and other property from flooding."
- I3-11 [8. Draft EIR/EIS page 2-44, Section 2.4.6.3. The Water Agencies' request for law enforcement assistance paid for by land developers has been deleted and needs to be added.
- I3-12 [9. Draft EIR/EIS page 3-8, Section 3.3.3. The following sentence should be rewritten, "Irrigation water also includes return flows from rice fields, which is conveyed to downstream users through the RD-1000 drainage system. held within a "closed system" that re-uses the water within the basin without release to the Sacramento River. The closed system is maintained from April through August."

- I3-13 10. Draft EIR/EIS page 3-8, Section 3.3.3. The following sentence should be rewritten. “Following the development of the federal Central Valley Project (CVP), Natomas Mutual entered into a contract with the bureau of Reclamation to establish water delivery requirements in a river system now substantially affected by the CVP. This “settlement contract” quantifies base supply diversions of 98,200 acre-feet per year and provides up to 22,000 acre-feet of CVP water per year. The Natomas farming community began operations after installation of the river levees in 1916-1919. The landowners secured senior water rights. Nearly thirty years later, the Central Valley Project (CVP) was built and in 1946 Natomas Mutual entered into a contract with the Bureau of Reclamation for certain water supplies under a settlement contract. This settlement contract does not replace the amounts of water Natomas Mutual is entitled to divert under its pre-existing rights, licenses, and permits.”
- I3-14 11. Draft EIR/EIS page 3-8, Section 3.3.3. The second sentence in the second paragraph of Section 3.3.3 should be rewritten as follows. “Although the average historical diversions from these five plants is approximately 80,000 acre-feet per year, Natomas Mutual delivers approximately 110,000 acre-feet on average. The “closed system” enables Natomas Mutual to re-use water, effectively reducing its diversions by an average of 30,000 acre feet per year. The State Water Resources Control Board has ruled that Natomas Mutual should be credited for that effort.”
- I3-15 12. Draft EIR/EIS page 3-9. Between the bulleted paragraph and the first full paragraph, insert, “Although the pumping facility descriptions above list localized areas for each plant, the closed system is so interconnected that it actually re-circulates water throughout the entire system.”
- I3-16 13. Draft EIR/EIS page 3-9. The first sentence of the first full paragraph should be revised as follows, “Recent improvements in the drainwater recirculation system have contributed to a substantial improvement in water management by providing a more flexible matching of supply and demand throughout Natomas Mutual’s service area. Conservation efforts begun in 1986 have contributed to long-term substantial improvements in the drain water system. The recirculation improvements have provided a more flexible matching of supply and demand and have reduced the impacts on the Sacramento River.”
- I3-17 14. Draft EIR/EIS page 3-9. The following sentence should be deleted from the third paragraph. “Natomas Mutual owns two small groundwater wells, producing less than 200 acre-feet per year to supplement surface water supplies.”
- I3-18 15. Draft EIR/EIS page 3-11. The third sentence of the first full paragraph should be modified as follows: “The drainage pattern of the Basin has been altered so that during the Spring and Summer months, agricultural

I3-18

runoff is pumped into the RD 1000 system of drains and recirculated until August. At that point, runoff is pumped into the RD 1000 system of drains and into the Sacramento River at several places."

I3-19

16. Draft EIR/EIS page 4-9. The second bulleted paragraph should be modified as follows: "Natomas Mutual pumping plant consolidation. Natomas Mutual operates three pumping plants along the Sacramento River, and is currently studying the potential for consolidating these pumping stations into one unit and installing state-of-the-art fish screens. This project would likely include additional canal improvements along the western boundary of the Natomas Basin. Detailed engineering plans and environmental review of this project have not been initiated at this time. and two pumping plants in the Cross Canal. Natomas has studied the consolidation of all five pumping plants into only two diversions from the Sacramento River, complete with state-of-the-art positive fish barriers. The consolidation project is beginning the final design stage and construction is slated for 2003-2005. CEQA compliance will be completed by 2003. The project will create improvements to habitat in the Cross Canal and some sections of the internal delivery system will also be modified to improve habitat and connectivity."

I3-20

17. Currently, the NBHCP and the Draft EIR/EIS are inconsistent as to the status of the Water Agencies with respect to the NBHCP. The Draft EIR/EIS equates "Permittees" and "Applicants." [See, e.g., Draft EIR/EIS at I-1 (stating that, "[t]he applicants seeking ITPs for covered activities within the Natomas Basin are referred to as permittees (see Section 2.1). However, the NBHCP identifies the Water Agencies as "Permittees" but not "Applicants." [NBHCP at I-24 (stating that, "[t]he Water Agencies continue to be represented in the HCP as a Permittee in the event they should choose at a future date to apply for Incidental Take Permits for the activities (excluding pesticides) authorized in the HCP and evaluated in the EIR/EIS.") See also NBHCP at I-33 (stating that "[t]he City of Sacramento, Sutter County and RD 1000 and the USFWS jointly will prepare a combined environmental impact report (EIR) and environmental impact statement (EIS) prior to approval of the NBHCP and ITPs.")].

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FAX

To: Field Supervisor
Fish and Wildlife Service, Sacramento Fish and Wildlife Office,
2800 Cottage Way, W-2805, Sacramento, Ca

Vicki

Content: Comment on draft NBHCP

From: Kim Gagnon, Senior Wildlife Management student at Humboldt State University
kimagagnon@hotmail.com

Pages: 1-22

12/05/02 12:10:00 P. 0002

Comment on the 2002 draft Natomas Habitat Conservation Plan

By: Kim Gagnon, Current Senior at Humboldt State University, Dept. of Wildlife Management, 944 F. St., Arcata, CA, 95521. kimagagnon@hotmail.com

I have created a list below, sectioned A-T, of different points I would like to make about the NBHCP, concerning Swainson's hawks (*Buteo swainsoni*). Each section is filled with concerns that I have about the draft NBHCP and with requests that I have for the writing of the final NBHCP. I hope that my concerns are considered and addressed when finalizing the NBHCP. Thank you so much for your time spent in reading my comments.

A)

NBHCP fails to address if and when an additional pre-construction survey will be done if the first survey happens to occur in between early September and early March, which is when Swainson's hawks are absent from the area due to migration.

NBHCP, V-1:

"Not less than 30 days or more than 6 months prior to commencement of construction activities on specific Authorized Development sites in the NBHCP area, a pre-construction survey of the site shall be conducted to determine the status and presence of, and likely impacts to, all Covered Species on the site."

I4-1

In the Central Valley, Swainson's hawks arrive in late Feb and early March, 4-6 weeks earlier than at sites < 350 km away in NE CA. These hawks arrive earlier most likely because they migrate shorter distances from wintering sites in central Mexico (Woodbridge 1998). They depart the Central Valley in early Sept. and some depart early in Oct. Individuals then are absent from breeding grounds for 5-6 months in Central CA (England et al. 1997). Since 1997 it has been recorded that 30 individuals have been overwintering in the Central Valley (England et al. 1997) but for the most part, Swainson's hawks are complete migrants, breeding in North America and wintering in Mexico and S. America. Except for those rare overwintering birds, they are not a permanent resident of the Central Valley (Biosystems Analysis 1989, CDFG 1993, England et al. 1997, Woodbridge 1998).

This 5-6 months absence should be kept in mind when doing the pre-construction surveys that "will determine the status and presence of, and likely impacts to, all covered species on the site." If the pre-construction surveys are done anytime in between early September and early March, it is likely that the surveyors will not detect Swainson's Hawks that might otherwise be present if it were breeding season (late Feb and early March-early Sept./ early Oct). The land to be developed might be suitable and important breeding or foraging habitat for Swainson's hawks, yet the hawks will not be present to prove the importance of the land if the pre-construction surveys are done when the hawks are migrating or on their wintering grounds down south. To ensure that Swainson's hawks will be fairly detected before development is approved or not, the pre-construction surveys must be done between early March and early September. More than one pre-construction survey may have to occur in different seasons, depending on the life histories of the other Covered Species in the area.

B)

I4-2

NBHCP fails to require high enough replaced: developed land mitigation ratios for areas within 1/2 mile of an active nest. Since the noises from development one half mile away may be loud enough to disrupt the hawks, I suggest that biologists should monitor all active Swainson's hawks nests that are within 1/4 - 1 mile of development to find out the hawks' reactions to development.

NBHCP, V-9:

"If breeding Swainson's hawks (i.e. exhibiting nest building or nesting behavior) are identified, no new disturbances (e.g. heavy equipment operation associated with construction) will occur within ½ mile of an active nest between March 15 and September 15, or until a qualified biologist, with concurrence by CDFG, has determined that young have fledged or that the nest is no longer occupied."

This means that development can occur within a half-mile of Swainson's hawks' nests, as long as construction, etc. is held off while the hawks are present. I recommend that the land developed within this ½ mile must be replaced with *greater* than 0.5 acre for every acre developed (see H below).

Swainson's Hawks are generally tolerant of regular, ongoing human activities around nest sites in agricultural and urban landscapes (England et al. 1995, Estep 1989). However, changes in activity regime (construction in previously open areas, human intrusion at nest site) frequently causes nest abandonment, particularly during the pre-nesting, egg-laying, and incubation stages of the reproductive cycle (Estep 1989, Woodbridge 1998). New disturbances, therefore, frequently cause chick mortality, which results in permanent loss for the population because Swainson's hawks have one brood a year and apparently do not lay replacement clutches (BLM 2002, Woodbridge 1998).

How did ½ mile from the nest get chosen as the determining distance for which development will be allowed beyond? If disturbances are exceedingly loud or extensive the hawks will be disrupted (England 2002). There is no evidence provided or studies mentioned in the NBHCP that have proved that large amounts of noise and disturbance a half mile away will not cause nest abandonment. It seems as though loud machinery and humans working one half mile away would still be loud and disruptive to nesting Swainson's hawks. I recommend that the NBHCP provides this evidence needed. If that information is not provided, I recommend that upon the first day of development until the Swainson's hawks leave their nests, biologists tri-weekly (or more) monitor all nests that are 0.5-1 mile away from development. If nest abandonment occurs for example at a nest 0.6 miles away from development, all development that is in the Basin that is within 0.6 miles of any active nest must be immediately stopped until the birds have left to migrate south. Biologists should also monitor the behavior and success of all the Swainson's hawks in those nest trees. A dramatic change in behavior or chick mortality is probably the result of development nearby and if this becomes a pattern with more than 1 nest within 0.5-1 mile of development, then development should also be stopped until the hawks migrate south.

14-2

C)

The NBHCP fails to define what an impacted nesting tree is and the NBHCP is not convincing enough in justifying why a nesting tree should be allowed to be impacted by development. The proposed measures (planting 15 sapling trees in a preserve) to be taken after the impaction of a nesting tree also do not convince me that suitable habitat will be provided soon enough and well enough. Therefore, no nesting trees should be impacted. Cutting down trees should be seen as a direct take of the bird and it's 1-4 chicks that it produces every year (England et al. 1997).

14-3

NBHCP, V-10:

"The NBHCP will require 15 sapling trees to be planted within the habitat reserves for every Swainson's hawk nesting tree anticipated to be impacted by Authorized Development."

First of all, what is an impacted nesting tree? Is this just a nesting tree that will be cut for Authorized Development or is it also a nesting tree that will remain standing within a certain area of development?

12/05/02 02:10:00 P. 1004

This definition needs to be made clear in the final draft of the NBHCP. I suggest that it be defined as both of the definitions that I just mentioned. The "certain area" should equal 1 mile from the nest. So for every nest tree removed and for every nest tree that is within 1 mile of development, 15 sapling trees will be required to be planted within the habitat preserves. However, as I stated before, ideally no nesting trees should be cut.

I was wondering when I read this statement how long it takes for these tree species to grow and my question was soon answered: "nesting habitat will be available quickly (5-10 years in the case of cottonwoods and willows), and in the long term (i.e., valley oaks, black walnut and sycamores)." Five years is still a long time. The birds only live for an average of 7 or 8 years (RIM 2002, Woodbridge et al. 1995). And valley oaks, black walnut and sycamore trees are very slow growing trees. Valley oaks won't be fully mature until 40 years and black walnut and sycamore trees take 20-30 years to mature (Baughman and Vogt 1996, Deukmejian et al. 1998) What are the hawks supposed to do in the meantime? They will have to crowd into the fewer trees that are still standing. It should be noted that Swainson's hawks also typically nest in willows, black locusts, box elders, junipers, and aspens (England et al. 1997). If any of these trees are present in the Basin project area, then they should also be planted along with the other tree species already mentioned.

I don't think that planting 15 trees someplace else is necessarily going to solve the problem of developing an area where an active nesting tree is that was obviously a good spot for the Swainson's hawk to nest and forage nearby. The entire matrix around the nesting tree is important. The hawk chose that area out of all the other areas in the Basin, yet developers will soon be able to take away that preferred habitat. And what if this new area where the trees are planted is not nearly as suitable in the eyes of a Swainson's hawk as biologists thought it would be? It might have to settle for someplace else which may not provide it with its needs for survival. Also, individuals frequently use the same nest or nest tree in successive breeding seasons or move only short distances within the same territory (England et al. 1997, Woodbridge 1998). So most likely, the birds will return to the nesting tree that is no longer there because of development. They might experience lag time in figuring out what just happened, where their nest went, and where to go next, throwing their breeding cycle off. Or if they try to nest within the same territory (in the developing area) because this is where they've always nested, the site within the developing area will not be optimal habitat. Therefore, no nesting trees should be cut and no development should occur within a mile of nest trees.

I4-3

D)

The NBHCP fails to define "unavoidable." This term should be defined. Once again, for reasons already provided, nesting trees should not be taken even if it is "unavoidable."

NBHCP, V-9:

"Where disturbance of a Swainson's hawk nest cannot be avoided, such disturbance shall be temporarily avoided (i.e., defer construction activities until after the nesting season) and then, if unavoidable, the nest tree may be destroyed during the nonnesting season. For purposes of this provision the Swainson's hawk nesting season is defined as March 15 to September 15. If a nest tree (any tree that has an active nest in the year the impact is to occur) must be removed, tree removal shall only occur between September 15 and February 1."

I4-4

I don't think it is right to cut down any nesting trees. However, if nesting trees are going to be removed, there should definitely be a limit as to *how many* nesting trees can be removed in the Basin. I don't find any sort of limit mentioned anywhere. And what exactly defines "unavoidable"? How and when is cutting down a tree unavoidable?

E)

I4-5

No development should be allowed in the Swainson's Hawk Zone, unlike V-8 of the NBHCP suggests.

NBHCP, D-7:

"Swainson's Hawk Zone: This zone is defined as the lands which are not currently developed (excluding the 250 acres of land designated "Urban" on the City of Sacramento General Plan and the North Natomas Community Plan located within the City of Sacramento) and which are located within the Natomas Basin and within one mile east of the Sacramento River and extending from the Natomas Cross Canal on the north and Interstate 80 on the south. See also Figure 13 of the NBHCP."

Note: 47/60 nests are within this Zone and 3 nests are right beside the Eastern boundary of the Zone.

NBHCP, V-8:

"A Permit area of 252 acres will be allowed within the Swainson's hawk zone to grant development. Of these 252 acres, 80 acres will be a buffer along the Fisherman's Lake."

If this is a Swainson's Hawk Zone, why is development being allowed in the future that could possibly displace hawks from their Zone? I don't think any development should be allowed in the Swainson's Hawk Zone! After development begins and continues throughout the Basin, the hawks may become mostly limited to this Zone. Why develop the one "safe" haven they have left?

Habit loss due to residential and commercial development is currently the most significant threat to the remaining population of Swainson's hawks (CDFG 1993) and only the Central Valley and Modoc Plateau still support more than a few isolated pairs (England 2002). Forty-seven out of 60 nests occur in the Zone and 3 more occur right beside the Eastern Zone (Figure 13, NBHCP). Due to the high density of current nest sites within the Zone, the potential for additional nest sites, the high value of riparian areas for nesting sites (CDFG 1993, England 2002, England et al. 1997, Woodbridge 1998), the importance of the Central Valley in being one of the last places for Swainson's hawk populations to live, and the significant threat that development brings to the population of Swainson's hawks, *no development* should be allowed within the zone or anywhere in the Basin that is within 1 mile of an active nest. Development in these areas will result in permanent losses of nesting habitat, and the cumulative effects of habitat fragmentation caused by the proposed 252 acres of development will result in further losses.

Riparian zones are crucial to protect for Swainson's hawks in order to provide suitable nesting habitat. The more area within that Zone that is available, the better off the hawks will be. Also development in the area may drive away some hawks from one of the only available riparian zones in the area.

Here is some information concerning the importance of riparian habitat to Swainson's hawks from various sources:

"Although not an obligate riparian species, the availability of nesting habitat is strongly tied to the distribution of riparian forest or riparian trees in much of the Central Valley portion of the species' range in California (Woodbridge 1998).

"Although Swainson's hawks will nest in trees located in upland areas, their strong association with riparian forests suggests that protection and restoration of these habitats may provide nesting habitat superior to other sources of trees such as roadsides and field margins" (Woodbridge 1998).

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"[They] typically nest in a solitary tree, bush, small grove, or line of trees along a stream course" (England et al. 1997).

"Over 85% of documented Swainson's hawks nest trees in the Central Valley have been found in riparian systems, making this habitat type critically important" (CDFG 1993).

I4-5

Due to the high density of current nest sites within the Zone, the potential for additional nest sites, the high value of riparian areas for nesting sites, the importance of the Central Valley in being one of the last places for Swainson's hawk populations to live, and the significant threat that development brings to the population of Swainson's hawks, *no development* should be allowed within the Zone or anywhere in the Basin that is within 1 mile of an active nest. Development in these areas will result in permanent losses of nesting habitat, and the cumulative effects of habitat fragmentation caused by the proposed 252 acres of development will result in further losses.

F)

If development does occur in the Swainson's Hawk Zone, absolutely no more development should be allowed beyond the 252 acres. This is never actually stated in the NBHCP.

NBHCP, V8:

"Should either the City or the County seek to expand NBHCP coverage for development within the Swainson's Hawk Zone beyond that described above, granting of such coverage would require an amendment to the NBHCP and permits and would be subject to review and approval by the USFWS and the CDFG in accordance with all applicable statutory and regulatory requirements".

I4-6

So basically, the writers of the HCP do not clearly say that there will be no more development in the Swainson's Hawk Zone beyond the 252 acres. Instead, it says that *if* the CDFG and USFWS approve, then more development *can* occur. Isn't 252 acres of development enough? If the 252 acres of development goes ahead, I think that absolutely no more development should be allowed in the Swainson's Hawk Zone. Their original habitat has been and will continue to be encroached upon enough.

NBHCP, IV-21:

"The NBHCP's primary strategies to mitigate impacts to the Swainson's Hawk Zone caused by Authorized Development is to *avoid development* in the Swainson's Hawk Zone...."

This seems like a contradictory statement to me. Two-hundred and fifty two acres are planned to be developed.

G)

I4-7

Present and future research is needed in the Swainson's Hawk Zone.

Whether or not development occurs, research should immediately occur in the Swainson's Hawk Zone to establish population trends, new and historic nest site areas, hatching success, distance between nests, territoriality, interactions with conspecifics, etc. Since hawks may be displaced from their original nests outside the Zone and retreat to the Zone, density of hawks may increase in the Zone. Research studies done in the Zone before, during, and continuously after development will show if there is an increased density in the area, as well as the response of hawks to the higher density in terms of home range size,

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territory size, site fidelity, hatchling/fledging success, survival/mortality rates, etc. Are the hawks concentrating in the Zone, and if so how are they dealing with it? If the home range/territory size is smaller than expected, are they still hatching and fledging as many chicks as before the density increased or compared to the average amount of chicks hatched from hawks in the area before construction began?

These types of questions should be answered from continuous monitoring of the population of Swainson's hawks before, during, and post development. Research is a valuable tool and since the highest densities of Swainson's hawks occur in the Zone, this is a great area to research the biology of the hawks and to monitor population trends and behavior responses to development occurring in the Basin. Research should begin as soon as the NBHCP is passed and continue at least 5 years after development ends and preferably continue indeterminately as long as funding is available. This post development research will help to show how the population of hawks in the Basin recovered after development. If the hawk populations do poorly and are obviously threatened, then more riparian or other suitable nesting habitat should be required to be provided that has suitable foraging areas nearby, since placement of nests is dependent on proximity to foraging habitats that are entirely different from the vegetation selected for nest sites. Suitable foraging habitats in the Central Valley are generally treeless agriculture lands of the right crop, with unsuitable foraging areas being orchards, vineyards, irrigated pastures, grain, corn, cotton, and rice fields (CDFG 1993, SWHA 2002, Woodbridge 1998). Monitoring Swainson's hawk populations and behavior should occur in the Zone and if possible in the newly reserved areas.

I4-7

H)

The 0.5:1 mitigation ratio of replaced to developed land in the NBHCP is not high enough!! Higher mitigation ratios are being proposed in other HCP's in the Central Valley that also have Swainson's hawks and preserving only half of the land that will be developed will most likely result in mortality of Swainson's hawks as suitable habitat continues to be developed.

I4-8

NBHCP, VI-5:

"Mitigation required of Authorized Development projects will include the collection and use of mitigation fees, and in some cases acceptance of land dedications, to set aside and manage 0.5 acres of habitat mitigation land for each 1.0 gross acre of development that occurs in the Basin."

Many other proposed HCP's that include Swainson's hawks have much higher mitigation ratios. Here are a few:

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SIMSCP), which includes measures to avoid and minimize incidental take of the covered species [including SWHA], emphasizing project design modifications to protect both habitats and species. It classifies the county's land uses into four general categories: Natural Lands, Agriculture Lands, Multi-Purpose Open Space, and Urban Lands. Habitat preservation and/or creation will be acquired to mitigate for loss of natural and agricultural lands. Up to 71,837 acres of Natural and Agriculture Lands could be converted under the plan, requiring approximately 100,241 acres of habitat preservation and/or creation. Approximately 90% of the preservation will be achieved through the use of conservation easements with the remaining lands purchased outright...an additional 600 acres will be preserved to compensate for potential impacts to "covered" species that stray from preserve lands onto neighboring lands." (USFWS 1999)

100,241 acres+ 600 acres= 100,841 acres of preservation or creation / 71,837 acres of conversion = 1.4 acres of replaced land for every 1 acre of land conversion (avg. for total project)

More detailed look at the SIMSCP mitigation ratios:

1:1-acre mitigation ratio, Preserve Land acquisition: Ag Habitat Land converted from Open Space use

3:1-acre mitigation ratio, Preserve Land acquisition: Natural land

3:1-acre mitigation ratio, Preserve Land acquisition: Natural Land converted from Open Space (SJCOG 2000)

Yolo County Habitat Conservation Plan:

"The total acreage of all mitigation lands must equal or exceed 100% of the total acreage of the development on an annual basis (1-to-1 ratio)" (USFWS and CDFG 1996).

Back to the NBHCP:

"Habitat Conservation Planning efforts (Natomas Basin HCP is an example) have been *based* primarily on the draft CDFG mitigation guidelines. However, these guidelines have been thoroughly reviewed by the Swainson's Hawk Technical Advisory Committee (SWTAC), an independent group of agency and private biologists with experience with Swainson's hawks. The SWTAC has pointed out several flaws in the guidelines, and has judged them to be *inadequate* to conserve or recover the species in the Central Valley. SWTAC concludes that the CDFG guidelines will result in a loss of foraging habitat throughout the remaining area populated by the species, and does not consider the potential habitat needs of additional territories with population recovery. (Woodbridge 1998).

Under CDFG draft mitigation guidelines, losses of suitable foraging habitats within 10 miles of a Swainson's hawk nest site must be mitigated by protection or creation of equally suitable foraging habitat elsewhere within the territory's 10-mile radius. The ratio of replaced/loss habitat changes from 1:1 within 1 mile of a nest, to 0.5:1 over 5 miles from the nest. (I was unable to find the guidelines for the mitigation ratio from 1-5 miles of a nest). These ratios are inadequate according to SWTAC.

I disagree with these ratios as well, which are similar to the ratios suggested in the draft NBHCP that all developed land no matter where the location, will be replaced with only half the amount of land that will be developed. Basically, half of the land that was once available to these birds will be gone under this NBHCP draft plan. The *amount* and intensity of land uses within the large home ranges of Swainson's hawks are the primary factors determining habitat quality (largely a function of prey abundance and availability) for a given territory or subpopulation (Estep 1989, Woodbridge 1998). Swainson's hawks travel long distances (up to 29km=18 miles) from their nest sites to forage (Estep 1989, England et al, 1997). In agricultural habitats, these foraging distances are closely associated with seasonal maturity of crop. The largest distance traveled occurs when crops are mature, making it harder for Swainson's hawks to find prey (Bechard 1982, Estep 1989, Woodbridge 1998). Habitat use by breeding birds occurs at the landscape scale, rather than the microsite scale, as may be the case for many nesting songbirds. Placements of nests by Swainson's hawks are dependent on proximity to foraging habitats that are entirely different from the vegetation selected for nest sites. Loss of patches of high-quality foraging habitat to development or conversion to high-intensity crop types adjacent to riparian forest or other patches of trees may eliminate territories (Woodbridge 1998). Lastly, in Central California, urban nesting birds were farther from suitable foraging habitat than were rural nests, and they fledged fewer young (England et al. 1995).

Therefore, it is important to maintain the *same amount* of suitable foraging habitat *within* 10 miles of the active nest that will be developed because: suitable habitat available to Swainson's hawks needs to be large (at the landscape level), proximity to foraging habitats is important to Swainson's hawks' success,

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these hawks will travel 10 miles or more (up to 18 miles) to forage, loss of foraging habitat may eliminate territories, and more distance from suitable foraging habitats results in fewer fledging young.

I agree with the CDFG draft mitigation guidelines when they suggest that losses of suitable foraging habitats within 10 miles of a nest site must result in creation or protection of equally suitable foraging habitat elsewhere within the territory's 10-mile radius. Notice however that this CDFG statement I agree with does not mention the amount of area to be protected. I agree with the SWTAC in judging the CDFG's replaced: loss mitigation ratios (1:1 within 1 mile of a nest, to 0.5:1 over 5 miles from the nest) to be inadequate to conserve or recover Swainson's hawks in the Central Valley. I recommend that if development is from 1 to 10 miles from an active nest, preserve land should be within the 10-mile radius and mitigation ratios for the NBHCP should be equal to or greater than mitigation ratios recommended by the Yolo and San Joaquin HCP's, which range from 1:1 to 3:1.

The NBHCP fails to address loss of habitat within the Swainson's Hawk Zone along the Sacramento River when development occurs. The current NBHCP proposal includes development of 252 acres within the Zone. As I already previously stated in section E, *no development* should be allowed within the Zone. Development in these areas will result in permanent losses of nesting habitat, and the cumulative effects of habitat fragmentation caused by the proposed 252 acres of development will result in further losses.

I recommend that any proposed development within the Zone or within 1 mile of any active nest in the Basin, if allowed by future drafts of the NBHCP, must exceed or equal a mitigation ratio of 3:1 (as proposed by San Joaquin HCP's, preserving 3 acres for every acre of development on natural lands) and must be replaced with riparian habitat, the preferred area for nesting sites.

In conclusion, I recommend that *no development* occur in the Swainson's Hawk Zone. However if this recommendation is not carried out, I recommend for every acre of development that occurs within the Zone *and* for every acre of development that occurs anywhere in the Basin that is within 1 mile of an active nest, that 3 acres or more of the same habitat type be preserved. For example, if 250 acres of riparian habitat is developed within the Zone, 750 acres of riparian habitat must be preserved outside of the Zone (since the Zone is already preserved). If this ratio is still not approved, I strongly recommend that *at least* a 1:1 mitigation ratio be implemented. Anything less than that is completely unacceptable, giving the importance of nest site areas. To maintain foraging habitat, I recommend that a replaced: developed mitigation ratio ranging from 1:1 to 3:1 will be applied for any land that is developed from 1 to 10 miles away from an active nest and that this preserved land is within the 10 mile radius zone from the active nest. The NBHCP mitigation ratio is not large enough!

I4-8

I)

As of now, no riparian habitat has been preserved since the first NBHCP in 1997 (Roberts pers. comm).

So far the Swainson's Hawk Zone will be the only preserved riparian area for Swainson's hawks.

I4-9

I suggest that at least one chunk of 400 acres minimum of riparian land be preserved outside of the Zone, once mitigation procedures proceed with development. The Fisherman Lake area would be a great place to set up a preserve. This is described in more detail later (see section S).

J)

I4-10

I have 2 concerns about taking away "less suitable" habitats and creating more "suitable" habitats at unequal ratios (25% upland habitat, 25% managed marsh, 50% rice production). The first is, what may be suitable to one species may not be suitable to another species. My second concern is the amount and percentage of each habitat that should be preserved. At least 50% and preferably 100% of the amount of each habitat types that exist now should be preserved in the future (whether it be in or outside the project area), as soon as possible and development should happen slowly. All habitat types that exist now should also exist after development. Monitoring of wildlife populations should occur throughout the project area to determine the reaction of wildlife to development.

NBHCP, IV-6:

"Much of the land to be developed after issuance of the NBHCP Permits is either of limited value as habitat or serves as habitat to a limited number of the Covered Species. In contrast, TNBC reserves will be enhanced and managed to provide a greater diversity of habitat that will serve a larger number of Covered Species. Thus, the reserves to be created through habitat management will offer greater opportunities for species survival by providing a refuge from persistent mechanical or in some cases chemical disturbance often associated with common agricultural practices."

NBHCP, IV-13:

"The NBHCP provides for a general division of land uses within TNBC reserves as follows: 25% managed marsh; 50% rice production; and, 25% upland habitat."

I have 2 concerns about taking away "less suitable" habitats and creating more "suitable" habitats at unequal ratios (25% upland habitat, 25% managed marsh, 50% rice production). The first is, what may be suitable to one species (say Swainson's hawk) may not be suitable to another species (say a willet). This is obviously common sense, but my hope is that there will indeed be a variety of habitat types preserved. The habitat types being: open water, freshwater marsh and margins of open water, riparian scrub-shrub, valley riparian forest, valley oak woodland, grassland/savanna, grassland, levee sides and old field. In order to maintain flora and wildlife diversity it is imperative that all these types of habitats are preserved because although some species occur in more than one habitat, there are some species that are unique to one habitat type.

Species occurring in only one habitat according to II-43-46 of the NBHCP:

Open water (including flooded rice fields)

Pied-billed grebe, common golden-eye, whistling swan, cinnamon teal, bald eagle, mallard, American coot, forster's tern, snow goose, American wigeon, double-crested cormorant, pintail, ruddy duck, CA gull, Ross' goose, Kingfisher, Western pond turtle

Freshwater marsh and margins of open water

Marsh wren, yellowthroat, black-crowned night heron, green heron, killdeer, belted kingfisher, yellow-headed blackbird, purple gallinule, cattle egret, long-billed curlew, black-necked stilt, tricolored blackbird, great egret, American avocet, yellowlegs, black tern, red-winged blackbird, American bittern, snowy egret, sora, willet

Valley riparian forest

Flicker, violet-green swallow, red-shouldered hawk, vireos, fox sparrow, titmouse, black-headed grosbeak, woodrat, southern alligator lizard

Valley oak woodland

Rough-legged hawk, sharp-shinned hawk, meadowlark, ash-throated flycatcher, western rattlesnake, CA slender salamander

Grassland/savanna
Black-tailed hare.

Then there are species that occur in 2 habitats. Since they occur in both habitats one might say that it is sufficient to preserve just one of those habitat types, but the species may need both habitats: one for foraging one for nesting, etc. The same can be true for species that occupy more than 2 sites. They may need all those habitat types for a part of their life cycle.

Some species that occur in 2 habitats in the Basin

Muskrat, yellowthroat, green heron, bewick's wren, black phoebe, northern harrier, cottontail, screech owl, tree swallow, rufous-sided towhee, brown towhee, anna's hummingbird, western tanager, kingbird, mourning dove, golden eagle, loggerhead shrike, short-eared owl, horned lark, brewer's blackbird, gilbert skink, ring-necked snake

My second concern is the amount and percentage of each habitat that should be preserved. At least half of the amount of each habitat types that exist now should be preserved in the future, as soon as possible and development should happen slowly. As of now, 25% of preserve lands will be upland, 25% will be marshlands, and 50% will be rice fields. If 16,000 acres were developed then 8,000 acres would be preserved (if the 0.5:1 mitigation ratio is approved) and only 2,000 acres would be upland habitat. But what if over 4,000 acres of upland habitats were developed? I think that at least half of the amount of same habitat type developed should be preserved.

No one knows yet how much habitat can be lost in an area in order for the species in the Basin to be able to maintain population sizes that occur now. Will all of the wildlife species in the Basin even fit into only half the amount of habitat area that exists now? Will increased competition (due to higher numbers and possible greater number of species in the relatively smaller preserve area) rule some species out? Will niches overlap too much? Will there be enough food, cover, etc. for wildlife species in the preserve? Who knows! The only way to find out is to monitor the populations throughout the project area as development happens which will be a long and tedious process. Therefore, habitat should be developed slowly, not all at once. If populations are doing poorly, more of that particular habitat type should be preserved at once. Or a better solution is to develop much less land in the first place.

14-10

K)

This statement is misleading:

NBHCP, IV-1:

"Of the 53,537 acre Natomas Basin, about 7,267 acres were already developed in 1997, leaving a balance of 46,270 acres of undeveloped and agricultural land."

14-11

If 17,500 more acres were developed as proposed, the reader would likely assume that 28,770 acres would be left as open space consisting of undeveloped and agriculture land.

However, Friends of the Swainson's Hawk (FOSH), wrote a letter that stated that the NBHCP envisions 17,500 acres of new urban development added to the already 4,400 acres already developed, 3,000 acres of airport and highway use, and 4,400 acres of airport buffer lands (FOSH 2002). This leaves 24,237 acres to be left as open space, not 28,770 acres.

L)

I oppose the additional 10,000 acres of development proposed by the City/ County Joint Vision MOU for the Natomas Basin.

As I understand there is a proposed City/ County Joint Vision MOU for the Natomas Basin that would lead to 10,000 more acres of development (with a 1:1 mitigation ratio), in addition to the proposed 17,500 acres permitted by the NBHCP. Urbanization proposed by the NBHCP and the MOU would pave over most of the areas where the Giant Garter Snake have been documented and severely reduce Swainson's hawk foraging habitat (FOSH 2002c). More and more development will make it harder to find willing sellers to provide preserve lands because of land speculation. Not only will it be harder to find willing sellers to provide preserve lands, but "A probable result of the new development contemplated by the MOU would be the extirpation of the GGS population in the Natomas Basin, thereby jeopardizing the survival and recovery of that species; and severe impacts on California's Swainson's Hawk population" (FOSH 2002c). In order to prevent that devastating possibility, no more than 17,500 acres of urban development should occur in the Basin. If all of that additional 10,000 acres is developed in the project area, there will not be enough land left to preserve if the 1:1 mitigation ratio is implemented. 10,000 acres would need to be preserved and only about 5,000 acres of open space would be left after 10,000 more acres of development.

I4-12

Here's the math:

53,537 acres - 4,400 already developed - 17,500 acres of new development - 8,950 acres of anticipated preserve lands - 3000 acres of airport and highway use - 4,400 airport buffer lands - 10,000 acres of proposed new development - 10,000 acres of proposed preserve lands = - 4,713 acres of open space (FOSH 2002c).

This proposition of 10,000 acres of development and 10,000 acres of preserve lands simply does not work. There is just not enough space in the Basin to fit all the proposed development and reserve lands.

This is outrageous to me that so much land could possibly be developed in an area that contains so many important flora and fauna, many of which are species of concern. Do we want all of California to be paved? That's where we are heading. Thirty-six species in CA have been already been driven to extinction in recent times and another 1,088 are currently listed as rare, endangered, or threatened by state and federal fish and wildlife agencies. California hosts more unique plant and animal species than any other state in the country, yet no other state has grown as fast or as consistently (PCL 2002). It is crucial to protect what biodiversity is left in CA before it is covered with development. Please do not pass 10,000 more acres of development in addition to the planned 17,500. And please do not allow the full 17,500 acres of development!

M)

I4-13

The NBHCP requires that land may be acquired only from willing sellers and that the preserve lands be large, which could easily *limit* the amount of *suitable* habitat that can be acquired as mitigation land.

NBHCP, IV-3-4:

"TNBC performs an important function for the NBHCP by establishing and overseeing a concerted program for acquiring, enhancing and managing mitigation lands in perpetuity on behalf of the Permittees. Specifically, TNBC will receive mitigation fees collected by the City and County (and from the County of Sacramento for the Metro Air Park Project), using the fees to establish mitigation lands, and to manage

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the mitigation lands for the benefit of the Covered species....As a non-governmental entity, TNBC has no powers of condemnation and can only purchase lands from willing sellers."

NBHCP, IV-2:

"The TNBC has acquired 2,104.14 acres of habitat reserve land to date on behalf of the City."

Yet 7,267 acres were developed in 1997. The preserved area is not even half of what has been developed. Even if there are more rules laid out in the recent draft NBHCP to enforce stricter mitigation, I don't see how finding willing sellers is going to get any easier all of a sudden than it has been since 1997. In fact it should get harder with increased land speculation. How does TNBC plan to acquire more preserve lands in the future when they obviously haven't been able to acquire enough land in the past and they have acquired absolutely no riparian habitat (Roberts pers. comm)?

The NBHCP states that there will be 8,750 acres of habitat preserves and that the preserves will be consolidated into large, biologically viable units where one habitat block within the reserve system shall be a minimum of 2,500 acres in size and the balance of reserve lands shall be in habitat blocks that are a minimum of 400 acres in size (NBHCP, IV-9). All of this talk of acquiring large blocks of reserve lands sounds great on paper, but I doubt it is really feasible, and especially not feasible to acquire *enough* sufficient habitat for all of the many species that occur in the Basin. I do not suggest preserving smaller blocks of land. I suggest less development, which would allow for more realistic availability of large blocks of preserve lands.

I4-13

The harsh reality of not being able to acquire reserve land easily (or at all) is yet another reason why I oppose so much development to occur in the Natomas Basin. Even if half of the land developed is preserved, mass amounts of plants and wildlife losses are bound to occur. Yet, I doubt that the TNBC will even be able to acquire that much land and I doubt it will be in enough time to make a difference to the wildlife that is in need of a large suitable habitat. Less development should occur in the NBHCP.

N)

Creating habitat that is suitable to the wildlife that lost their habitat due to development, seems to sound better on paper than actually implementing.

NBHCP, IV-5:

"The TNBC reserves will be specifically managed to create habitat to support the covered species..."

I4-14

Once again this sounds wonderful on paper, but in reality, one can't go about just creating habitats here and there to support wildlife species and have this creation be successful every time. Biologists are not Gods who know everything about a habitat that makes it suitable for a particular species to be successful. Knowing what is suitable for a mosaic of species is especially impossible. There are so many factors that correlate to the success of particular species, be it wildlife or plants. And all of these factors may not be obvious to biologists, nor may they ever be. Creating a suitable habitat is not going to be easy and should not be taken lighthearted. What is planned to be done if the created habitat does *not* support the covered species and how will anyone know if the habitat is not supporting the wildlife?

O)

I4-15

How do these described buffers outside the airport fit into the availability of adequate reserve lands? Not enough attention is given to the matter in the NBHCP.

NBHCP, IV-32:

"All mitigation lands established for the NBHCP reserve system will need to be located and managed to avoid potential safety conflicts relating to collisions between aircraft and birds, and to be consistent with the May, 1997 Federal Aviation Administration Advisory Circular concerning wildlife attractants in the vicinity of airports. The Advisory Circular recommends the following distances between an airport's aircraft movement areas, loading ramps, or aircraft parking areas and the wildlife attractant: (1) 5,000 feet for airports serving piston-powered aircraft; and (2) 10,000 feet for airports serving turbine-powered aircraft. In addition, the Circular recommends that a distance of five statute miles be maintained between a wildlife attractant and the airport's approach or departure airspace if the attractant may cause hazardous wildlife movement into or across the approach or departure airspace."

I4-15

The NBHCP mentions the buffer space that is needed between airports and reserves but it fails to address the idea that even less land will be available to acquire and establish as preserves with the buffer that will protect wildlife species. This issue should be addressed in the NBHCP and considered when promising 8,950 acres of preserve lands to be established. I suggest less land being developed in the first place.

P)

I4-16

I expect the following statement to be upheld and not broken.

NBHCP, IV-6:

"TNBC system of reserves will be managed and maintained in perpetuity, providing permanent habitat for the Covered Species."

Q)

I4-17

The NBHCP fails to address how corridors will be provided for land locomotive species. This needs to be addressed.

NBHCP, IV-7-8:

"A primary goal of the NBHCP is to ensure connectivity between individual reserves, and connectivity between reserves and surrounding agricultural lands. Connections can be provided along land, through water and through air to enable the necessary mobility of species within their ranges... In addition to the channel connectivity described above, TNBC will consolidate reserve acquisitions during the fifty (50) year life of the permits in order to build larger blocks of habitat reserve lands... The connectivity promoted through TNBC acquisitions will reduce fragmentation and isolation of habitat reserves, thereby increasing the long-term viability of wildlife populations within the Natomas Basin."

There are no examples given here or anywhere in the "connectivity" section about how connectivity on land is going to be ensured, besides by making sure that the preserved lands are large. However, that does not ensure connectivity. There will still be gaps in between the large preserves. Connectivity for water species is described in detail. And birds that fly shouldn't be affected much since they can fly, but what about land locomotive species? How will corridors be created for them?

R)

I4-18

The NBHCP fails to address the issue of hunting in detail. This is the only area I found that it was mentioned. Hunting needs to be highly regulated.

NBHCP, IV-26:

"Management plans will identify the level of hunting allowed, if any, and will include parcel specific restrictions to protect the Covered Species during any hunting activities. No take of Covered Species as result of hunting will be covered under the permits."

How much and where will hunting be allowed and for which species? It seems that hunting contradicts the statement quoted directly below that states that access to reserves should be limited.

NBHCP, IV-25:

"Generally, public access to TNBC reserves shall be limited or regulated. Riparian and wetland areas are more valuable as wildlife habitat when they are located where human access is limited. TNBC will protect the Covered Species and their habitat by limiting and regulating public access to TNBC reserves. Reserves shall be patrolled to control prohibited and incompatible activities, including, but not limited to, dumping, off-road vehicle activity and trespass."

I4-18 The hunting areas and regulations need to be established and they need to be in areas where Covered Species will not be negatively affected. This should be discussed in the NBHCP.

S)

I4-19 Fisherman's Lake and surrounding area should be preserved.

The NBHCP states that "Fisherman's Lake, and the immediately adjacent areas are, and will continue to be, owned and managed by RD 1000" (NBHCP, V-2). Instead the NBHCP should propose to acquire the lake from RD 1000 and give them a separate drainage canal. As it is now, the plan does not propose much change.

The Natomas Basin Conservancy does own preserves, which are near Fisherman's Lake, totaling 258 acres (TNBC 2002). The NBHCP also plans to include a 250- foot wide buffer on the City side of the lake in the Land Acquisition Program to be managed by TNBC. It will stretch from Del Paso Road to El Centro Road. The City has also agreed to initiate a North Natomas Community Plan amendment to potentially widen the agricultural buffer along the City side of Fisherman's Lake to 800 feet wide (NBHCP, V-2).

First of all, I think that that the word "buffer" needs to be explained. What does a buffer amount to in terms of preservation of the land? Will the buffer land be managed for Critical Species in the area?

Whatever the case, this proposed NBHCP does not amount to *enough* preserved land near Fisherman's Lake. I have already explained in depth that riparian areas along with suitable foraging areas nearby are crucial to the survival of Swainson's hawks (see Section E). Fisherman's Lake and it's surrounding area is also important because Swainson's hawks already inhabit the area, it is identified in all major environmental studies and recommended by GGS experts as habitat that should be preserved, to date no lands have been preserved south of Elverta Road, airport buffer lands in this area add to preserve for cumulative species benefit, the area is not zoned for development, it supports both upland and wetland species, and it is part of the historic slough linking the American Lakes (FOSH 2002a). The Lake is also located close to the growing suburban population, west of I-5 on Del Paso Road. Houses have already been built just to the east of the Lake, in an area called Westlake. The owner of the land between the new houses and Fisherman's Lake, AKT, wants permission to build more houses in what they call "West Lakeside." However, Swainson's hawks nest very close to this site (FOSH 2002b). Special care must be taken to avoid encroachment from development upon Swainson's hawks in the Fisherman Lake area.

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- For all of those reasons, I agree with FOSH in recommending that all the land south of I-5, west of El Centro, east of the Sacramento River, and north of I-80, that is not already developed, be acquired as a preserve (Lamare pers. comm). Managing this land around Fisherman's Lake to maximize the habitat value and to restore the land is very important. Most of this land should be managed for Swainson's Hawk foraging. The lake and immediately surrounding area should be managed to support giant garter snakes.
- Along with FOSH, I request that the southerly 300 acres of Metro Airpark not be developed. This is a marshy area (originally in floodplain) that links to the area south of I-5 and forms part of the connectivity. This area has been used by white tailed kite as well as Swainson's Hawk (Lamare pers. comm).
- Most important, I agree with FOSH in suggesting that there must be full protection of a corridor going north from Fisherman's Lake under I-5, connecting with other preserve lands to maintain connectivity.
- I4-19 If these requests are not met, there should at the very least be significant additional protection for the lake banks and trees in the Fisherman Lake area.
- I4-20 T) If 17,500 acres of development are allowed, I suggest that absolutely no other additional development should ever be allowed and it should be written and agreed upon in the final NBHCP.

Summary of my requests and concerns:

- I4-21 Foremost, it is obvious from all of the points I just presented that I am opposed to all development in the Natomas Basin. The Central Valley is one of the only strongholds left for the hawks, and development will negatively affect Swainson's hawks, which have been listed by the state as threatened since 1983. I chose to focus on the Swainson's hawk, but development will inevitably negatively affect many species that occur in the project area, such as the federally and state threatened giant garter snake. Development will most likely decrease or possibly eliminate local populations of vulnerable species in the area no matter what precautions are taken.
- However, knowing the harsh ways of reality and urban sprawl, development will most likely occur in the Basin and if it does, I hope that my concerns and suggestions are taken into consideration. They are summarized below.
- I4-22 To ensure that Swainson's hawks will be detected before development is approved or not, the pre-construction surveys must be done between early March and early September. More than one pre-construction survey may have to occur in different seasons, depending on the life histories of the other covered species in the area.
- I4-23 There is no evidence provided or studies mentioned in the NBHCP that have proved that large amounts of noise and disturbance a half mile away will not cause nest abandonment. It seems as though loud machinery and humans working one half mile away would still be loud and disruptive to nesting Swainson's hawks. I recommend that the NBHCP provide this evidence needed. If that information is not provided, I recommend that upon the first day of development until the Swainson's hawks leave their nests, biologists tri-weekly (or more) monitor all nests that are 0.5-1 mile away from development. If nest abandonment occurs for example at a nest 0.6 miles away from development, all development that is in the Basin that is within 0.6 miles of any active nest must be immediately stopped until the birds have left to migrate south. Biologists should also monitor the behavior and success of all the Swainson's hawks in those nest trees. A dramatic change in behavior or chick mortality is probably the result of development

I4-23

nearby and if this becomes a pattern with more than 1 nest within 0.5-1 mile of development, then development should also be stopped until the hawks migrate south.

I4-24

The NBHCP fails to define what an impacted nesting tree is and the NBHCP is not convincing enough in justifying why a nesting tree should be allowed to be impacted by development. The proposed measures (planting 15 sapling trees in a preserve) to be taken after the impact of a nesting tree also do not convince me that suitable habitat will be provided soon enough and well enough. Therefore, no nesting trees should be impacted. Cutting down trees should be seen as a direct take of the bird and it's 1-4 chicks that it produces every year.

I4-25

I don't think it is right to cut down any nesting trees. However, if nesting trees are going to be removed, there should definitely be a limit as to *how many* nesting trees can be removed in the Basin. I don't find any sort of limit mentioned anywhere. And what exactly defines "unavoidable"? How and when is cutting down a tree unavoidable?

I4-26

Due to the high density of current nest sites within the Zone, the potential for additional nest sites, the high value of riparian areas for nesting sites, the importance of the Central Valley in being one of the last places for Swainson's hawk populations to live, and the significant threat that development brings to the population of Swainson's hawks, *no development* should be allowed within the Zone or anywhere in the Basin that is within 1 mile of an active nest, unlike V- 8-9 of the NBHCP suggests. Development in these areas will result in permanent losses of nesting habitat, and the cumulative effects of habitat fragmentation caused by the proposed 252 acres of development will result in further losses.

I4-27

The writers of the HCP do not clearly say that there will be no more development in the Swainson's Hawk Zone beyond the 252 acres. Instead, it says that *if* the CDFG and USFWS approve, then more development *can* occur. If the 252 acres of development goes ahead, I think that absolutely no more development should be allowed in the Swainson's Hawk Zone. Their original habitat has been and will continue to be encroached upon enough.

I4-28

The following statement is misleading because development in the Zone is not being avoided: "The NBHCP's primary strategies to mitigate impacts to the Swainson's Hawk Zone caused by Authorized Development is to *avoid development* in the Swainson's Hawk Zone...."

Research is a valuable tool and since the highest densities of Swainson's hawks occur in the Zone, this is a great area to research the biology of the hawks and to monitor population trends and behavior responses to development occurring in the Basin. Research should begin as soon as the NBHCP is passed and continue at least 5 years after development ends and preferably continue indeterminately as long as funding is available. This post development research will help to show how the population of hawks in the Basin recovered after development. If the hawk populations do poorly and are obviously threatened, then more riparian or other suitable nesting habitat should be required to be provided that has proper foraging areas nearby, since placement of nests is dependent on proximity to foraging habitats that are entirely different from the vegetation selected for nest sites. Monitoring Swainson's hawk populations and behavior should occur in the Zone and if possible in the newly reserved areas.

I4-29

The 0.5:1 mitigation ratio of replaced to developed land in the NBHCP is not high enough!! Higher mitigation ratios are being proposed in other HCP's in the Central Valley that also have Swainson's hawks and preserving only half of the land that will be developed will most likely result in mortality of Swainson's hawks as suitable habitat continues to be developed.

It is important to maintain the *same amount* of suitable foraging habitat *within* 10 miles of the active nest that will be developed because: suitable habitat available to Swainson's hawks needs to be large (at the landscape level), proximity to foraging habitats is important to Swainson's hawks' success, these hawks will travel 10 miles or more (up to 18 miles) to forage, loss of foraging habitat may eliminate territories, and more distance from suitable foraging habitats results in fewer fledging young.

I4-29

If my recommendation on allowing *no development* to occur in the Swainson's Hawk Zone is not carried out, I recommend for every acre of development that occurs within the Zone *and* for every acre of development that occurs anywhere in the Basin that is within 1 mile of an active nest, that 3 acres or more of the same habitat type be preserved. For example, if 250 acres of riparian habitat is developed within the Zone, 750 acres of riparian habitat must be preserved outside of the Zone (since the Zone is already preserved). If this ratio is still not approved, I strongly recommend that *at least* a 1:1 mitigation ratio be implemented. Anything less than that is completely unacceptable, giving the importance of nest site areas. To maintain foraging habitat, I recommend that a replaced: developed mitigation ratio ranging from 1:1 to 3:1 will be applied for any land that is developed from 1 to 10 miles away from an active nest and that this preserved land is within the 10 mile radius zone from the active nest. The NBHCP mitigation ratio is not large enough!

I4-30

I have 2 concerns about taking away "less suitable" habitats and creating more "suitable" habitats at unequal ratios (25% upland habitat, 25% managed marsh, 50% rice production). The first is, what may be suitable to one species may not be suitable to another species. My second concern is the amount and percentage of each habitat that should be preserved. At least half and preferably 100% of the amount of each habitat types that exist now should be preserved in the future (whether it be in or outside the project area), as soon as possible and development should happen slowly. All habitat types that exist now should also exist after development. Monitoring of wildlife populations should occur throughout the project area to determine the reaction of wildlife to development.

I4-31

This statement is misleading: "Of the 53,537 acre Natomas Basin, about 7,267 acres were already developed in 1997, leaving a balance of 46,270 acres of undeveloped and agricultural land (NBHCP, IV-1)." If 17,500 more acres were developed as proposed, the reader would likely assume that 28,770 acres would be left as open space consisting of undeveloped and agriculture land. However, in a letter written by Friend's of the Swainson's Hawk, wrote that the NBHCP envisions 17,500 acres of new urban development added to the already 4,400 acres already developed, 3,000 acres of airport and highway use, and 4,400 acres of airport buffer lands (FOSH 2002). This leaves 24,237 acres to be left as open space, not 28,770 acres.

I4-32

I oppose the additional 10,000 acres of development proposed by the City/ County Joint Vision MOU for the Natomas Basin. In order to prevent that devastating possibility, no more than 17,500 acres of urban development should occur in the Basin. If all of that additional 10,000 acres is developed in the project area, there will not be enough land left to preserve if the 1:1 mitigation ratio is implemented. 10,000 acres would need to be preserved and only about 5,000 acres of open space would be left after 10,000 more acres of development. It is crucial to protect what biodiversity is left in CA before it is almost completely covered with development.

I4-33

Even if there are more rules laid out in the current draft NBHCP than in the 1997 NBHCP to enforce stricter mitigation, I don't see how finding willing sellers is going to get any easier all of a sudden than it has been since 1997. In fact it should get harder with increased land speculation. How does TNBC plan to acquire more preserve lands in the future when they obviously haven't been able to acquire enough land in the past and they have acquired absolutely no riparian habitat?

I4-34 [Acquiring large blocks of reserve lands sounds great on paper in the NBHCP, but I doubt it is really feasible, and especially not feasible to acquire *enough* sufficient habitat for all of the many species that occur in the Basin. I do not suggest preserving smaller blocks of land. I suggest less development, which would allow for more realistic availability of large blocks of preserve lands. The harsh reality of not being able to acquire reserve land easily (or at all) is yet another reason why I oppose so much development to occur in the Natomas Basin. Even if half of the land developed is preserved, mass amounts of plants and wildlife losses are bound to occur. Yet, I doubt that the TNBC will even be able to acquire that much land and I doubt it will be in enough time to make a difference to the wildlife that is in need of a large suitable habitat. Less development should occur in the NBHCP.

Creating habitat that is suitable to the wildlife that lost their habitat due to development, seems to sound better on paper than actually implementing. What is planned to be done if the created habitat does *not* support the covered species and how will anyone know if the habitat is not supporting the wildlife?

I4-35 [The NBHCP mentions the buffer space that is needed between airports and reserves but it fails to address the idea that even less land will be available to acquire and establish as preserves with the buffer that will protect wildlife species. This issue should be addressed in the NBHCP and considered when promising 8,950 acres of preserve lands to be established. I suggest less land being developed in the first place.

I4-36 [I expect the following statement to be upheld and not broken: "TNBC system of reserves will be managed and maintained in perpetuity, providing permanent habitat for the Covered Species" (NBHCP, IV-6).

I4-37 [The NBHCP fails to address how corridors will be provided for land locomotive species. This needs to be addressed.

I4-38 [The NBHCP also fails to address the issue of hunting in detail. The hunting areas and regulations need to be established and they need to be in areas where Covered Species will not be negatively affected. This should be discussed in the NBHCP.

I4-39 [I suggest that at least one chunk of 400 acres minimum of riparian land be preserved outside of the Zone, once mitigation procedures proceed with development. The Fisherman Lake area would be a great place to set up a preserve.

Riparian areas along with suitable foraging areas nearby are crucial to the survival of Swainson's hawks, making Fisherman's Lake and the Sacramento River to the west very important areas. The area is also important because Swainson's hawks already inhabit the area, it is identified in all major environmental studies and recommended by GGS experts as habitat that should be preserved, to date no lands have been preserved south of Elverta Road, airport buffer lands in this area add to preserve for cumulative species benefit, the area is not zoned for development, it supports both upland and wetland species, and it is part of the historic slough linking the American Lakes. The Lake is also located close to the growing suburban population, west of I-5 on Del Paso Road and needs to be protected from encroaching development. Houses have already been built just to the east of the Lake and the owner of the land between the new houses and Fisherman's Lake wants permission to build more houses. However, Swainson's hawks nest very close to this site. Special care must be taken to avoid development into this area around Fisherman Lake.

For all of these reasons, I agree with Friends of the Swainson's Hawk (FOSH) in recommending that all the land south of I-5, west of El Centro, east of the Sacramento River, and north of I-80, that is not already developed, be acquired as a preserve (Lamare pers. comm). Managing this land around Fisherman's Lake to maximize the habitat value and to restore the land is very important. Most of this

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I4-39

land should be managed for Swainson's Hawk foraging. The lake and immediately surrounding area should be managed to support giant garter snakes. Along with FOSH, I request that the southerly 300 acres of Metro Airpark not be developed. This is a marshy area (originally in floodplain) that links to the area south of I-5 and forms part of the connectivity and it has also been used by white tailed kite as well as Swainson's Hawk (Lamare pers. comm). Most important, I agree with FOSH in suggesting that there must be full protection of a corridor going north from Fisherman's Lake under I-5, connecting with other preserve lands to maintain connectivity. If these requests are not met, there should at the very least be significant additional protection for the lake banks and trees in the Fisherman Lake area.

I4-40

Lastly, If 17,500 acres of development are allowed, I suggest that absolutely no other additional development should ever be allowed and it should be written and agreed upon in the final NBHCP.

Final request

I4-41

Since I devoted so much time to researching and then writing this letter, I would greatly appreciate answers to my questions and any other thoughts you may have about my letter. I did this in my spare time in between classes and studying, so I may have missed information that was in the NBIICP that I thought was not there. Please inform me if I missed any crucial information that was presented in the NBHCP and please take my concerns into account when writing and approving the final NBHCP.

Sincerely,

Kim Gagnon

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December 5, 2002

To: Field Supervisor
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Sacramento Fish and Wildlife Service Office
2800 Cottage Way, W-2605
Sacramento, CA 95825

Fax: (916) 414-6711

Re: Public Review and Comment upon July 2002 Draft Natomas Basin Habitat Conservation Plan (NBHCP) and Draft Environmental Impact Report/ Environmental Impact Statement (DEIR/EIS)

Dear Sir or Madam:

IS-1

The following comments specifically address issues concerning the giant garter snake (*Thamnophis gigas*) (GGS) within the Natomas Basin. Comments are based upon a literally lifelong experience with GGS in Natomas and are a compilation of my experience with GGS experts George E. Hansen, Glenn D. Wylie, and years of intensive personal study of GGS, both within the American Basin and throughout its remaining range in the Central Valley. I currently possess a valid a USFWS 10(a)(1)(A) Recovery Permit (TE-018177-1 Expires 05/15/2005) and CDFG Wildlife Collecting Permit and Memorandum of Understanding (801112-02 Expires 08-06-2004) expressly permitting intensive research studies of the giant garter snake throughout the entirety of its range. Comments are organized within categories pertinent to GGS ecology and life history that I feel are critical to the success of the NBHCP, but are not necessarily listed in order of importance. Miscellaneous comments are included within subsequent sections at the end of the document.

IS-2

The NBHCP possesses three elementary, yet highly pertinent deficiencies that fail to ensure the persistence of the giant garter snake within the Natomas Basin throughout the 50-year life of the conservation plan. These deficiencies are summarized briefly as follows:

IS-3

- 1) The one-half to one mitigation ratio is inadequate given the geographic location of proposed development and the failure to account for temporary impacts to population dynamics while replacement habitat develops to maturity. While ditches and drains provide the most stable, permanent habitat for GGS in the Basin, the NBHCP fails to provide either protection or mitigation for this well-documented habitat, and therefore cannot guarantee the that GGS will persist here indefinitely.

15-4 [2) Without the protection of existing populations *in situ*, there is no scientific evidence to suggest that replacement habitat will succeed for target species such as GGS.

15-5 [3) Should source populations persist, with or without direct protection, the NBHCP, fails to provide adequate guarantees of connectivity between source populations and replacement habitat, without which establishment of new populations or the relocation of existing populations cannot occur.

I. Mitigation

A. *The Draft NBHCP fails to ensure that replacement habitat is established prior to the destruction of existing habitat and therefore cannot support mitigating below parity.*

15-6 [Hansen and Brode's report on the Status and Future Management of the Giant Garter Snake (*Thamnophis gigas*) Within the Southern American Basin, Sacramento and Sutter Counties, California (1992) asserts that newly created GGS habitat takes several years to mature. Canals that were relocated in 1988 during the widening of SR 99/70 were not recolonized despite the re-establishment of vegetation and known prey species and the presence of giant garter snakes immediately nearby (22). Hansen and Brode suggest that replacement habitats may take as long as 3-5 years to mature to the extent that they are able to support resident populations of GGS (22). "Recruitment to the general population of GGS will be reduced because of lost habitat and the loss or displacement of adult GGS during this time" (22). **The NBHCP fails to address issues of population dynamics, and to account for the decline of GGS while replacement habitat develops to maturity.**

15-7 [The U.S. Geological Survey Biological Resources Division (BRD) Monitoring Giant Garter Snakes at Colusa National Wildlife Refuge 2000 Progress Report noted the use of newly created marsh habitat by three radio-tagged GGS. However, instances of habitat use were singular events and occurred adjacent to ditches supporting high densities of established GGS. These instances do not assure that preserves that are removed from established populations will experience similar success. While these results indicate promise for the success of habitat restoration within the Natomas Basin, they also indicate that even habitat surrounded by dense populations of GGS do not support resident GGS by themselves within the first year (see above). Because monitoring of GGS response to wetland restoration is a work in progress, time to maturation of habitat and concurrent impacts to source populations of GGS are unknown and cannot be predicted with accuracy. **Therefore, the assertion of the NBHCP that post-development replacement of habitat will sustain population of GGS within the Basin indefinitely is unfounded, and is based in no way upon sound, scientific data or knowledge.**

15-8 Hansen and Brode's four-year study on the Results of Relocating Canal Habitat of the Giant Garter Snake (*Thamnophis gigas*) During the Widening of State Route 99/70 in Sacramento and Sutter Counties, California (1993) emphasize, "Replacement or supplemental habitat should be constructed as soon as possible after a conservation plan is approved (23). They also stress that "the success of recolonization and the time required to achieve it will be key factors in determining appropriate mitigation" (23). Such criteria are absent from the NBHCP. Under the NBHCP, replacement habitat is required no sooner than 50 years following the destruction of core habitat. In addition, the destruction of core habitat is allowed to occur prior to demonstrating the efficacy of restoration measures. Thus, the post-development mitigation strategy of the Preferred Alternative is unsound, and violates the NBHCP's Overall Goals and Objectives to provide a preserve system that "...provides habitat for existing, and new viable populations of Covered Species" and that will "ensure that direct impacts of Authorized Development upon Covered Species are avoided or maximized to the maximum extent practicable" (I-15).

B. One-half to one mitigation fails to compensate for population declines that occur between the destruction of existing habitat and the maturation of replacement habitat.

15-9 Hansen and Brode (1993) suggest that, "Replacement of existing habitat requires compensation at a 2:1 or greater ratio to achieve viable GGS population levels. Compensation greater than parity is required to overcome interim population declines that occur during the time between destruction of the original habitat and the maturation of the new habitat" (35). The NBHCP fails to account for this aspect of GGS population dynamics and therefore fails to adequately mitigate for impacts to existing populations of GGS (see above).

15-10 The NBHCP justifies the low mitigation ratio by asserting "...that the effective habitat reserve ratio is actually higher than the 0.5-to-1 ratio, because not all lands to be developed under the NBHCP permits are of high value to the covered species as habitat. Because portions of the Natomas currently have marginal value as habitat, and because all land to be developed in the Basin will be subject to mitigation fees, in some cases the 0.5-to-1 mitigation ratio will result in a substantial increase in overall habitat value" (IV-5, 6). This approach places greater emphasis upon creating new, unoccupied habitat than the more sensible approach of preserving species in place (see below).

15-11 In addition to placing greater emphasis upon replacement habitat than the direct, applied preservation of existing populations of covered species, the premise that the 0.5-to-1 mitigation ration may result in an increase in habitat value fails to account for the fact that proposed development (NBHCP Figures 2 and 3) displaces some of the most significant populations of GGS in the Basin (NBHCP Figure 12). Replacement habitat, while possessing the greater proportion of recognized desirable habitat characteristics, is still inferior to more marginal habitat that actually supports GGS. Therefore, there is no

IS-11

evidence that GGS habitat will be mitigated near parity and that populations can therefore be sustained within the Natomas Basin under the Proposed Alternative.

IS-12

In fact, it is likely that critical populations of GGS will be destroyed before functional preserves are created elsewhere. BRD's Investigations of Giant Garter Snakes in the Natomas Basin: 2000 Field Season notes that, "In some cases development projects in the southern end of the Basin will destroy local snake populations, particularly when there is no avenue of escape from construction activity" (3). GGS historically utilized native annual and perennial wetlands within the Natomas Basin that were located predominantly within the southern end of the Basin (NBHCP Figure 5). BRD and California Natural Diversity Database records indicate several occurrences of GGS in this area within recent decades that have been extirpated by subsequent development. **Therefore, 0.5-to-1 mitigation fails to account for these losses and their subsequent impact upon GGS population dynamics (see above).**

C. *The NBHCP and DEIS/EIR fail to adequately address the potential and most likely declines in Natomas Basin GGS populations.*

IS-13

The DEIS/EIR contends that, "A BRD study conducted from 1998 to 1999 recorded 277 individual GGS in the Natomas Basin. It should be noted that these occurrences are in addition to the 38 recorded in the California Natural Diversity Database...The most recent giant garter snake survey information (Wylie, 2001) showed that fewer giant garter snakes were captured relative to previous years, but this does not necessarily mean that the giant garter snake population in the Natomas Basin is in decline" (3-39). **This statement, which downplays the potential for a contemporary decline in GGS populations, fails to take adequate caution in regard to the formulation of sound mitigation strategy, and violates the NBHCP's Overall Goal and Objective to provide a preserve system that will "ensure that direct impacts of Authorized Development upon Covered Species are avoided or maximized to the maximum extent practicable" (I-15).**

BRD states that GGS are being noted in lower numbers than in previous years. Distortion of historical captures downplays the significance of historical trend in decline. The NBHCP does not mention the observation of 685 sightings, and 225 hand-only captures of GGS in a limited survey area during Hansen and Brode's four-year study on the Results of Relocating Canal Habitat of the Giant Garter Snake (*Thamnophis gigas*) During the Widening of State Route 99/70 in Sacramento and Sutter Counties, California (23). These captures were made by one individual, by hand only, while BRD utilized a large field crew employing both hand-capture protocols as well as the use of floating aquatic traps, which function 24 hours per day. BRD numbers dropped from 81 in 2000, to 31 in 2001, yet this decline in the number Basin-wide GGS observations is not addressed in the NBHCP. It should also be noted, that the NBHCP unwittingly distorts the perception of historical population numbers by comparing BRD observations with CNDDDB locality records (see above). The NBHCP fails to mention that CNDDDB records represent multiple occurrences as a single record (e.g. CNDDDB occurrence No. 43 is a single occurrence record representing ten individual GGS at Pritchard Lake). **The 0.5-to-**

15-13

1 mitigation ratio cannot be approved until the demographics of Natomas Basin GGS are better understood.

15-14

While were at it, why don't we briefly mention Pritchard Lake and the fact that there may be a great deal of degradation out there that has not been documented. Hey, talk about the importance of Lone Tree Rd canal in Hansen and Brode 1992 and the decline in habitat value and capture success observed by USGS studies and personal observations. This area still has not recovered and in fact possessed virtually no vegetation during 2002. I can vouch for this personally. All indicates a relatively undocumented decline in overall habitat value that is not accounted for in the NBHCP and the mitigation ratio prescribed within the Preferred Alternative.

D. The NBHCP fails to ensure stable populations of GGS necessary to seed replacement habitat; therefore GGS populations must be preserved in place (in situ mitigation)

Mitigation strategy within the NBHCP relies exclusively upon the preservation of habitat, rather than the more sensible preservation of Covered Species *in situ*. While this may work, at least hypothetically, for highly mobile or transient species such as the Swainson's Hawk which can fly between suitable areas, it is far less effective for a species such as GGS that, while being mobile, depends upon a very limited set of aquatic transit opportunities (i.e. drainage ditches and canals) to reach replacement habitat (see above).

15-15

The NBHCP has been "established to allow some development to occur within the Natomas Basin, while ensuring that habitat values are maintained, and, to the maximum extent practical, increased within the Natomas Basin" (I-17). In the context of the NBHCP "habitat value" is based solely upon a suite of characters associated with the successful establishment of GGS. Logically, habitat is of far greater value when supporting an existing population of the target species, but is not dealt with thusly within the NBHCP.

Without protecting existing populations, there is absolutely no guarantee that source populations will persist, or that protected species such as the GGS that rely on extremely specific dispersal corridors to migrate between source populations will be able to reach replacement habitat. It is obvious that replacement habitat will experience a greater degree of rapid immigration of target species in those cases where stable source populations are immediately adjacent. There is no scientific evidence, rigorous or otherwise, that suggests that canals within the Natomas Basin currently exist in such a state that long-range migration of GGS will be possible (see above). **In order to provide the greatest likelihood of this species survival under the Proposed Alternative, it will be necessary to protect existing populations of GGS until reserves are well established and are shown to support new or immigrant populations of GGS.**

E. The NBHCP provides no mechanism for assuring that preserve acquisitions are made within or adjacent to established populations of GGS.

15-16

The NBHCP's overall acquisition criteria (IV-15, 16) do not adequately consider proximity to known populations of GGS. With respect to the selection of rice fields for inclusion in the reserve system the NBHCP does indicate that "rice fields will generally be selected that are within, or that have connectivity to, known giant garter snake populations or known occupied giant garter snake habitat" (IV-22). Canals, more than rice, are responsible for sustaining permanent populations of GGS (see below), but receive absolutely no guarantee of protection, nor do they receive any consideration for direct acquisition as mitigation. The NBHCP provides no guarantee of mitigation near or adjacent to established populations of GGS. Rather, acquisition of preserve land is based upon availability by willing sellers. **Therefore, acquisition criteria do not provide sufficient means of ensuring that source populations necessary to reserve success are sustained.**

Item II—Connectivity

A. The NBHCP fails to adequately protect connectivity between reserves and existing, occupied habitat.

15-17

GGS move around move in response to changing habitat conditions in order to find suitable sources of food, cover and prey. Changing agricultural regimes and the rotation of crop types create an ever-changing mosaic of available habitat within the Natomas Basin that is acknowledged by the NBHCP. "Thus, connectivity between canals and ditches in different areas and between these systems and other habitat types is extremely important for genetic interchange and ability to find summer habitat" (II-13). An overall objective of the NBHCP is to "ensure connectivity between TNBC reserves to minimize habitat fragmentation and species isolation. Connections between reserves will generally take the form of common property boundaries between reserves, waterways (primarily irrigation and drainage channels) passing between reserves and/or an interlinking network of water supply channels and canals" (I-15). **The NBHCP fails to provide this protection.**

"As evidenced on Figure 17, the channels of RD 1000 and Natomas Mutual are extensive throughout the Natomas Basin...and provide substantial connectivity between the existing TNBC Preserves. It is important to note that the system of canals identified on Figure 17, are anticipated to remain to serve both urban development anticipated to occur and also provide the backbone of canal connections between reserves" (IV-8). **The NBHCP fails to address the quality of this canal system in regard to GGS.**

In fact, the NBHCP states that "GGS may use stretches of unvegetated canals as dispersal corridors; however, they typically do not remain in such canals long because without

cover they are vulnerable to predation" (II-10). The overwhelming majority of this connectivity in the southern portion of the Natomas Basin lies within the City Sphere of Influence, is bounded immediately by urban development, possesses no buffer of any sort as is provided for replacement habitat (see above), and is subject to persistent maintenance practices implicated in preventing establishment by GGS (see below). **This system cannot be relied upon to provide adequate connectivity.**

The NBHCP states. "The primary opportunity for connectivity between individual reserves is the system of channels maintained and operated by RD 100 and Natomas Mutual. Under the management of RD 1000 and Natomas Mutual, this system of canals will be managed to enhance habitat values and minimize harm to covered species as specified in the NBHCP" (IV-8). However, Hansen and Brode's four-year study on the Results of Relocating Canal Habitat of the Giant Garter Snake (*Thamnophis gigas*) During the Widening of State Route 99/70 in Sacramento and Sutter Counties, California (1993) states "although it was determined that giant garter snakes had the ability to travel the distances required to colonize the new canals, none of the new canals studied provided suitable giant garter snake habitat by the end of the four-year study, and none were colonized by giant garter snakes. Continual or annual grading were the main factors that prevented the establishment of vegetative cover and other physical attributes of giant garter snake habitat" (abstract). This condition of the East Drainage Canal adjacent to SR 99/70 persists to today, and this area has not shown to support giant garter snakes (E. Hansen, unpublished notes). Furthermore, BRD Investigations of the Giant Garter Snake within the Natomas Basin: 2001 Field Season attributes a shift by GGS from the North Main Canal ("Snake Alley") to ditches along rice fields to the west" (2), implicating current canal maintenance practices in the displacement of GGS. While the NBHCP provides an outline of recommended maintenance practices for this system of Canals (V-29), it provided no assurance of adherence by the water agencies nor does it provide any mechanism for monitoring or enforcement. **Therefore the NBHCP fails to meet the primary objective "to ensure connectivity between TNBC reserves to minimize habitat fragmentation and species isolation" (I-15).**

15-17

B. The NBHCP fails to mitigate the loss of connectivity between reserves and existing, occupied habitat.

BRD's Investigations of Giant Garter Snakes in the Natomas Basin: 2001 Field Season notes that, "Apart from physical construction and other land development in the Natomas Basin, large blocks of land are being fallowed in anticipation of development. Giant garter snakes are being negatively impacted by this development even before development occurs" (3). This loss of habitat contributes to fragmentation and eliminates connectivity that is not accounted for in the NBHCP.

15-18

C. NBHCP does not provide adequate protection for existing drainage ditches and canals.

Hansen and Brode's report on the Status and Future Management of the Giant Garter Snake (*Thamnophis gigas*) Within the Southern American Basin, Sacramento and Sutter Counties, California (1992) recommends that "buffers between GGS habitat and urban development should extend at least 100 feet from the outside edge of the GGS habitat (levee toe or maintenance road) to a boundary fence. The buffer should consist of at least 75 feet of native or ruderal vegetation with 15 to 20 of bare ground along the boundary fence" (19). The conceptual mitigation plan presented by Hansen and Brode calls for protection of the canals, and includes buffers for these connective corridors (21).

15-19 The NBHCP conservation strategy emphasizes maintaining connectivity between TNBC reserves to allow giant garter snake movement within the Natomas Basin. This species is highlighted for two reasons: 1) giant garter snake is the most prevalent Covered Species within the Basin that requires land/water connectivity to travel within the Basin, and 2) if adequate connectivity is provided for giant garter snake, then it is anticipated that other Covered Species will also be afforded adequate opportunities to migrate within the Basin" (IV-8). While the NBHCP stresses the importance of connecting corridors to the overall success of the conservation program (I-15), it does not provide the same protections for these corridors, nor does it incorporate potential acquisition or maintenance of these programs as a part of the proposed mitigation. In fact, while the NBHCP proposes setback zones for mitigation parcels that "shall be situated a minimum of 800 feet from existing urban lands or lands that are designated for urban uses in an adopted general plan... [Lands] such that direct and indirect effects of such development are significantly incompatible with the objectives and purposes of the reserve system" (IV-II)..." it does not provide this same protection for the connection between preserves upon which the success of the preserve system relies.

Hansen and Brode's four-year study on the Results of Relocating Canal Habitat of the Giant Garter Snake (*Thamnophis gigas*) During the Widening of State Route 99/70 in Sacramento and Sutter Counties, California illustrates that while rice is important temporary habitat during the GGS active season, it is only useful during the portion of the active season when rice has emerged above the water surface and prey has become established (Figure 17). Results of BRD radiotelemetry studies of female GGS support this (NBHCP II-13). In fact, it is the presence of drainage ditches and canals associated with rice agriculture that are responsible for providing the "(1) water, including permanent water that persists through the summer months; (2) emergent, aquatic vegetation and steep, vegetated banks for cover; and (3) and abundant food supply" (NBHCP II-11) and cracks, burrows, and winter refuge sites that allow GGS to persist in times that rice is not mature to the extent that it provides habitat. Simply preserving rice agriculture within the Natomas Basin does not guarantee that GGS can persist here, nor that ditches and drains accompanying rice agriculture will be maintained in a fashion consistent with the needs of GGS. **For this reason, it is necessary that specific protection of canals, ditches and drains be incorporated as part of the NBHCP's recovery strategy.**

Item III—Alternatives

While all of the deficiencies of the NBHCP listed above have serious implications regarding the survival of GGS within the Natomas Basin, impacts stemming from insufficient mitigation, a failure to guarantee persistent connective corridors between reserves, and failure to promote preservation of GGS *in situ* can be significantly reduced by the five DEIR/EIS Alternatives (2-49).

Alternative 1—increases mitigation to a 1:1 ratio, thereby increasing both the amount of land preserved for target species and the likelihood of preserving some habitat *in situ*.

Alternative 2—would be based upon the habitat value of the land to be developed, and would include up to a 3:1 ratio for the highest-value habitat for giant garter snakes (2-49). This would provide the same benefits of Alternative 1, and would assure mitigation above parity, thereby offsetting the population declines likely to occur in response to habitat destruction before reserves develop to maturity. **This is the biologically preferred alternative.**

IS-20

Alternative 3—would confine acquisition of preserve lands to biologically superior habitat areas. This alternative would increase the likelihood of preserving habitat *in situ*, but provides no other direct means of stabilizing population dynamics or offsetting the population declines likely to occur in response to habitat destruction before reserves develop to maturity.

Alternative 4—would reduce potential take by reducing the amount of development within the Basin, but would fail to mitigate for impacts already accrued in anticipation of development and would provide no other means of stabilizing population dynamics or offsetting the population declines likely to occur in response to habitat destruction before reserves develop to maturity.

Alternative 5—is a “no action alternative” and would provide species benefits quite similar to those of Alternative 4.

Item VII—Errors

1. Incomplete species description—Giant Garter Snake

IS-21

The NBHCP states that, “the giant garter snake was formerly listed as a sub-species of *Thamnophis elegans* but was elevated to full species status as *T. gigas*” (II-9). This is incomplete. GGS has undergone a lengthy series of taxonomic revisions that include characterizations as a subspecies of *T. ordinoides*, *T. elegans*, and *T. couchii*. Ultimately, an evaluation of morphological traits teamed with existing biochemical data prompted a recommendation to reclassify GGS as a unique species, *Thamnophis gigas*. The shift,

15-21

therefore, occurred between classifications as *T. couchii gigas* to a unique species, rather than from *T. elegans gigas* as the NBHCP suggests.

2. Incorrect species name—Western Spadefoot

15-22

The NBHCP describes the Western Spadefoot (which is not a true toad of the family *Bufo*idae, but instead belongs to the family *Pelobatidae*) as *Scaphiopus intermontanus* (II-32). This refers to the Great Basin Spadefoot. The correct name, which is contained in most tables within the NBHCP and DEIR/EIS, is *S. hammondi*.

Thank you,

Eric C. Hansen
Consulting Environmental Biologist

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PHONE (530) 661-9225 FAX (530) 661-3633

September 4, 2002

Field Supervisor
United States Fish & Wildlife Service
2800 Cottage Way, W-2605
Sacramento, CA 95825

Re: Natomas Basin Habitat Conservation Plan

Dear Madam or Sir:

I6-1 [I object to the NBHCP. Mitigation should be at least a 1:1 ratio of mitigation to developed land. This is customary in other projects that I am familiar with. Mitigation at a lower rate results in a net loss of habitat, and is plainly inadequate. I have been told that it is highly unusual, if not unheard of, for HCPs in California to have a ratio lower than 1:1 and many are higher. There should be no exception in this case, and I do not believe that an exception can be justified.

I6-2 [I also think that the mitigation should take place in the Natomas Basin. It defeats the purpose of mitigation to mitigate far away from the target area. Out-of-basin mitigation in Sutter County (Area "B") should not be allowed.

Sincerely,



Daniel B. Hardy, M.D.

DBH/gm

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FISH & WILDLIFE OFFICE

Field Supervisor,
Fish and Wildlife Services
2800 Cottage Way, W-2605
Sacramento, CA 95825

11/10/02

Dear Sirs;

In answering the draft EIR/EIS for the Natomas Basin Habitat Conservation Plan, the cause of the loss of habitat in the Natomas Basin is mainly from urbanization of the area. Subdivision ground is selling from \$45,000 to \$60,000 per acre.

I7-1

As the Sacramento and Sutter County planners allowed the area to be urbanized, the owners of any private property, taken to mitigate the loss of habitat, should therefore be reimbursed as if it were subdivision ground.

Yours truly,


Burton H. Lauppe
11000 Garden Hwy
Sacramento, CA 95837

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Field Supervisor - 9-02-02

The enclosed: The Politics of North Natomas is my comment on the draft Natomas basin habitat conservation plan and its environmental impact statement if I have to do them, writing let me know.

18-1

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ENVIRONMENTAL
REGULATORY
DIVISION



Mr. Frank McCormack
927 Park Ranch Way
Sacramento, CA 95831

Thank-you
Frank McCormack

Finis Coronat Opus!

427-6313

THE POLITICS OF NORTH NATOMAS

arduous

1a: hard to accomplish or achieve: DIFFICULT
b: marked by great labor or effort

It's pretty hard to get any stability, however, when you consider that it wasn't until 1986, three years after we purchased the Kings, that we even knew we would be playing in a permanent home. That nice new ARCO Arena that opened the 1988-89 season didn't just happen by chance. It took years of beating our heads against the wall until we even knew we would be allowed to build it. But I suppose that's because building an arena or stadium in North Natomas, where it made sense, was from the outset entangled in a political controversy that started in the early 1960s. Things were a lot less com-

plicated then, that's for sure.

After three years of study, the Sacramento City Council in 1962 adopted the Natomas Development plan that called for total development of that area. The plan envisioned a regional shopping center — that later became Sunrise Mall, out in the county — construction of two intercontinental highways, Interstates 5 and 80, and massive commercial and residential development in North Natomas.

But the mood of the community had changed, and as politics shifted left in the late 1960s and 1970s, growth and development became the bad guy. Developers suddenly were all villains in black hats; the environmentalists were all heroes. Land that had been targeted for development, like North Natomas, was suddenly more valuable to the community as "prime farmland," whether it was prime or not. In the early 1970s, when Anne Rudin and Phil Isenberg were just starting out on the City Council, the city reversed the plan and declared North Natomas off-limits to development. So our plans to build a sports complex out there were swimming against the current from the beginning.

But by 1983, we bought the team, the Chamber of Commerce came out with its report on the tremendous economic advantage of having professional sports franchises, and the public was once again focusing on re-zoning North Natomas. The issue really got crystallized in the 1983 mayor's race, which, in the end, became a campaign with only one big issue — should North Natomas be re-zoned for a sports complex?

As early as 1979, when she was running for her third four-year term on the City Council, Anne Rudin made her position clear. "I frankly don't care if we have

a stadium or not in Sacramento," Rudin was quoted in the *Bee's* September 13th edition. We got nowhere on the Natomas stadium issue for a long time and the City Council seemed to put us off indefinitely on April 13, 1982 when it voted 7 to 2 to keep Natomas off limits to developers for at least another five years.

But by 1983, with the team in hand, people started to believe us when we said we wanted to bring major league sports to Sacramento. Although a lot of people still said we were greedy developers trying to rob the public, we had credibility on the sports issue. The mood was changing also due to the work of Michael Seward and the Chamber of Commerce. Seward and City Councilman, David Shore, faced off on the issue in an article in the *Sacramento Union* that ran July 3, 1983. Seward, in a cheerleading approach applauded by the SSA, said it made economic sense for the area to be opened to development, since its position between two freeways would be easy to get to. He also pointed out the phenomenal economic boon sports franchises are to a city with their non-polluting, labor-intensive qualities. Shore argued that the developers were asking for a free lunch. It would cost the taxpayer millions to pay for police and fire protection and roads and other services needed for the complex, Shore said. But he never mentioned that whatever the public paid for — and we were asking for no public money — would be easily offset by the tax and other revenues created by the project.

As mentioned earlier, we backed Ross Relles in the 1983 mayor's race, but not, as Anne Rudin maintained, because we were enamored of him or thought he'd be a great mayor. He was also not our front man in the election as Rudin suggested. He was running, he

supported the stadium in Natomas, so we supported him.

I became part of Relles' steering committee in the race and I told his staff from the very start that the stadium was going to be the number one issue in the race. It was, but when the September 27, primary results were in, even I was shocked. Relles, a political newcomer himself, finished first in the field with 19,817 votes. Rudin was second with 18,638 votes. Serna was the odd man out with 16,814 votes, finishing third in a five-candidate field.

Even though Relles finished first, he would have two major problems in the runoff against Rudin. The city was predominantly Democratic, so Republican Relles would be in a position of having to take Serna's Democratic votes from Rudin. The second problem and the one that would ultimately spell defeat for Relles was the fact that he really was a one-issue candidate. I remember calling Relles on the day of his final television debate with Rudin to implore him to talk about other issues. He needed to quit harping on the stadium and to broaden his base if he was going to win. I pleaded with him to talk about the city's police protection, fixing pot holes in the streets, taxes — anything but the sports complex. On election eve, a confident Relles claimed victory and relaxed while watching Monday Night Football. Rudin and her supporters, meanwhile, were calling as many registered voters as possible, primarily women, in an effort to get out a big vote the following day for their candidate. On Tuesday, November 8, 1983, Anne Rudin became the first woman to be elected Mayor of Sacramento — City Councilwoman Belle Coolidge was appointed mayor in 1948 — and she beat

a one-issue political novice by fewer than 1,000 votes. I had put everything I had into the Relles campaign and was exhausted and depressed when he lost. I went into hiding for a week and just escaped into television fantasyland by renting about 20 movie videos to recoup from exhaustion.

Even though it was hard to see the end of our struggle, especially with Rudin's election, we continued to plug away.

A *Bee* headline two days after the election was prophetic. It said, "North Natomas Stadium May Win Despite Relles' Loss." The three new council members — Tom Chinn, Grantland Johnson and Bill Smallman — were the reason for the headline. The make-up of City Council was shifting in our direction.

In January, 1983, the Gateway Point Sports, Recreation and Corporate Center, later to be renamed Capital Gateway, was formed. And the Spink Corporation, a planning and engineering firm, was hired to begin planning for the Gateway Point Properties, 1,620 acres east of Interstate 5, south of Del Paso Road and north of Interstate 80. Ron Smith, a partner in Spink, led the effort. All of the land was in the city and the owners of Capital Gateway were the SSA, with its 435 acres right in the middle; Sacramento Savings and Loan; Bell Savings and Loan; Centennial Group and the RJB and JB companies. The other owners all knew that they had no prayer of getting their land re-zoned unless we built the sports facilities. So Lukenbill got the group to sign a \$100 million guarantee, written on SSA stationary, and, with Gary Bricker and Ron Smith, presented it at a November 1, 1983 press conference.

Signed by all the principals, the letter said: "To dem-

onstrate sincerity and resolve in connection with this project, the property owners headed by the Sacramento Sports Association are prepared today to make the following commitment to the people of Sacramento. (1) the stadium, arena and parking will be built by a group headed by the Sacramento Sports Association and entirely at that developer's expense, that is at no cost whatever to the taxpayers; (2) the property owners will also absorb all costs and incur all expenses necessary to construct freeway interchanges and roads and to provide for water, sewer, drainage, utilities and freeway landscaping." There was a third provision in the letter to guarantee that we would pay the \$7 million fine to the Environmental Protection Agency for building in the area and tapping into the sewer line. The purpose of the letter was to dispel allegations once and for all that the taxpayers' pockets would be picked.

This was also a calculated political move to draw attention away from alternative sites, like Delta Shores in the south part of Sacramento, that Rudin and others were touting. We figured the \$100 million guarantee would ride Relles right into the mayor's office. That didn't happen, but there was victory for us in defeat. Rudin won, but so did new council members Grantland Johnson, Tom Chinn and Bill Smallman. With the re-elections of Doug Pope and Joe Serna, we figured that we had a majority on City Council that would approve our re-zoning — finally — if we could get through the bureaucracy that is the planning process.

With the new faces on Council, Lukenbill was optimistic. We all were. The main reason for the optimism was Joe Serna. Serna met with Lukenbill and me right after the Indiana Pacers deal fell through and all but

guaranteed that if we landed a franchise we'd get our re-zoning approved. Acquisition of a pro team, Serna told us, would prove to the City Council that the SSA was sincere about bringing sports to Sacramento. It would squelch the cry of our opponents that we were "just greedy developers trying to re-zone for a profit." So Lukenbill called his bluff and bought the Kings for \$10.5 million, hoping the permits and zoning would be handled expeditiously. But of course, that was not to be.

Our application to re-zone 1,620 acres in North Natomas was submitted to the city's planning department on Tuesday, December 13, 1983, after eight months of work by the property owners and the Spink Corporation to come up with a quality plan for the area. Lukenbill and political consultant, Maurice Read would meet with each council person individually during this period to give them all an update of the plan and incorporate their input, if any. Lukenbill wanted the arena proposal processed separately and quickly. His back was against the wall. The lease in Kansas City's Kemper Arena, the home of the Kings, was about to expire and negotiations to renew the lease would have to begin. The last thing Lukenbill wanted to do was build a temporary arena in the county, just outside the city limits, until the 1,620 acres could be studied.

But City Attorney Jim Jackson said, "fast-tracking" the arena was impossible. The cumulative impact on the entire area had to be studied, Jackson said. So Lukenbill had three choices. He could sell the team, renegotiate the Kemper lease or build the temporary arena. Selling the team was out of the question and he didn't want to commit himself to more years in Kan-

sas City. That would only delay getting a franchise in Sacramento. He had one choice — building a temporary arena, moving the team here and proving that he meant business and that Sacramento was, indeed, a big-league city.

Exactly what Gregg feared would happen in North Natomas happened — each Council member had his or her own idea of what to do and the arena got bogged down while discussions centered on how to deal with the large area in totality. Each Council member had an agenda or special interest to pursue. Lynn Robbie wanted a resolution to reaffirm the no-growth policy for North Natomas. Serna wanted a greenbelt to be included in any re-zoning. Johnson was concerned about jobs. Rudin wanted study sessions. But all the resolutions and ideas came to a head in January when Joe Serna got the City Council to approve on a five to four vote his resolution asking for an expeditious processing of the Gateway Point application. That at least meant that the proposal would be studied on its merits instead of being automatically shot down under the city's old policy that no growth would occur in North Natomas.

But the City Council would again flip-flop on how to best proceed in the area. Johnson, a very shrewd politician, introduced a resolution at a February, 1984, meeting to call for a full North Natomas Community plan, complete with an area-wide environmental impact report. That took us completely by surprise and, as far as we were concerned, seemed to blow sports in Natomas out of the water for all the delay it was going to cause.

But the politicians' silver bullet strategy, to study a project to death, did not apply this time. The three

council members in support of the SSA — Chinn, Pope and Smallman — voted against the resolution because they figured it would force an endless study of the situation. Rudin and Robbie voted for the "study-it-to-death" resolution. Kastanis and Shore, who had been riding the fence, went along with it, too. The other yes votes were from Johnson and Serna, who believed that Rudin and Robbie would be hard pressed to vote against a sports complex later down the road if it were included in a comprehensive community plan.

The *Bee's* editorial after the Council's flip flop best summed up the proceedings. "Based on Tuesday's City Council performance — during which none of the members seemed to know what they were doing, and after which no two seemed to agree about what they had done — it would be fair to say that the city's handling of this year's major development issue is a thorough mess," the editorial said. "In a meeting that the mayor seemed unable to control — or for that matter to fathom — the council appeared to switch its policy on planning for the North Natomas area 180 degrees from what it was only last month."

The city had agreed to do what our opposition, ECOS, had suggested. Instead of the 1,620-acre re-zone we were all but guaranteed if we bought a team, it would ambitiously study a much larger area, 9,300 total acres, and require a thorough environmental review of the whole area. ECOS never stopped fighting, as was obvious when it filed lawsuits after we finally had our victory with the bureaucracy. At this stage in the process it appealed to City Council after the City Planning Commission, on a five to two vote, approved the lengthy environmental impact report on the community plan. The Council

rejected ECOS' appeal, but the whole process consumed more than three years and cost taxpayers and the property owners more than \$4 million in time and money. In delays over a five-year period, Capital Gateway lost about \$25 million and the city lost millions in taxes that would have been generated that much earlier. During the **arduous** planning process, the SSA cooperated fully with the city. By law, the city was obligated to process our application within a year after it was submitted. As a gesture of good faith, we signed a waiver relieving the city of the time limit. I sent SWA, the city's lead consultant, stadium and arena information it could incorporate into its fact-finding study. But the information had to be channeled to the city first because City Attorney Jim Jackson wanted to ensure objectivity in the planning process and to make sure neither ECOS nor anyone else accused the city of making decisions in secret. But the city attorney's caution did not create the desired objectivity. Instead, the opposite occurred and we were suspicious of the whole arrangement. If we were not able to communicate directly with the consultants who were doing the city's work, we doubted very much that the results would be very workable and would not reflect an understanding of the peculiarities of Sacramento. I never even knew if the information that I submitted to the city had been forwarded to the consultants.

Sure enough, when SWA's preliminary plans came out they looked as if they were created in a total vacuum and Lukenbill was furious. SWA laid out three scenarios for developing the area, but only one included a stadium. They also had a 200-acre golf course with no clue about who would pay for it. The economics were

unworkable and Lukenbill would strike back in the newspapers a few months later when he said the consultants were consultants and not developers because they knew nothing about development. The plans were flawed, pure and simple. For one thing, the city's consultants had the sports complex abutting the freeway. Common sense dictated that the sports complex should be placed as far from the freeway as possible so it would not conflict with Interstate travel. If there were to be miles of cars backed up it would be better to have them on surface streets within a complex to avoid traffic congestion.

In a defensive posture, the SSA hired its own consultants and the war of the consultants was on. If the city's consultants produced a two-foot stack of maps and studies, Capital Gateway produced a like amount of paperwork with usually opposite conclusions and findings.

The area under study for the community plan was 22 square miles — 7,800 acres within the city limits and an additional 1,500 acres in the county for a total of 9,300 acres. The largest potential re-zoning in city history, the area was equal to six Sacramento downtowns. Finally, after years of meetings, debate, studies and delay the proposed North Natomas Community Plan came before the City Council on February 6, 1986. The moment of truth was at hand. All public testimony, pro and con, had been heard at previous meetings. After initial discussion, Councilman Pope offered the resolution in support of the plan. It was seconded by Councilman Kastanis. The 17-page resolution took up eight pages on shorthand reporter Eileen Jennings' typewriter.

The first two paragraphs set the tone for the resolution as Pope said: "Needless to say, after a couple of years of discussion on this Community Plan and for me over eight years of speeches and reading staff reports and deliberations about North Natomas, I know each of us on this Council recognizes the opportunity that we have to make a decision that perhaps will have one of the most dramatic impacts on the direction of growth in the metropolitan Sacramento area.

"The proposed Plan, I think, that's before us will set a standard in my mind and I think in the rest of the Council's mind for excellence in planning for this community. The Plan possesses greater benefits, I think, than any other community plan that's been adopted in the history of Sacramento." Councilwoman Lynn Robbie then introduced a substitute motion to separate the re-zone of the 9,300 acres from the sports complex issue. It was seconded by Mayor Rudin, who had wanted the issues separated all along. But this was not to be. City Attorney Jackson said Robbie's substitute motion would wipe out the original motion. After some discussion, Robbie took another approach. She introduced other amendments to the motion on a variety of issues; air quality, the Natomas Airport, Regional Transit rights-of-way and others that would delay or stall the issue. After each one was discussed, she came back full circle and once again tried to separate the issues. Roberts Rules of Order were sorely tested that night and Robbie got little sympathy from the Council when she said: "I want this voted on separately and I want it voted on separately for a very clear reason. The clear reason is that I am not opposed to the stadium and I want my constituents to clearly understand that

I'm not opposed to this stadium. I do not want this in the newspaper tomorrow with the idea that there were seven to two against the stadium. I want the people in District 8 to understand that I'm just as much of a Kings' fan as anybody else and I want it voted on separately. I don't think that's asking too much."

Despite their wanting to separate the issue on this final vote, both Rudin and Robbie had strongly supported the concept of a community-wide plan when Council decided to go that way two and a half years earlier. They had voted to spend a lot of taxpayer money to study the full 9,300 acres and we thought it was only fair that they now abide by what the plan had come up with, which, after Lukenbill was finally able to persuade some Council members, was a level of development, including the sports complex, that was pretty close to what we said was needed to economically justify the privately financed sports complex. Rudin, who a few years earlier opposed our original 435 acre re-zone request, said on this night, "I think we're re-zoning too large an area." She seemed to forget that the latest plan was not the SSA's plan, however. It was the city's. If she would not abide by the community plan why did she support the study? If she thought the SSA would shrivel and die during that time she was mistaken. But this time the die had been cast in our favor and the votes were already with us.

There was one more delay, though, because all politicians love to talk and each wanted to get his or her two cents in before this historic vote. The plan was described as "bold" by Johnson. Shore said it was a "beginning." Serna referred to the planning process as "rigorous." Smallman said it was "exciting." Kastanis

saw it as an "opportunity" while Robbie said the density was "too high" and Rudin said the re-zoning raised too many "red flags." But Chinn made a prophetic comment when he said, "Fifteen years from now people will look back to this night and wonder why we had such a big fuss over this issue."

Mayor Rudin, knowing personal defeat for her hard-fought cause was imminent, showed some real class in her closing comments. "The plan will go forward and I'm going to pledge my efforts because I know it's going to be approved tonight. I'm going to pledge my efforts to make it work." She lost the war but she was still mayor and had to abide by what the City Council had decided. Even though a Natomas re-zoning was not her view of how the city should grow, she gracefully accepted the majority view. A resolution in support of the Natomas plan was passed 7 to 2. Lukenbill, who paced up and down the halls while the issue was being debated for what seemed like the millionth time, said the victory was the start of a lot of work. "All I've been trying to do is get permission for eight years."

I didn't go to that important meeting; I had been to hundreds of meetings on the issue for years. I tried not to but I took personally the oppositions' comments about greedy, disingenuous developers. I promised myself I wouldn't subject myself to it again. I timed it right and showed up instead at Richard Benvenuti's for the victory celebration. Richard praised Lukenbill for his hard work and commitment and Gregg in turn praised Jan, his wife, because she lived with the struggle for as long as anyone. I couldn't even get near Gregg that night to congratulate him because there were so many glad-handers who had circled around him and jumped on

the bandwagon now that we were finally victorious. So I left with my friend Tom Peterson, the food and beverage man, to share the moment with the people I was most comfortable with, the ARCO Arena staff.

We should have known that the opposition would keep fighting, even in defeat. The battle over Natomas would move up to a new level — the courts. ECOS and the Natomas Community Association filed the first suit on grounds that the Natomas Plan was in violation of the city's 1974 General Plan. A general plan is basically a blueprint for the city's future and the last one approved by the city declared North Natomas to be off limits to development. The Council, in approving the Natomas plan, was effectively amending the general plan, however, so the lawsuit was basically a procedural challenge. But there would be other lawsuits and appeals to the Natomas Plan, five lawsuits in all in 1986. The lawsuits and the city's ineptness, which created some of the lawsuits, had just about sapped my zeal and enthusiasm for the whole struggle that started when Gregg and I shook hands and agreed to start this crusade in 1978. The dream of a sports complex was dying a slow death in my heart while Gregg, the relentless one, kept plodding methodically toward his goal, almost oblivious to the explosion of lawsuits all around him.

I was especially devastated when some cruel vandals killed nearly 600 trees we had planted in the area. Some 471 were along Interstate 5 and another 127 young trees were destroyed two days later along I-80. They included valley oak, weeping willows, white alder, and my favorite, the redwood. The redwoods are the largest living things on earth. The giant sequoia lives for 3,500 years while its cousin, the coastal redwood, has

a life span of 2,200 years. I got a natural high each day when I drove by the beautiful new trees until on Monday morning April 6, 1987, the trees were destroyed as some sort of protest, no doubt, for the plans we finally had won approval on. I surveyed the damage with Jesus Orozco, the landscape superintendent, walking nearly an hour and touching every uprooted tree. Nearly two years of growth were cut down in a single night of mindless rampage.

Rick Eychensen, general manager for KFBK Radio, sparked the idea for a tree replanting. The SSA joined forces with the Sacramento Tree Foundation and the radio station to replace the trees. It was open to the public and two hundred nature lovers showed up on a bright Saturday morning to replant many of the trees. That was a happy day.

The formality of adopting the North Natomas plan was approved on May 13, 1986, with Anne Rudin the only dissenter in a 7 to 1 vote. Councilman Bill Smallman was absent.

I couldn't bear to join Lukenbill at the meeting or the victory party. I would have liked to share the moment with Luke but he was once again surrounded by anyone who played any part in the Natomas effort. I was selfish. I remembered the handshake eight years earlier when we were just a couple of crazy dreamers. We had pulled off what a lot of people thought was impossible. You can't fight City Hall and win. We did but we had two great allies inside City Hall — City Manager Walt Slipe and Deputy City Manager David Martinez. The win, though, took its pound of flesh. We now both knew politics and compromise. But the dream was fading. We both knew real hard work lie ahead. Poli-

tics was a necessity to overcome, but we never had any idea it would take eight long and bitter years.

Fifteen months later, worn out and exhausted by all the bull we had gone through, I retired from the SSA. When the City Council passed a resolution thanking me for my efforts, I got my last shot off on how I felt about Sacramento and North Natomas. The brief speech read:

"It is a great honor to be recognized by the political leaders of our community. I have lived practically my whole life in Sacramento, coming here as a one-year-old on my mother's knee in 1946. So I say to you from the bottom of my heart, as a 40 year resident of this community — I love Sacramento.

"There is a song that says: 'There ain't no good guys, there ain't no bad guys, there's only you and me, and we just disagree'."

"Obviously, there has been disagreement and debate over North Natomas but the policy decision has been made to go ahead with the construction of the arena, stadium, infrastructure and the PUD's."

"With your vision, your cooperation, your leadership, and with the city staff's daily diligence in implementing those policy decisions — I firmly believe that North Natomas will be a model for all communities in the United States."

"In conclusion, the orderly development of North Natomas will send a clear message around the country that Sacramento is no longer a re-active city, instead a pro-active city in its dedication to excellence; and I will only love Sacramento more because of it."

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TO BUREAU

Draft Natomas Basin Habitat Conservation Plan and Draft EIS/EIR

Public Information Workshops and Open House

- Monday, September 23 (4:00-6:00 pm)
- Monday, September 23 (7:00-9:00 pm)
- Wednesday, September 25 (4:00-6:00 pm)
- Wednesday, September 25 (7:00-9:00 pm)

Please fill out the following so we can be sure to keep you on our mailing list and to document the author of comments received. Thank you.

Name: B. CHRIS MCKENZIE

Address: P.O. Box 657 Pleasant Grove Ca, 95668

Organization: MCKENZIE FARMS Phone: 916 655-3367
916 709-7885 Cell
916-655-3344 FAX

Please provide us with your written comments on the Draft HCP or EIR/EIS.

See Attached - 3 pages -

Written Comments are due on October 28, 2002

FIELD SUPERVISOR
U.S. FISH AND WILDLIFE SERVICE
2800 COTTAGE WAY W-2605
SACRAMENTO, CA 95825-1846
(916) 414-6711 FAX

SIGNATURE: B. Chris McKenzie
(Use back of form if you would like to provide more information)

McKENZIE FARMS

P.O. Box 657

Pleasant Grove California. 95668

(916) 655-3367 or fax (916) 655-3344

November 28, 2002

Field Supervisor
U.S. Fish and Wildlife Service
2800 Cottage Way w2605
Sacramento, California 95825-1846

Written Comments-Draft Natomas Basin Conservation Plan

I9-1

McKenzie Farms is a small family owned farming business. We have owned and farmed this property continuously since the 1950's. We grow rice, seed rice, wild rice, small grains, Vetch, and hay. Historically we gradually evolved from irregular dry land farming, to complex contour rice fields, to terrace paddies. My comments relate specifically to our property (approximately 350 acres) located north side of Riego Road, East of Pacific Ave., but many also apply to the contiguous lands to the north and east. I have personally conducted and supervised all farming on this property since my father's passing in 1985 on a daily basis. Since the 1960's I have become very familiar with the property and the beneficial aspects of rice farming in regard to wildlife support, habitat utilization, and broader environmental benefit to the area.

Soil series and characteristics are more typical of eastern mid valley elevations (Western Placer County, Sutter and Sacramento County East of the Plan area) having shallow mineral topsoil and hardpan. Our property and adjacent property to the north and east are higher in elevation and not serviced by Natomas Mutual Water Company and rely exclusively on deep wells for irrigation. This is generally the area shown in your Figure 7 Topographic map in the area above the 25foot elevation mark north of Riego road.

I feel the study and plan do not adequately address the uniqueness of this property in Sutter County, overstate the mitigation (incidental take impact) requirements, and threaten an arbitrary "taking" of our property rights without due process, validation, or compensation. Some of the specific factors are:

1. Lack of permanent or permanently charged irrigation ditches.
2. Soil and drain ditch design. The only permanent drains are on the 4 borders of the property. They are intermittent and tend to dry up when the well water is turned off. Soil type (gravel or hardpan), steep ditch profile, and vegetation are not ideal for the GGS.
3. Crop rotation history (330 net farmable acres) of property usage changes almost annually. Unlike much of Natomas where rice is planted 9 of 10 years. Although all farm acreage is tilled once or more annually, our rotation includes rice, wild rice, vetch, fallow/cover crops, hay etc. Rice acreage in 2002 was 190 acres, 2001-127 acres rice, 2000-123 acres rice. Of this property 51 acres (3 year requirement) will be Certified Organic in 2003. Your figure #7 for the year 1993 confirms about 130 non-rice acres.
4. The property is not nor has ever been identified as:

↑
19-1

Adjacent or near any current or proposed habitat site (Figure 8)
Garter Snake habitat site or record (Figure 12)
No Swainson's Hawk nesting sites within 1 Mile (Figure 13)
No Other species sightings or records (Figure 14)

5. The above confirms over 50,000 hours of fieldwork and observations, which I have personally conducted over the last 25 years. I have never seen a GGS on that property. Swainson's hawks are rare usually only when attracted to feed at a burning field and do not hang around to compete with the red tail or marsh hawks. The only other covered species observed are the occasional burrowing owl, and the White Faced Ibis. The latter is of concern only because it has increased from non-existent in Natomas ten years ago, huge populations in recent years. They are becoming the dominant "wader" species posing a potential treat to other traditional nesting species (Avocet, Stilt, Ducks, etc.) as well as a crop depredation factor. The Ibis is has become a significant rice field pest in Asia.
6. The proposal is discriminatory in that the cost of mitigation on one property is unrelated to the actual impact on covered species or habitat. The plan is also discriminatory in that nearly identical property located near by (within 2 miles) in Sutter and Placer counties is not subject to such mitigation requirements.

Additional Areas of Concern:

19-2

A. Land owners are not allowed option of providing suitable mitigation lands or development rights within the designated areas. The acquisition, suitability, purchase, management, cost, and fee schedule appears to be the exclusive right and at the discretion of the operator. There needs to be a mechanism to insure that the exclusive rights of the operator do not distort the property values or unfairly manipulate the value of farm or mitigation land or create dramatically differing mitigation fees.

19-3

B. The plan appears to require the landowner to pay an indeterminate (\$10,000+/acre) to allow the operator to purchase existing farm (rice?) land at \$4,000-8,000/acre, collect a fee, and lease it out to a person of his choice, and keep the rent and while reducing annual county tax payments. This appears to be the case on nearly 1/2 of the total proposed mitigation. The cost versus acquiring development rights from the landowner and allowing continued landowner farming/tenant arrangements is fractional. The proposed system will provide fail-safe wealth accumulation and cash flow as well as competitive inequities for landowners and farmers. Consideration should be given to establishing a bid or compensation system for farmers/landowners to grant habitat development rights for the designated portion of rice and farmed open space land.

19-4

C. Care should be taken in the establishment of new habitats to avoid developing agricultural nuisance problems. Adequate buffers must be established to avoid normal agricultural use (spraying, etc), crop depredation, and importation of species, which may migrate or be upgraded and impact farming.

19-5

D. I feel the plan is disproportionate in relation to prior land use in creating wetland (Marsh) habitat at the expense of upland habitat. California Quail and Pheasants have all but disappeared from the area but have not a sentence in the documents provided.

19-6

E. I was struck by the lack of farmer landowner representation or participation in the process. This should be corrected, no one understands the area, property development, farm management, and plan impacts as well as active local farmers.

I9-7

I have spent most of my life keenly aware of the environmental impact of the food and habitat provided by farmers for nesting and migrating species. We have incurred considerable expense for decades to sustain a dwindling wild pheasant population, maintain water for (spring and fall) migrating waterfowl, encouraged waterfowl nesting, and managed the resource without a penny of recompense or hunting revenue. Each year our rice feeds thousands of people, tens of thousands of birds, reduces valley summer ozone, produces over 200 million gallons of oxygen, contributes to the economy and provides an exportable product to reduce an escalating balance of payments deficit. I feel this plan as proposed will be detrimental to sustaining private property and farm ownership, accelerate sale and development of farms, concentrate land ownership, and undermine farming.

I9-8

It has been extremely difficult task to list all comments and concerns raised in the hundreds of pages provided in your draft. There would be doubtless other concerns raised or satisfied with the many details on procedure, accountability, committee appointment, audit procedures, and legal remedies not clarified in the Draft Plan provided. I would appreciate the opportunity to explain my concerns, and better understand your proposed actions so vitally affecting our property and livelihood. Thank you for considering these informal comments please keep me notified of any meetings, proposals and/or actions concerning the progress of this plan.

B. Chris McKenzie- Manager

Sent By: JMONROE;

4154536521;


Dec-5-02 13:25;

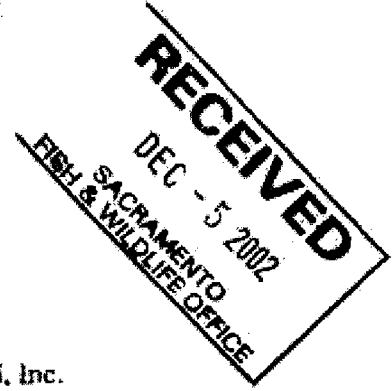
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Jud Monroe, Ph.D.
Environmental Planning, Documentation, and
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21 Fairhill Drive, San Rafael, CA 94901
Bus: 415-453-6546; FAX: 415-453-6521
e-mail: jmonroe@pacbell.net

FAX Cover Sheet

Date: December 5, 2002
To: Ms. Cay Goude
Company: USFWS, Sacramento Office
FAX No: 916-414-6713
From:  Jud Monroe and Dean Carrier, for Brookfield, Inc.



Number of Pages, including coversheet: 27

Comments:

Per your direction at our meeting on November 25, 2002, Dean Carrier and I, on behalf of Brookfield, Inc., are sending our comments on the NBHCP via FAX. We hope that our comments will help the Service to make the Final EIR/EIS for the NBHCP a stronger document and enhance prospects for long-term basin-wide conservation.

If you do not receive all of the pages, please call at 415-453-6546.

Sent By: JMONROE;

4154536521;

Dec-5-02 13:25;

Page 2

Jud Monroe, Ph.D.
Environmental Planning and Documentation
21 Fairhills Drive, San Rafael, CA 94901
415-453-6546 (O); 415-453-6521 (FAX)

and

Dean Carrier
Certified Wildlife Biologist
3655 Sunview Road, Paradise, CA 95969
530-876-9393 (O); 530-876-9399 (FAX)

December 5, 2002

Department of the Interior, Fish and Wildlife Service
Sacramento Office
2800 Cortage Way
Sacramento, CA 95825
ATTN: Ms. Cay Goude
BY FAX: 916-414-6713

RE: *Comments on the Revised Natomas Basin HCP and the Draft Environmental Impact Report/Environmental Impact Statement for the Revised Natomas Basin Habitat Conservation Plan*

Dear Ms. Goude:

110-1 [On behalf of Brookfield, Inc., we provide the following comments to the *Revised Natomas Basin HCP* and the *Draft Environmental Impact Report/Environmental Impact Statement for the Revised Natomas Basin Habitat Conservation Plan* (hereafter "NBHCP" and "EIR/EIS"). Our comments reflect a desire that the conservation objectives of the NBHCP be achieved and provide a sound basis for present and future conservation of the covered species in the general Natomas Basin area.

Our comments relate to the NBHCP's discussion of potential future development and related discussion of cumulative impacts in the EIR/EIS. For convenience, we have initially summarized our concerns, followed by a more detailed discussion.

1. SUMMARY

110-2 [In general, we believe that the EIR/EIS discussion of cumulative impacts is inadequate as it relates to the Natomas Joint Vision Planning Area (NJVPA). As a result, the EIR/EIS is inconsistent with the requirements spelled out in CEQ Regulations, CEQA, and the 1996 *Habitat Conservation Planning Handbook*. This problem may be remedied, and the EIR/EIS strengthened, by addressing potential cumulative impacts of such future development in the NJVPA and providing for their mitigation in a manner consistent with that of the NBHCP.

- I10-3 1.1 **The NBHCP and EIR/EIS make numerous statements regarding (a) the possibility for development outside of the Permit Area but within the 53,537 acres designated as the interior of the Natomas Basin and (b) the effects of such development on the NBHCP.**
- First, the NBHCP and the EIR/EIS alternately assume no development beyond 17,500 acres within the interior of the Natomas Basin or some undefined level of urban development. However, statements such as "*It is assumed that the remaining land within the Basin will ultimately be a combination of urban and agricultural uses.*" (NBHCP page 1-18, lines 1 and 2), make it clear that development is anticipated outside of the Permit Area. Second, in the event such development occurs, the NBHCP proposes a number of contradictory consequences related to this development.
- I10-4 1.2 **The EIR/EIS discussion of cumulative impacts (Section 4.1.2.2 and following) is too narrow and is not in compliance with CEQ Regulations (40 CFR Section 1508.7) or the California Code of Regulations Section 15355.**
- The NBHCP concludes that future development outside of the Permit Area would be an action that would have cumulative and adverse effects on threatened and endangered species, even to the extent that it might trigger reevaluation of the permits issued under the NBHCP. However, the EIR/EIS (page 4-4) does not address such potential impacts. Instead, it limits "*past, present, and reasonably foreseeable actions that have the potential, in combination with the effects of the Proposed Action, to result in cumulative impacts are those that:*
- *submitted an urban development permit or other permit application to a federal or non-federal agency with approval authority*
 - *are related to the types of impacts attributable to those that would result from implementing the Proposed Action*
- These extremely narrow criteria are inconsistent with the discussion of cumulative impacts in the NBHCP. If the NBHCP and its EIR/EIS are to be consistent, the potential effect of future development must be addressed in the EIR/EIS evaluation of cumulative impacts. The present EIR/EIS focus on impacts associated with the "*management of covered species in the Natomas Basin or in other parts of their range*" is too narrow. CEQ regulations require that: "*NEPA analysis must assess cumulative effects, which are the impact on the environment resulting from incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. Actions by federal, non-federal agencies, and private parties must be considered.*" (40 CFR 1508.7)
- I10-5 1.3 **The requirement to address cumulative effects of potential future development is not merely a procedural issue. It is a substantive issue. The cumulative impacts of clearly foreseeable development in the interior of the Natomas Basin must be addressed in the EIR/EIS to provide a basis for ensuring that such development may be accomplished in a manner consistent with the conservation objectives of the NBHCP. In particular,**

Sent By: MONROE;

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Page 2/2

probable development between the City of Sacramento and Sutter County permit areas in the NJVPA should be addressed.

I10-5 Under both CEQ regulations and CEQA guidelines, cumulative impacts analysis requires identification of the probable impacts of foreseeable future actions and their incremental impact in the context of the NBHCP. Potential mitigation measures must also be described and evaluated. The omission of reasonably foreseeable development in the EIR/EIS discussion of cumulative impacts makes it difficult to determine how the conservation objectives of the NBHCP will be accomplished. The failure to address such cumulative impacts results in an EIR/EIS that limits the opportunity of the public and decision makers to evaluate and comment on a potentially significant impact of the projects permitted by the NBHCP.

I10-6 1.4 **These issues can be addressed satisfactorily by revising the NBHCP and the EIR/EIS to reconcile internal inconsistencies related to future development and expanding the discussion of cumulative impacts. These revisions would involve:**

- Identify and analyze the probable level and type of development likely to occur in the portions of the 53,537 acres of the interior Natomas Basin. We recommend that this be accomplished by including the City of Sacramento/County of Sacramento Joint Vision planning effort, which has been underway since May of 2001.
- The conservation objectives of the NBHCP should be addressed by providing consistent guidelines for mitigation of past, present, and future development. In developing mitigation strategies to address impacts of potential future development, the Service should be consistent with the guidance on page 3-14 of the USFWS/NMFS November 1996 Habitat Conservation Planning Handbook, which states in part:

I10-7 *"Sometimes a new HCP will overlay multiple existing HCPs, or other applicants may elect to pursue an HCP on their own even though a regional HCP is being developed in the same area. . . . Such inclusions and exclusions are perfectly acceptable. Nevertheless, participants should be aware of coordination problems that can develop between HCPs in these types of cases. For example, it is important to ensure that mitigation programs for the same species are identical in adjacent HCPs."*

I10-8 • In particular, the NBHCP and the accompanying EIR/EIS cumulative impacts analysis should be revised to reflect the foreseeable future development in the NJVPA. The general manner in which such impacts should be addressed to ensure that the conservation goals and objectives of the NBHCP may be accomplished should also be discussed. In evaluation of mitigation for cumulative impacts, the Service should specify that mitigation measures for impacts in the NJVPA to threatened and endangered species covered by the NBHCP should be addressed in a manner that is compatible with those in the NBHCP and will accomplish mitigation equivalent to that provided for in the NBHCP.

I10-9 We encourage the Service to take these actions to bring the cumulative impacts analysis of the EIR/EIS into compliance with CEQ Regulations and CEQA guidance, and thereby provide an appropriate basis

Sent By: JMONROE;

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I10-9 for addressing the impacts and appropriate mitigation for foreseeable future development in the NJVPA.

2. DETAILED COMMENTS

2.1 The NBHCP makes numerous statements regarding (a) the possibility for development outside of the Permit Area but within the 53,537 acres designated as the interior of the Natomas Basin and (b) the effects of such development on the NBHCP.

2.1.1 First, the NBHCP and the EIR/EIS alternately assume no development beyond 17,500 acres within the interior of the Natomas Basin or some undefined level of urban development:

- NBHCP Definitions Section, Definition 4, last sentence:

I10-10 *"Any development within the City of Sacramento beyond 8,050 acres to be covered under its incidental take permits, or within Sutter County, beyond 7,467 acres to be covered under its incidental take permits, or within Sacramento County beyond the MAP project, will not be covered under the respective incidental take permits and will trigger a reevaluation of impacts to and mitigation for biological and other resources in the Natomas Basin and amendment of the NBHCP and the incidental take permits or development of a new HCP and issuance of new incidental take permits to address such impacts and mitigation as appropriate."*

This sentence clearly contemplates the potential for additional and significant development within the Plan Area; because development will occur, it also makes revision of the NBHCP inevitable

- NBHCP Page 1-2, last paragraph continuing to page 1-3:

I10-11 *"Any additional urban development within the Natomas Basin that occurs outside of the City's and Sutter's Permit Areas, with the exception of the MAP development, including any development within Sacramento County or within the jurisdiction of another Potential Permittee, also would constitute a significant departure from the Plan's OCP [Operations Conservation Plan] and would trigger a new effects analysis, a new conservation strategy. . . ."*

Here, the NBHCP makes it clear that the parties to the NBHCP have contemplated the potential for other development and have concluded that it could require a new conservation strategy. Under the "No Surprises" Policy, such a conclusion implies that the impacts would be significant (if they are not significant, then the No Surprises policy would seem to prohibit a change in the NBHCP's conservation strategy). Therefore, these impacts, and their mitigation, should be addressed in the EIR/EIS.

- NBHCP Page 1-3, Section B, Plan Participants, last paragraph:

I10-12 *"In addition to the Plan Participants identified above, there is the potential for other parties to seek coverage under the NBHCP or a similar habitat conservation program. These entities and individuals are considered Potential Permittees and are discussed following the Plan Participants below."*

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110-12 This sentence clearly contemplates other development, and a need for other Section 10(a) permits or amendment to the proposed permits under the NBHCP.

- NBHCP Page 1-5, last paragraph continuing to page 1-6:

"If the City of Sacramento annexes additional lands into the City (with the exception of the panhandle annexation area - see Section III.C.), [sic] The City would be required to comply with state and federal law, to address the impacts of take resulting from future development of annexed lands."

and NBHCP Page 1-6, first full paragraph:

110-13

"For purposes of the NBHCP, although the West Lakeside Annexation area is proposed by the landowners to be annexed to the City of Sacramento, this area currently is located within Sacramento County and is not included in the 8,050 acres of Authorized Development or within the City's Permit Area."

These sentences make it clear that the Service is aware of specific potential future development areas within the 53,537-acre Natomas Basin Plan Area.

- NBHCP Page 1-11, under "5. Potential Permittees":

110-14

"If the County of Sacramento considers new projects within the unincorporated area of the Natomas Basin, in Sacramento County, the County may seek to address mitigation for biological impacts via amendments to this NBHCP or through a habitat conservation plan similar to the NBHCP. Similarly, farmers within the Natomas Basin may choose to participate in the same or similar habitat conservation plans that would specifically address ongoing agricultural operations."

These sentences make it clear that the NBHCP contemplates new projects in Sacramento County, and contemplates permits for agricultural operations as well.

- NBHCP Page 1-17, Third paragraph:

110-15

"The NBHCP conservation strategy has been prepared to accommodate 17,500 acres of Planned Development [within the Plan Area]."

This sentence contradicts all previous references to potential future development within the Plan Area and makes accomplishment of the conservation strategy dependent upon a fixed level of development within the Plan Area, which, from the previously-cited passages, is not a realistic assumption.

110-16

- NBHCP Page 1-17, Last paragraph, continuing to the next page:

"During the 50-year life of the permits, development activities covered by the NBHCP could result in approximately 23,105 acres of urban development in the Natomas Basin (5605 acres of existing development and 17,500 acres of additional Planned Development). It is assumed that the remaining land within the basin will ultimately be a combination of urban and agricultural uses."

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I10-16

This sentence assumes future urban development during the permit life:

I10-17

2.1.2 Second, in the event such development occurs, the NBHCP proposes a number of contradictory consequences related to this development. Specifically, the NBHCP alternately concludes that such development, if it were to occur, would (a) "trigger a new effects analysis" and, "a new conservation strategy" (NBHCP page I-5); (b) "trigger a reevaluation of the Plan, potential amendments and/or revisions to the Plan and Permits, and possible suspension or revocation of the City's Permits" (NBHCP Page I-5); or (c) in the event that development were proposed in the County of Sacramento, "The County may seek to address mitigation for biological impacts via amendments to this NBHCP or through a habitat conservation plan designed to achieve the biological goals and objectives for the Natomas Basin outlined in the NBHCP in a manner compatible with the conservation strategy of the NBHCP "

In short, the NBHCP is recognizes the potential for development outside of Permit Areas but is inconsistent regarding the appropriate response to such development.

2.2 The EIR/EIS discussion of cumulative impacts (Section 4.1.2.2 and following) is too narrow and is not in compliance with CEQ Regulations (40 CFR Section 1508.7) or the California Code of Regulations Section 15355.

I10-18

2.2.1 Cumulative impacts are evaluated in an EIR/EIS to place a specific project in its context and to allow for the adjustment of mitigation to reflect the potential for cumulative impacts. Cumulative impacts analysis provides an opportunity to determine whether the proposed conservation associated with project-specific mitigation is appropriate given the overall context of the proposed action. If the examination of cumulative impacts suggests that mitigation needs to be adjusted, or guidelines for the mitigation of foreseeable actions should be developed, this can be accomplished via mitigation actions for cumulative impacts. This opportunity is lost if the cumulative impacts analysis is too narrowly focused.

The EIR/EIS, however, addresses only impacts associated with the "management of covered species in the Natomas Basin or in other parts of their range." This narrow focus is based on a faulty interpretation of the nature of the Proposed Action. The Proposed Action (the action described in the NBHCP) is the development of 17,500 acres of land, and the issuance of a permit to take threatened and endangered species associated with this development. "Management of covered species in the Natomas Basin" is only a minor feature of the actions permitted by the NBHCP.

Such a narrow interpretation of the Proposed Action is not allowed by the CEQ regulations cited in the EIR/EIS on page 4-3. The CEQ regulation cited on page 4-3 does not limit cumulative impacts analysis to "related actions." Even if it were to allow such a narrow interpretation, the related actions are actions related to those contemplated in the NBHCP, which include both development of 17,500 acres and the management of mitigation areas. The cumulative impacts analysis should therefore also address a full range of foreseeable actions in the Plan Area which might result in take of threatened or endangered species, including development within the Natomas Joint Vision planning area.

Further, Chapter 5 of the *Habitat Conservation Planning Handbook* is explicit regarding the scope of the evaluation of project impacts under NEPA.

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"When thinking about the NEPA analysis as it relates to the incidental take permit and an HCP, it is important to be precise about the nature of the underlying action. The purpose of the HCP process is to provide an incidental take permit to the applicant that authorizes the take of federally listed species in the context of a conservation plan. The HCP will specify the impacts that will likely result from the taking, what steps the applicant will take to minimize and mitigate such impacts, what alternative actions are not being utilized and such other measures as may be required by the Services.

The scope of the NEPA analysis therefore covers the direct, indirect, and cumulative effects of the proposed incidental take and the mitigation and minimization measures proposed from implementation of the HCP. The specific scope of the NEPA analysis will vary depending on the nature of the scope of the activities described in the HCP "

The underlying actions which must be addressed in the NEPA/CEQA documentation for the Natomas Basin HCP are therefore *"the activities described in the HCP,"* and these are not limited to implementation of the NBHCP mitigation programs. Cumulative impacts analysis must address the take associated with the 17,500 acres of take authorized by the NBHCP plus the take associated with management of the proposed mitigation lands.

Given the guidance in the *Habitat Conservation Planning Handbook*, the cumulative impact analysis must include impacts which are reasonably likely to occur if there is future development outside of the Permit Area but within the NJVPA, and these impacts must be evaluated in the context of the take associated with the 17,500 acres of proposed development in the Permit Area and the take associated with implementation of management activities. The NBHCP itself identifies that such development is reasonably likely and would have impacts significant enough to trigger reevaluation of the NBHCP permits. In addition, there is a 10-year public record of proposals for such development, primarily related to development in the NJVPA. Such potential future development must be evaluated in regard to its potential for cumulative impacts under the cited CEQ Regulations because it is foreseeable and may contribute to impacts associated with the activities contemplated in the NBHCP.

Future development also must be addressed because it could have *"impacts related to the types of impacts caused by the Proposed Action."* Both the activities covered by the NBHCP and future development would have impacts to threatened and endangered species. This is made abundantly clear in the NBHCP itself, which notes that future development would possibly trigger a reevaluation of the permits issued under the NBHCP.

In addition, there is no justification for omitting consideration of future development in the EIR/EIS because the NBHCP provides ample evidence that the USFWS and CDFG are aware of the potential for such development. In addition, the attached correspondence related to future development outside of the NBHCP Permit Area reflects USFWS knowledge of this potential for development. Attachment 1 is a letter dated September 7, 1999 to Ms. Cay Goude, USFWS, Endangered Species Division from Mr. Dennis Yeast, Environmental Coordinator, County of Sacramento, requesting assistance "in how this project [North Natomas Long-Term Planning Project] could affect implementation of the NBHCP Attachment 2 is a letter dated April 4, 2000 from Ms. Karen J. Miller, Chief, Endangered Species Division to Mr. Dennis Yeast, Environmental Coordinator, County of Sacramento, discussing USFWS

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concerns related to probable development in an area now included in the NJVPA and described in detail in the November 2000 Draft Environmental Impact Report for a "General Plan Amendment for Long-Term planning in North Natomas or other Appropriate Areas" SCH No 1999022071.

- NBHCP Page 1-18, lines 1 and 2:

"It is assumed that the remaining land within the Basin will ultimately be a combination of urban and agricultural uses."

- NBHCP, Page 1-3, first full paragraph:

"This NBHCP is based upon the 1997 NBHCP that was the basis for issuance of permits to the City of Sacramento."

This reference to the 1997 HCP, which provided for development of lands currently excluded from the permit areas of the revised NBHCP, makes it clear that the authors of the NBHCP were aware of the potential development that would have been covered by the 1997 NBHCP. Per page 3-9 of the 1997 HCP, future development of up to 8,300 acres was anticipated outside of the Permit Area addressed in the NBHCP.

In addition, there is an on-going City of Sacramento/County of Sacramento public planning processes which contemplates development outside of the Permit Area that should be considered in the cumulative impacts analysis.

- In a reference memo (August 7, 2002, Attachment 1), the Planning and Building Department, City of Sacramento, makes a formal recommendation *"that the City Council hold a workshop this evening to discuss entering into a Memorandum of Understanding (MOU) between the City and the County of Sacramento with regard to land use and revenue sharing for the unincorporated Natomas area."*

This memorandum further notes that planning *"to consider goals and policies to modify the City Sphere of Influence for several study areas, including Natomas"* began in June 2000. In addition, a *"preliminary set of planning principles for Natomas was presented to the Board of Supervisors at a public workshop in May 2001."*

Maps accompanying the August 7, 2002 memo show development within the 53,537-acre Natomas Basin, including the Teal Bend Golf Course, expansion of the Sacramento International Airport, a proposed light rail line crossing portions of lands in the Natomas Basin not included in NBHCP Permit Areas, and a proposed "Sphere of Influence" encompassing the lands between Sutter County and the City of Sacramento.

The proposed MOU and Shared Policy Vision (Attachments A and B to the August 7, 2002 Planning and Building Department memorandum) indicate that the City and County contemplate expansion of Sacramento Airport (page 15). The area designated for future development is generally described as

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that area to the east of Lone Tree Road. This clearly leaves the area to the East of Lone Tree Road as the probable area for cooperative City-County development and open-space preservation. Within the Sphere of Influence defined in the MOU, the draft planning principles include a provision for "property Tax Sharing for Multi-Purpose/Master Planned Community Areas."

Given that the City of Sacramento is a party to the NBHCP, it is improbable that preparation of the NBHCP could have been accomplished without participants knowledge of those on-going, and public, discussions of potential future development in the Natomas Basin outside of the Permit Areas.

- NBHCP, EIR/EIS, Executive Summary, Page ES-4, Areas of Controversy

The fourth area of controversy cited in this section is "*Consideration of future development beyond the 17,500 acres considered in the HCP.*"

If future development is an area of controversy, then the criteria used to identify actions or projects to include in cumulative analysis are therefore inappropriately narrow and do not comply with either CEQ or NEPA guidance.

Brookfield believes that a more useful approach to cumulative impacts analysis would be to project reasonably foreseeable development within and outside of proposed permit areas. Expanding the scope of the cumulative impacts analysis in this manner would be (a) more consistent with the scope and objectives of the NBHCP and (b) more likely to result in improved regional conservation planning for threatened and endangered species. This approach would require an additive impact analysis.

Cumulative impacts = project impacts + past impacts + present impacts + future impacts

Such an approach to scoping cumulative impacts analysis is clearly provided for in CEQ Regulations and in CEQA Guidelines. Nor does it matter whether the individual actions or projects are in themselves minor and may not individually cause significant impacts. It is the additive effects that both NEPA and CEQA guidance stress.

The NEPA and CEQA guidance cited by the Service also do not limit cumulative impacts analysis to actions or projects at any particular stage of development. The test for determining whether a future action or project should be addressed is not whether official permitting processes have been initiated. Such actions or projects would more appropriately be defined as "present" because they are contemporaneous with the action or project addressed in the HCP, for which an applicant has requested a permit, the issuance of which will depend on the outcome of the HCP process. The NEPA and CEQA guidance requires somewhat more foresight in cumulative impacts analysis, requiring this analysis to project into the reasonably foreseeable future and identify actions or projects which might have similar impacts to the action or project addressed by the HCP.

The EIR/EIS also has an affirmative responsibility to take a broad and long-term view of cumulative impacts, because failure to do so undermines the guiding principles for the Section 10(a) process. In the 1996 USFWS/NMFS Habitat Conservation Planning Handbook, Section E(5)(page 1-7), the Section 10(a) process is described as "*an opportunity to provide species protection and habitat conservation within the context of non-Federal development of land and water use activities.*" It thus

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provides a mechanism for allowing economic development that will not appreciably reduce the likelihood of the survival and recovery of the species in the wild." A narrow scoping of cumulative impacts analysis risks understatement of potential impacts and does not provide a sound basis for addressing such impacts in a manner consistent with the conservation objectives of the NBHCP. Section 10 of FESA is "an opportunity to provide species protection and conservation within the context of non-Federal development" only if that context is fully defined.

I10-18 Despite evidence that development is planned for the 53,537-acre Plan Area of the Natomas Basin, including expansion of the Sacramento International Airport and urban development between the City of Sacramento and Sutter County within a new City of Sacramento Sphere of Influence, the EIR/EIS limits discussion of cumulative impacts to the potential for impacts associated with management of the proposed mitigation sites and other wildlife areas in the general vicinity of the Natomas Basin. This narrow focus limits the ability of the public and decision makers to evaluate the potential for cumulative impacts associated with urban development and the appropriate mitigation measures for such impacts.

I10-19 2.2.2 In addition to the general consideration of potential future development, there are reasonably foreseeable specific actions or projects that should be addressed in cumulative impacts analysis, which the Service has omitted from consideration.

Even without specific plans for development within the approximately 25,000-acre area between the existing City of Sacramento and Sutter County, a reasonable person could project that development will occur within these areas *as a direct result of the activities permitted under the NBHCP*. The NBHCP and its EIR/EIS designate three permit areas:

7,467 acres area in Sutter County
8,050 acres in Sacramento County
1,983 acres in the Metro Air Park (MAP) area of Sacramento County

The NBHCP proposes to permit development of a total of 17,500 acres, all of it within the above Permit Areas, including substantial commercial and industrial development in south Sutter County and commercial development at the Metro Airport Project. The permit areas are separated by approximately 25,000 acres of land in Sacramento County. The NBHCP describes the Permit Areas for Sutter County (EIR/EIS Figure 3) as including a large "Industrial Commercial Reserve" (ICR). Development of several thousand acres of industrial and commercial facilities in south Sutter County, combined with such development in the Metro Air Park, will have highly predictable impacts associated with significant job creation and associated growth at these industrial and commercial facilities. Because the City-County Natomas Joint Vision will probably focus development east of Lone Tree Road, it is entirely reasonable to assume that there will be housing developed in the area between Lone Tree Road and the eastern boundary of the Natomas Basin to house workers at the MAP Project facilities and the Sutter ICR. Some of this housing would likely be developed in Sutter County, and the NBHCP provides for this development. But it is also reasonable to assume, as the NBHCP does itself in many instances, that the unincorporated area of the County will also be developed. The general characteristics of suburban development are readily predictable -- houses, lawns, roads, shopping areas, parks, etc. The Service could easily utilize the proposed North Natomas

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I10-19 Community Plan as a general indication of the mix of facilities for such development, since it is to be permitted under the NBHCP.

I10-20 2.2.3 In summary, there is a long and detailed public record (including the 1997 draft NBHCP itself) that documents the potential for additional development within the Natomas Basin but outside of the Permit Area. The EIR/EIS must address the potential for cumulative impacts to threatened and endangered species resulting from the NBHCP in combination with this foreseeable future development. The impact analysis and mitigation planning in the EIR/EIS cannot reasonably be founded on the clearly faulty assumption that areas outside of the Permit Area will not be developed.

2.3. The requirement to address cumulative effects of potential future development is not merely a procedural issue. It is a substantive issue. It is necessary for the cumulative impacts of clearly foreseeable development in the interior of the Natomas Basin to be addressed in the EIR/EIS because the accomplishment of many of the conservation objectives of the NBHCP may be affected by such development and the mitigation that would be associated with such development.

2.3.1 Potential future development may impact the accomplishment of NBHCP conservation strategies and objectives.

In the Detailed Comments 2.1, above, we demonstrate that the NBHCP recognizes that development is likely to occur in the Natomas Basin outside of the Permit Area and that such development should be reviewed to determine its compatibility with the conservation plans outlined in the NBHCP. In Detailed Comments 2.2 we note that one of the Permittees engaged in the NBHCP effort (the City of Sacramento) has been involved in a planning process for cooperative City of Sacramento-County planning for development and open space in the unincorporated areas of Sacramento County, outside of the Permit Areas. Cumulative impacts analysis should address how such development might affect the following biological goals and objectives of the NBHCP:

- I10-21
- "Establish and manage in perpetuity a biologically sound and interconnected habitat reserve system." NBHCP Page 1-14
 - "Minimize conflicts between wildlife and human activities, including conflicts resulting from airplane traffic, roads and automobile traffic, predation by domestic animals, and harassment by people." NBHCP Page 1-15
 - "Ensure connectivity between TNBC reserves to minimize habitat fragmentation and species isolation. Connections between reserves will generally take the form of common property boundaries between reserves, waterways (primarily irrigation and drainage canals) passing between reserves and/or an interlinking network of water supply channels or canals." NBHCP Page 1-15

I10-22 2.3.2 It is necessary that the EIR/EIS address probable future development because there is no certainty that all such development would be subject to future FESA/CESA permit process. The EIR/EIS may be the only opportunity to place foreseeable development in the Joint Natomas Vision planning area in the context of the NBHCP.

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The analysis of the cumulative impacts of the proposed project in light of past, present, and foreseeable future development in the Natomas Basin is substantively important at this time because not all development which may occur outside of the Permit Area would necessarily involve take of threatened and endangered species. The Service would therefore have no authority to regulate this development.

The extent to which future development may proceed without future FESA/CESA review may depend on whether or not such development involves actual death of an individual of a listed species. Section 10 of ESA requires a permit be issued for "...any taking [of fish and wildlife] otherwise prohibited by Section 9(a)(1)(B). The latter Section states such "take" must result in the death of an individual of a listed species. In a memorandum responding to *Arizona Cattle Growers' v. U. S. Fish and Wildlife Service* f.3d, 2001 WL 1598208 (9th Cir. Dec. 17, 2001), the USFWS solicitor indicated one of the findings was "An incidental take statement is not a mechanism for managing land use. If there is no reasonable certainty of take, there should be no ITS and no reasonable and prudent measures with terms and conditions." While this argument applied to Section 7 processes (projects and procedure of federal agencies), it is obvious the same would apply to the issue of take by the private sector on private lands. Thus, it would appear that if no take would reasonably occur, no Section 10 permit would be necessary.

I10-22 If the Service wishes to address the potential for impacts associated with future development, then the cumulative impacts analysis for the NBHCP may be the most appropriate vehicle for doing so.

I10-23 2.3.3 The failure of the EIR/EIS to address cumulative impacts of foreseeable development outside of the Permit Area may also affect future implementation of NBHCP commitments.

The NBHCP makes numerous commitments that any future development beyond 17,500 acres "will trigger a reevaluation of impacts to and mitigation for biological and other resources in the Natomas Basin." These commitments are clearly based on a conclusion that such development would have significant impacts. Nothing short of significant impacts would justify re-opening the NBHCP; if the impacts were not significant, then reevaluation could be considered unjustified and arbitrary. If the cumulative impacts are, indeed, potentially significant, then they, and appropriate mitigation for them, must be addressed in the NBHCP EIR/EIS.

This potential problem arises as a result of the "No Surprises" Policy. The Habitat Conservation Planning Handbook (page 3-29) expressly prohibits reevaluation of permit requirements under the "No Surprises" Policy:

"Once a permit has been issued and its terms are being complied with, the permittee may remain secure regarding the agreed upon cost of mitigation, because no additional mitigation land, funding or land use restrictions will be requested by the Services. . . except where extraordinary circumstances exist."

As noted in our comments on page 4, the NBHCP and the EIR/EIS draw different conclusions regarding cumulative impacts. The NBHCP suggests that there will be significant impacts associated with future development. But the failure of the EIR/EIS to address cumulative impacts of past, present, and foreseeable future development must be interpreted as a conclusion by the Service that

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such impacts would not be significant. If they were significant, then they must be addressed in the EIR/EIS. Having drawn that conclusion in its own CEQA/NEPA document, the Service could not reasonably conclude at a later date that development outside of the Permit Area was either unforeseen or an "extraordinary circumstance" requiring revisiting of the permits issued under the NBHCP.

In short, the failure to adequately address cumulative impacts places the Service, as a lead agency for the joint CEQA/NEPA document, in a classic "Catch-22." By omitting any discussion of cumulative impacts associated with development, the EIR/EIS contradicts the NBHCP, and the EIR/EIS is the Service's document. The EIR/EIS implicitly concludes that such impacts are insignificant because, if the Service in fact believes that such impacts would be significant, then it is under an affirmative obligation under NEPA to address them. The formal Findings based on the EIR/EIS will reflect this conclusion, because to contradict the EIR/EIS in the formal Findings under CEQA or NEPA would then require revision and recirculation of the EIR/EIS. CEQA, in particular, is explicit on this issue:

"A lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification. As used in this section, the term "information" can include changes in the project or environmental setting as well as additional data or other information. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement. "Significant new information" requiring recirculation include[s], for example, a disclosure showing that:

(1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented." (CEQA Guidelines Section 15088.5(a)(1))

110-23

In summary, if the EIR/EIS does not address cumulative impacts of clearly anticipated development, this must lead to a formal CEQA/NEPA Finding that such impacts will not be significant. If this finding is made, then the reevaluation of permits issued under the NBHCP, triggered by development outside of the Permit Area, cannot be justified or enforced.

2.4 To address these issues, the NBHCP should be revised to provide a consistent approach to addressing potential future development and EIR/EIS should be revised to address the cumulative impacts of such development.

110-24

The appropriate remedy for this inconsistency between the NBHCP and the EIR/EIS is to fully and appropriately address cumulative impacts of past, present, and foreseeable future development, and to develop appropriate mitigation strategies for these cumulative impacts. If this is done, the NBHCP will not have to be re-opened in response to future development and the foreseeable future development may occur in a manner consistent with the conservation strategies provided for in the NBHCP.

The cumulative impacts analysis therefore should identify and analyze the probable level and type of development likely in the interior Natomas Basin, but outside of the Permit Area. We recommend that

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this be guided by the proposed principles of the draft Sacramento City-County Joint Vision, and include at a minimum:

- A discussion of potential development associated with the Sacramento International Airport, including airport expansion and a light rail line from downtown Sacramento to the airport; and
- A discussion of residential and commercial development in the area between the northern boundary of the City of Sacramento and the southern boundary of Sutter County, east of Lone Tree Road.

The cumulative impacts analysis should determine the potential for such development, in combination with past development and that permitted by the NBHCP, to affect the accomplishment of NBHCP conservation objectives. In addressing these potential impacts, the EIR/EIS should also propose consistent mitigation for them. For purposes of analysis of probable impacts and mitigation, the Service should be consistent with the guidance on page 3-14 of the USFWS/NMFS November 1996 Habitat Conservation Planning Handbook, which states in part:

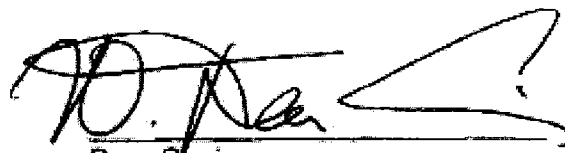
"Sometimes a new HCP will overlay multiple existing HCPs, or other applicants may elect to pursue an HCP on their own even though a regional HCP is being developed in the same area. . . . Such inclusions and exclusions are perfectly acceptable. Nevertheless, participants should be aware of coordination problems that can develop between HCPs in these types of cases. For example, it is important to ensure that mitigation programs for the same species are identical in adjacent HCPs."

The EIR/EIS should therefore be modified to apply the mitigation standards of the NBHCP to future development in the NJVPA and to draw appropriate conclusions regarding the ability of the NBHCP conservation objectives to be accomplished within the context of such future development. If this is done, then we believe that the EIR/EIS it will meet the requirements of both NEPA and CEQA in regard to cumulative impacts evaluation and provide effective guidance for future development and conservation within the Plan Area for the NBHCP.

110-24

Sincerely,


Jud Monroe
Environmental Planning and Documentation


Dean Carrier
Certified Wildlife Biologist

Attachment 1

September 7, 1999 letter from Mr. Dennis Yeast, County of Sacramento,
Department of Environmental Review and Assessment

to

Ms. Cay Goude
US Fish and Wildlife Service
Endangered Species Division



FILE COPY

**COUNTY OF SACRAMENTO
DEPARTMENT OF ENVIRONMENTAL REVIEW
AND ASSESSMENT**

**DENNIS E. YEAST
DIRECTOR**

September 7, 1999

Cay Goude
U.S. Fish and Wildlife Service
Endangered Species Division
2800 Cottage Way, Room West 2605
Sacramento, CA. 95825

Subject: Natomas Long-Term Planning Project (Control No. 97-GPB-0007)

Dear Ms. Goude:

The purpose of this letter is to obtain relevant information from the U.S. Fish and Wildlife Service (USFWS) on the potential impacts of the project on implementation of the Natomas Basin Habitat Conservation Plan (NBHCP). This letter describes the proposed project and its relationship to the NBHCP. This is followed by questions to the USFWS that are intended to assess the potential impacts of the project on the NBHCP. I believe the views of the USFWS are pertinent given the USFWS role to implement the federal Endangered Species Act and to issue Incidental Take Permits for the NBHCP. This information will be useful for the analysis being prepared by Sacramento County for the project Draft EIR. Your assistance is appreciated.

Background.

The North Natomas Long-Term Planning project study area involves approximately 6,519 acres in North Natomas in Sacramento County. This project, which consists of a General Plan Amendment, involves a threshold decision of whether to ultimately urbanize this area. The project study area is included within the boundaries of the Natomas Basin Habitat Conservation Plan (NBHCP). The NBHCP is multi-habitat, multi-species conservation program that is intended to mitigate for the expected loss of habitat value and incidental take of protected

species that would result from urbanization in the 53,000± acre Natomas Basin in northwest Sacramento County and southeast Sutter County.

The NBHCP is designed to allow the USFWS to issue Incidental Take Permits to five jurisdictions: City of Sacramento, Sacramento County, Sutter County, SAFCA, and Reclamation District 1000. To date, only the City of Sacramento Sacramento has applied for and received an Incidental Take Permit.

Presently, Sacramento County has deferred action on the NBHCP pending the outcome of litigation that has challenged USFWS approval of the NBHCP (City version) and issuance of an Incidental Take Permit to the City of Sacramento. Prior to approval of a NBHCP by Sacramento County, any future developments requiring Federal approval that are located within the Natomas Basin and also within the jurisdiction Sacramento County must prepare their own HCP if there is a potential for an incidental take of listed species. Once a NBHCP has been approved by Sacramento County and an Incidental Take Permit issued by the USFWS and CDFG, the landowners would have an option of either participating in the NBHCP or obtaining their own incidental take permits through preparation of their own HCP.

The project study landowners have indicated that they are currently preparing their own Draft HCP for the project study area that would ultimately be submitted in conjunction with a request for an Incidental Take Permit (personal communication, C. Doyle)

The NBHCP, as approved by the City of Sacramento, would not control or designate which lands within the Natomas Basin may be converted to urban uses. However, it anticipates that up to 17,500 acres will be converted to urban uses within the next 50 years based upon approved development, foreseeable development proposals and existing General Plans. In addition, the NBHCP does not control or specifically designate which lands in the Natomas Basin would be converted to permanent habitat.

The primary goal of the NBHCP is to establish a system of wetland mitigation lands in the Natomas Basin. However, up to 50% of the mitigation land can be established outside of the Natomas Basin under certain circumstances. Swainson's hawk mitigation can be in the Natomas Basin or on lands in Yolo County subject to approval of local government.

Under the NBHCP, landowners/developers converting lands to urban development would pay mitigation fees totaling \$2,240 per gross acre. These fees would be

utilized by the Natomas Basin Conservancy (NBC) to acquire land in the Natomas Basin at the ratio of one-half acre of mitigation land for every acre of land converted to urban development. Mitigation fees would be subject to periodic adjustment as deemed necessary by Sacramento County, Sutter County and the City of Sacramento. Recommendations for fee adjustments would be made by the NBC.

Project Impact.

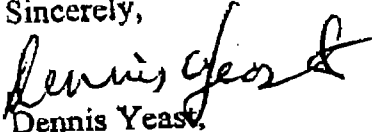
A Notice of Preparation (NOP) for the North Natomas Long-Term Planning Project was issued on February 18, 1999 (see attached). Responses to this NOP indicate substantial interest in how this project could affect implementation of the NBHCP.

The following issues need to be addressed in the Draft EIR being prepared for the North Natomas Long-Term Planning project.

1. Would project participation in the NBHCP (i.e., if applied for subsequent to County approval of the NBHCP) be consistent with the analysis, and development and mitigation assumptions of the NBHCP?
2. How would urbanization of the project study area affect the implementation of the NBHCP?
 - a. What would be the affect on the NBHCP of less land available in the Natomas Basin for mitigation if the project area develops to urban uses? What would be the affect of needing additional habitat area in the Natomas Basin in order to mitigate for the proposed project?
 - b. The project has the potential to result in growth inducement of adjoining lands (especially to lands directly to the west). What effects upon the NBHCP could be expected if additional growth areas were developed in the Natomas Basin?
 - c. Are there other likely potential impacts to the NBHCP associated with implementation of the proposed project?

Your help in this matter is greatly appreciated. Please respond by October 15, 1999. Please feel free to call me or Dan Meier at 874-7914 if you have any questions.

Sincerely,


Dennis Yeast,
Environmental Coordinator

Attachment

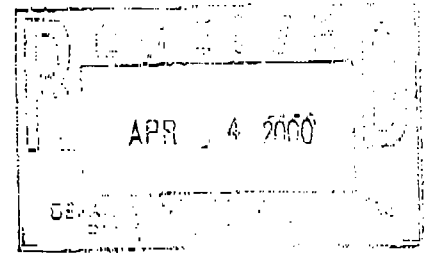
cc: File
Reading File
Mike Winter, Planning Department
Pat Groff, Public Works Administration

Attachment 2

April 4, 2000 letter from Ms. Karen J. Miller,
Chief, Endangered Species Division
US Fish and Wildlife Service

to

Mr. Dennis Yeast, Environmental Coordinator, County of Sacramento,
Department of Environmental Review and Assessment



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

IN REPLY REFER TO:
1-1-99-TA-2396

April 4, 2000

Mr. Dennis Yeast
Environmental Coordinator
County of Sacramento
Department of Environmental Review and Assessment
827 Seventh Street, Room 220
Sacramento, California 95814

Subject: Response to Request for Information on the Natomas Long-term Planning Project (Control No. 97-GPB-0007), Sacramento County, California

Dear Mr. Yeast:

The U.S. Fish and Wildlife Service (Service) has reviewed your request for information on the potential impacts of the proposed Natomas Long-term Planning Project (Control No. 97-GPB-0007) on implementation of the Natomas Basin Habitat Conservation Plan (NBHCP). The project study area involves approximately 6,519 acres within Sacramento County on the east side of the Natomas Basin immediately north of the Sacramento City limits. The project area is within the NBHCP boundaries, but is outside the permit area currently covered by an Incidental Take Permit issued to the City of Sacramento. The planning project is a General Plan Amendment that would involve a decision of whether to urbanize the study area.

In developing this response, we considered the effects of the project both if the County becomes a permittee and participant in the NBHCP and if individual landowners elect to pursue their own HCPs. We are providing the following responses to the specific questions you posed in your letter dated September 7, 1999:

Mr. Dennis Yeast

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1. Would project participation in the NBHCP be consistent with the analysis, and development and mitigation assumptions of the NBHCP?

In response to this question, the Service has identified three concerns:

Amount of development in the Natomas Basin

Comment - The NBHCP anticipates up to 17,500 acres of development within the Natomas Basin within the next 50 years. This figure was based on existing general plans and foreseeable development and was provided to the Service by the land use agencies developing the NBHCP in support of application for Incidental Take Permits (ITP). This is the maximum amount of development analyzed by the Service in its biological opinion and environmental assessment. Development in excess of this amount could change the Service's analysis of the effects of implementation of the NBHCP.

Recommendation - The County should determine the effects of the proposed project on the maximum amount of development that could occur in the Basin. The County's assessment should consider ongoing and anticipated development in the City of Sacramento, Sacramento County, and Sutter County since issuance of the ITP to the City of Sacramento on December 31, 1997.

Need for County's participation to ensure consistent implementation

Comment - While we understand the County's current reluctance to continue action on application for an ITP, we believe the County's participation is important to the success of the NBHCP. The Service is moving forward on issuance of an ITP for the Sacramento Metro Air Park special planning area. In this case, the Sacramento Metro Air Park development was anticipated and included in the NBHCP's projections of development within the Basin. However, the lack of participation of Sacramento County as a permittee significantly increased the complexity and difficulty of development and review of this HCP, even though the conservation strategy adopted by Metro Air Park is consistent with the NBHCP.

In essence, few if any entities are prepared or have adequate mechanisms in place to implement a regional HCP in the manner of a land use jurisdiction. The Service views land use jurisdictions, like Sacramento County, as more appropriate permittees for regional HCPs because they have the mechanisms in place and the authorities to ensure adequate and consistent implementation. Issuance of another ITP in the Natomas Basin to a private (non-land use jurisdiction) multi-party landowners group would further increase the complexity of monitoring compliance with the NBHCP's development and mitigation requirements and tracking implementation of the plan's conservation strategy. Apart from the benefits to landowners within the County's jurisdiction, the County would benefit from participation in the NBHCP by obtaining incidental take coverage for its own activities, such as public works projects, maintenance of County facilities, roads, the airport, and airport buffer lands, etc.

Mr. Dennis Yeast

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Recommendation - Prior to issuance of any ITP, the Service will be required to determine whether adequate mechanisms exist to ensure implementation, tracking, and enforcement of the permit. If the County approves the proposed project without obtaining an ITP and instead requires individual landowners to obtain permits, we request the County's assistance in determining whether mechanisms are available to ensure consistent implementation and tracking, and if necessary, enforcement of the permits. The County may also wish to consider what if any role it will take in ensuring implementation of permits issued to individual landowners. The County should also contact the Natomas Basin Conservancy (NBC), the plan operator responsible for acquiring and managing habitat mitigation lands and also charged with monitoring and tracking NBHCP implementation. The County should inquire whether requiring individual landowners, or landowner groups, to obtain permits will affect the NBC's abilities to carry out its roles in implementing the NBHCP.

Landowners may propose HCPs inconsistent with the NBHCP

Comment - To date, the Service is not aware of the development of any draft HCPs prepared by landowners in the project's proposed study area. However, one landowners group, Northern Territories Inc. (NTI), has had varied involvement in the NBHCP process. NTI landowners originally were opposed to the NBHCP. Later, NTI proposed an alternative "narrow channel marsh" design for the NBHCP. This design was rejected by the Service and California Department of Fish and Game as a risky, untested, and potentially very expensive design. After issuance of an incidental take permit to the City of Sacramento, NTI began discussions with the Service on developing an HCP. NTI proposed another "narrow channel marsh" design combined with flood control and drainage features, and a mitigation ratio significantly lower than that adopted in the NBHCP. The Service expressed serious concerns about the mitigation design and the lower ratio. Most recently, NTI has presented another "narrow channel marsh" design to the NBC. NTI has requested the NBC adopt their marsh design (among other changes) as a minor modification to the NBHCP. The Service and CDFG are in the process of providing the NBC a review of the effects of adopting NTI's proposal. (However, the Service has already expressed concerns about similar designs.) In summary, the Service has not yet received any indication that NTI has or is preparing a draft HCP that is acceptable to the Service and is consistent with the NBHCP that the City of Sacramento, Sacramento County, and Sutter County participated in developing. We are also not aware that any other landowners in the study area are preparing draft HCPs and application packages for ITPs.

Given this experience, the Service is concerned about the potential for HCPs that differ significantly from the NBHCP. Plans that differ significantly from the NBHCP could change the Service's analysis of effects of NBHCP implementation. The Service analyzed the effects of implementation of the NBHCP under the assumption that all development would be mitigated at a ratio of a half acre protected for each acre developed. We also assumed all mitigation would be consistent with the conservation strategy outlined in the NBHCP. A mitigation strategy differing from that in the NBHCP could affect the amount, size, and quality of habitat mitigation lands and may not be consistent with the Service's analysis of the effects of the NBHCP. The Service

Mr. Dennis Yeast

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would require further analysis of both the effect of the new HCP's mitigation strategy and its effect on implementation of the NBHCP.

Recommendation - If the County does not obtain an ITP that would extend coverage for incidental take to private development projects, the County should consider the effects of implementation of multiple plans with differing mitigation strategies. The County's analysis should consider effects on the amount of habitat that may be set aside, viability of habitat reserves, the amount of development in the Basin, and the implementation of the City's portion of the NBHCP. Alternately, the County should consider requiring project proponents to submit proposals consistent with the NBHCP's conservation strategy.

2. How would urbanization of the project study area affect implementation of the NBHCP?

a. What would be the effect on the NBHCP of less land available in the Natomas Basin for mitigation if the project area develops to urban uses? What would be the effect of needing additional habitat area in the Natomas Basin in order to mitigate for the proposed project?

Comment - See above regarding amount of development analyzed. The Service analyzed a maximum of 17,500 acres of development. We assumed the majority of lands not developed or in reserves would remain in agriculture. The Service assumed that the reserves plus undeveloped lands would be adequate to support the covered species. To the extent that the proposed project changes the amount of lands developed within the Basin, the proposed project could affect the ability of the NBC's reserve lands and the remaining habitat and undeveloped lands in the Basin to protect and maintain the covered species. [FWS would have to do the same in deciding whether to approve an HCP covering the lands within the proposed urbanizing area.]

Recommendation - The County should analyze the cumulative amount of development that may occur within the Natomas Basin and consider whether that amount of development would affect viability of reserve lands. The County should also consider the effects on the ability of the reserves and any remaining undeveloped lands to support the covered species and whether the cumulative effects of development would appreciably reduce the likelihood of survival and recovery of the covered species. This analysis would be required before the Service could take action on any application for an incidental take permit.

b. The project has the potential to result in growth inducement of adjoining lands (especially lands directly to the west). What effects upon the NBHCP could be expected if additional growth areas were developed in the Natomas Basin?

Comment - While the NBHCP does not control or designate land use within the Natomas Basin, it does envision establishing habitat reserve lands that are connected by existing waterways and delivery canals. Development of the proposed study area and the lands to the west could create a large block of urbanized land stretching from the Natomas East Main Drainage Canal almost to

Mr. Dennis Yeast

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the Sacramento River (this block could include the airport and Sacramento Metro Air Park). This could effectively isolate habitat in the southern portion of the Natomas Basin (i.e., Fisherman's Lake area) from habitat in the northern portion of the Basin. Lack of connectivity between habitat could affect the ability of the reserve lands and the remaining undeveloped lands to support the covered species. If reserve lands are no longer viable, the Service may be required to reconsider the effects of the ITP issued to the City.

Recommendation - The County should consider whether growth-inducing effects of the proposed project will isolate habitat in the northern and southern parts of the Basin, and whether such development would affect the ability of the NBC to acquire viable reserves that meet the goals and objectives of the NBHCP.

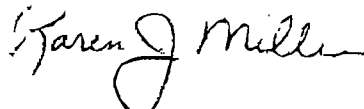
c. Are there other likely potential impacts to the NBHCP associated with implementation of the proposed project?

Comment - The NBC owns approximately 338 acres of property in Sacramento County, most of which is in the study area outlined on the maps provided to the Service. The NBHCP requires that the NBC reserves be set back at least 800 feet from existing or proposed urban development, based on existing general plans. At the time of purchase, the NBC property met this criterion. If the property cannot be adequately buffered from adjacent incompatible land uses, the NBC may be required to acquire additional lands elsewhere in the Basin, or reduce the acreage of the property that may be counted as reserve lands by that amount of the property within 800 feet of urban development.

Recommendation - The County should consider how the proposed project will affect the NBC property and its viability as a habitat reserve. Analysis should consider whether an adequate setback can be maintained, and whether comparable reserve lands can be acquired if the setback is not maintained.

We appreciate the opportunity to provide input on issues to be addressed in the draft EIR being prepared for the North Natomas Long-term Planning project. Please contact Kelly Hornaday or Chris Nagano of my staff at (916) 414-6645 if you have any questions regarding this letter.

Sincerely,



Karen J. Miller
Chief, Endangered Species Division

Mr. Dennis Yeast

6

cc: CDFG (Attn: Larry Eng, Dave Zezulak)
The Natomas Basin Conservancy (Attn: John Roberts)
City of Sacramento (Attn: Carol Shearly)

12/09/2002 15:41 FAX 916 920 8463

CH2M HILL

001/002

10/14/02

6

PERRY FARMS

Certified Public Accountants
350 Court Street, Woodland, CA 95695
Telephone (530) 662-3251
Fax (530) 662-4600

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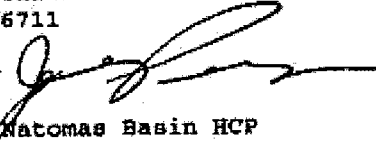
SACRAMENTO
FISH & WILDLIFE OFFICE

MEMO LETTER

Date: October 14, 2002

To: Field Supervisor United States Fish and Wildlife service
2800 Cottage Way W-2605
Sacramento, Calif. 95825
Fax (916) 414-6711

From: John Perry



Re: Comments on Natomas Basin HCP

I am a landowner in the Natomas Basin and my family has farmed in the area since the early part of the 1900's. My questions and comments relate to the Swainson Hawk, but I will ask some questions regarding Giant Garter Snake.

III-1

First, the HCP designates a hawk zone, what biological information exists to justify the one mile wide hawk zone. On figure 13 of the draft plan, it shows active hawk nests. There are a greater number of active nests in the northern portion of Sacramento County but yet the one mile zone stays consistent, why? In developing the hawk zone what consideration was given to the fact that the Yolo bypass, in Yolo County, runs the entire length of the Natomas Basin and will remain open space in to perpetuity. What consideration was given for Sacramento weir bypass which runs from the Sacramento River to the Yolo Bypass? It is my understanding that the purpose of California Endangered Species Act is the preservation of the endangered species. If habitat exists in Yolo County and that habitat will remain in existence into perpetuity, should that not be taken into consideration?

III-2

III-3

In the 1997 HCP it was stated that the hawk foraging habitat should be within 10 miles of the nest and the hawk has been observed up to 18 miles from the nest. If this information is accurate, why is the one mile zone necessary? Under the California Endangered Species Act the taking of habitat is not considered the taking of the species, therefore what authority exist to not allow any development in the hawk zone? In the lower portion of Sacramento County the nest sites mainly exist in developed areas, housing along Garden Highway, what effect does this development have on the ability of the hawk to continue to exist in this area in the future?

III-4

In the 1997 HCP it states that nest sites must be large trees with panoramic view of the foraging grounds. In developing the hawk zone, what consideration was given to the types of crops planted in the hawk zone? What is the quality of the foraging habitat of safflower, which is planted in late March or early April and harvested late August or early September? What is quality of the foraging habitat of Corn, which is planted in late March or early April and harvested in late September? What is the quality of the foraging habitat of wheat which is planted early winter and not harvested until July and the stubble not removed until late August? Which of the following three crops provide better foraging habitat, rice, corn or safflower?

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III-5

Historically, before the levee system was constructed and in some cases after the levee system was constructed, the area along the Sacramento River was overgrown with blackberries and other vegetation. The HCP states that the foraging habitats are open fields and grass lands. In developing the hawk zone, what consideration was given to the historical foraging habitat?

III-6

The Giant Garter Snake is Federal endangered species; the Swainson Hawk is State endangered species. The Hawk has tremendous mobility, i.e. forages up to 18 miles from its' nest site. The snake must have permanent and temporary freshwater habitats. The mobility of the snake is very limited. Why is there a hawk zone and no comparable "snake zone"?

III-7

A take under the California Endangered Species Act is defined as "hunt, pursue, capture, or kill or attempt the same". Under this definition where is the authority under the law that prevents development in the hawk zone? Information in previous HCP states that no direct take of individual Swainson's hawks is expected to occur under the plan. If this statement is correct how does the CESA apply to development in Natomas if there is no "take"?

III-8

The settlement agreement on the lawsuit against the City on the previous HCP specifically required the City to retain a one mile wide open space area along the Sacramento River. This requirement is exactly the same as the hawk zone. Is there any correlation between the settlement agreement and the HCP requirement? In May

III-9

of 2001 the attorney for the friends of the Swainson Hawks stated in a public meeting that a one mile wide area of open space along the Sacramento River was going to be included in the revised HCP. Being that the revised HCP was not released to the public until 2002, was the United States Fish and Wildlife Service releasing information to selected groups or individual?

III-10

Does the California Endangered species Act or the Federal Endangered Species Act grant any land use or planning authority to the State or Federal Governments? Is the hawk zone considered critical habitat?

III-11

III-12

The previous HCP was upheld in the Sacramento County Superior Court. The previous HCP did not contain the hawk zone, why is it now necessary for the revised HCP to contain a hawk zone when the 2081 permit remains in effect?

If the City has a valid 2081 permit, why is it amending the current permit?

If you have any questions, please contact me.

John Perry

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December 2, 2002

SENT VIA FACSIMILE and U. S. MAIL

Wayne White, Field Supervisor
United States Fish and Wildlife Service
2800 Cottage Way, W-2605
Sacramento, California 95825
Facsimile: (916) 414-6711

Re: Comments on Draft Natomas Basin Habitat Conservation Plan and EIR/EIS

Dear Mr. White:

We provide these comments on the Draft Natomas Basin Habitat Conservation Plan ("Draft NBHCP") and Draft Environmental Impact Report/Environmental Impact Statement ("Draft EIR/EIS") on behalf of AKT Development. Currently, the City of Sacramento is processing an EIR for AKT's West Lakeside project. West Lakeside is located just outside the City limits and the area covered by the North Natomas Community Plan ("NNCP"), north of Del Paso Road. AKT is seeking to annex the area to the City.

112-1

We are concerned that the Draft NBHCP appears to be making land use determinations that are not supported by biological principles. For instance, we are concerned that the Draft NBHCP unnecessarily caps development in the City at levels adopted in 1994, without providing a biological rationale. Such an approach will likely hinder the City's land use planning. We believe that an HCP that contemplates current and reasonably foreseeable planning will provide greater administrative efficiency, resulting in better protection for special status species.

112-2

The Draft NBHCP acknowledges that habitat value will vary throughout the basin. One of the underlying principles for establishing the Draft NBHCP's mitigation ratio is that the habitat value of the land preserved will exceed the habitat value of the

Wayne White, Field Supervisor

December 2, 2002

Page 2

112-2 land developed. This principle does not cease to apply above a certain acreage of development. From a biological perspective, therefore, there is no difference between a level of development contemplated in the 1994 NNCP and other development currently in the planning process. Nor is this approach necessary to satisfy the ruling in *National Wildlife Federation v. Babbitt*.

112-3 We are also concerned that the Draft NBHCP arbitrarily limits the City's ability to annex. The Draft NBHCP does not purport to establish which lands can be developed, but specifically states that annexation of West Lakeside would trigger the need to amend the permit. The amendment would be necessary even if development of West Lakeside would not exceed the City's development quota.¹ Other areas can be annexed without triggering the need for an amendment to the NBHCP.

112-4 AKT Development has been working with the City on the West Lakeside project for years. Additionally, West Lakeside is located within the City's sphere of influence in the draft of the City's General Plan Amendment and Comprehensive Annexation Plan. We acknowledge that the City's take permit would have to be amended upon annexation of West Lakeside. Alternatively, AKT may obtain an incidental take permit through the Section 7 consultation process. However, we believe the Draft NBHCP should be flexible enough to include West Lakeside within the City's take permit without the additional administrative hurdles contemplated by the current Draft NBHCP.

112-5 Land use agencies must retain the ability to amend their land use plans. By capping the number of acres that can be developed in each jurisdiction and hindering future annexations, the Draft NBHCP infringes on this ability.

112-6 We also have noticed a few areas of the Draft NBHCP that need clarification. First, the Draft NBHCP repeatedly notes the existence of a 250-foot buffer along Fisherman's Lake established by the NNCP. This is inaccurate. While the NNCP established a 250-foot buffer along the north edge of the plan, the buffer along the western edge, including Fisherman's Lake is 200 feet.

112-7 Additionally, the Draft NBHCP makes reference to a "Swainson's hawk zone" ("SHZ") along the Sacramento River. While the City's draft General Plan Amendment

¹ Furthermore, the Draft NBHCP arbitrarily establishes that an amendment, as opposed to a revision, would be required upon annexation without any biological evidence that annexation would affect species in a significant way.

Wayne White, Field Supervisor

December 2, 2002

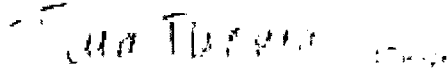
Page 3

112-7

and Comprehensive Annexation Plan indicates an interest in establishing a 1-mile wide corridor along the Sacramento River, such a SHZ has not yet been established by City planning. The Draft NBHCP should be updated to address these clarifications.

AKT Development hopes to work cooperatively with the wildlife agencies throughout the processing of its application to annex into the City, and ultimately, to be included in the NBHCP. Thank you for considering these comments.

Very truly yours,



Tina A. Thomas

cc: Vicki Campbell, Chief, Conservation Planning Division, U.S. Fish & Wildlife Office
Tom Hutchings, Director, Sacramento County Planning Department
Gary Stonehouse, Director, Sacramento City Planning Department
Carol Shearly, Natomas Unit Manager, Sacramento City Planning Department

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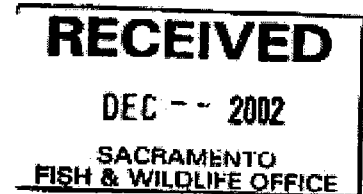
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December 5, 2002

**VIA HAND DELIVERY, FACSIMILE
AND FIRST CLASS MAIL**

Wayne White
Field Supervisor
U.S. Fish and Wildlife Service
2800 Cottage Way, W-2605
Sacramento, California 95825



Re: Comments on July 25, 2002 Draft of
Natomas Basin Habitat Conservation Plan

Dear Mr. White:

Thank you for allowing us an opportunity to review and comment upon the July 25, 2002 draft of the revised Natomas Basin Habitat Conservation Plan ("NBHCP" or "Plan"). Our comments are being made on behalf of Alleghany Properties, Inc., Lewis Investment Company, LLC, and Mr. Kern Schumacher, all of whom are significant landowners in the Natomas Basin area. For clarity, we have provided our general comments at the outset of this letter. Detailed comments are included in Attachment A.

GENERAL COMMENTS

113-1 [We submit that the NBHCP needs revision in a number of areas before it should be adopted and approved as the revised habitat conservation plan meant to correct the defects noted by Judge Levi's ruling. His ruling invalidated the procedures followed by the USFWS in approving the prior Natomas Basin Habitat Conservation Plan, not the biology upon which the Plan was based. As such, our clients do not support many of the substantive changes made in the NBHCP which go far beyond those revisions needed to address the shortcomings noted in Judge Levi's decision.

Recovery Plans, New Habitat and Covered Species

113-2 [The NBHCP requires automatic implementation of any mitigation measures specified in the recovery plans adopted for the Covered Species under the NBHCP. However, the costs for a recovery plan are the obligation of the federal government and should not be placed upon landowners whose obligation is limited to mitigation. In addition, the NBHCP would require the creation of special new habitat and, in some circumstances, introduction of Covered Species not currently found or historically known to occur in the Natomas Basin, even in the absence of any impacts to those

113-3

Wayne White
December 5, 2002
Page 2

I13-3

species. Such activities and requirements were never part of the original Natomas Basin Habitat Conservation Plan and are not designed to address any issues raised by Judge Levi's ruling. Moreover, there is no legal nexus to require special mitigation in the absence of any evidence of impacts to those Covered Species.

Monitoring and Reporting Requirements

I13-4

Another major concern we have involves the extensive and costly new monitoring and reporting requirements in the NBHCP. These requirements expand the scope of The Natomas Basin Conservancy ("TNBC") from that of the Plan Operator into that of a biological research institution. The new monitoring goes far beyond what is reasonably necessary to show that uplands and the managed and seasonal marsh is being successfully enhanced and created on former agricultural lands within the TNBC's habitat reserve system. Instead, TNBC is required to conduct Basin-wide surveys for the Covered Species at a cost estimated of \$3 Million, surveys for numerous species on lands not owned by TNBC, and annual surveys for "wintering" birds and "breeding" birds at an estimated cost of \$750,000. TNBC is also required to become the depository for all biological information about the Basin, as well as maintain a computer database of that information with an estimated cost increase to the Plan of at least \$1 Million. TNBC's only obligation should be to monitor its own mitigation lands, not the entire 53,000+ acre Natomas Basin. More important, it must be noted that the extensive new monitoring requirements in the NBHCP appear to be in violation of the principles stated on Page 3-27 of the USFWS' HCP Handbook. The HCP Handbook's principles provide that monitoring should be as economical as possible, and that the USFWS should "avoid costly monitoring schemes that divert funds away from other important HCP programs, such as mitigation." The new monitoring and reporting costs will now consume 47% of the total mitigation fees collected per developed acre according to information in the October 11, 2002 "Revised Fee Estimate" prepared by Economic and Planning Systems.

Adaptive Management

I13-5

Our Clients also object to the expanded definition of what constitutes "Adaptive Management" in the NBHCP. The definition has become so broad and open-ended that virtually any feature of the NBHCP could be altered as an adaptive management change, except for the 1/2 to 1 mitigation ratio and the 75% maximum percentage of managed marsh conversions on reserve lands. This broad definition of Adaptive Management has effectively diluted the USFWS' "No Surprises" Policy, which specifies that no changes will be subsequently made in a habitat conservation plan in the amount of land required or in the amount of funding required from the permittee. However, the breadth of the changes allowed as Adaptive Management are guaranteed to make the NBHCP's habitat mitigation fees subject to substantial increases.

Wayne White
December 5, 2002
Page 3

Land Acquisition

113-6

Restrictive new requirements have been created in the NBHCP for Area B land acquisitions. The TNBC's ability to buy land in Area B for Giant Garter Snake habitat was well founded on a number of simple premises: (i) it was important to preserve genetically diverse populations of the Giant Garter Snake, since the Natomas Basin's snake population was known to be infected with parasitic worms; and (ii) the price of land in the Natomas Basin would soon skyrocket if TNBC could buy only mitigation land within the Basin. The swift escalation in land prices within the Basin since 1997 has borne that out. Without the safety valve of being able to purchase mitigation land with Giant Garter Snake habitat outside of the Natomas Basin, the TNBC is at the mercy of the landowners within the Basin. The NBHCP has removed the effectiveness of that safety valve by now requiring TNBC to make a showing that any land acquired in Area B would not only be suitable as Giant Garter Snake habitat, but also suitable for use as habitat by the Swainson's Hawk and all of the other Covered Species. More significantly, however, before any land in Area B can be acquired, the TNBC must now show that there is no potential mitigation land left in the Natomas Basin which can feasibly be acquired. The NBHCP contains no specifics on what TNBC must demonstrate in order to prove that it can no longer feasibly acquire mitigation land in the Natomas Basin. That could mean that there is no land being listed for sale from a willing seller, or it could mean that the land prices have become so high as to be infeasible to purchase in light of the mitigation fees TNBC has collected. At a minimum, a clear definition needs to be provided for the term "feasibly be acquired" as used in the NBHCP. Moreover, these new requirements are not necessary to comply with anything in Judge Levi's decision.

Swainson's Hawk Mitigation

113-7

The NBHCP also requires special new mitigation for the removal of a Swainson's Hawk nest tree. Removal of a nest tree would now require a 15:1 replacement tree ratio. That 15:1 ratio exceeds anything the CDFG requires in the Swainson's Hawk Mitigation Guidelines included as part of the Appendices to the NBHCP. Moreover, the requirement for a 100% survival rate of the replacement trees for 10 years is questionable, and goes far beyond anything in the CDFG's Swainson's Hawk Mitigation Guidelines. We are not aware of any biological basis for such new and burdensome requirements. There are no published, peer reviewed scientific studies which attribute the decline of the Swainson's Hawk to a shortage of nest trees in the Natomas Basin. Moreover, these new requirements were never required by Judge Levi's ruling.

The Water Agencies

113-8

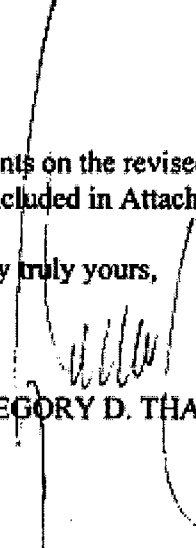
Insofar as RD 1000 and the Natomas Central Mutual Water Company (the "Water Agencies") are not included as Permittees under the NBHCP at this time, the NBHCP needs revision to clarify that the Water Agencies will have no obligations under the NBHCP until they file applications to become Permittees.

Wayne White
December 5, 2002
Page 4

CONCLUSION

Thank you for the opportunity to provide comments on the revised NBHCP. We trust you will find the above comments and suggested revisions included in Attachment A useful.

Very truly yours,



GREGORY D. THATCH

GDT/md
D5330(a).ltr
enclosure

cc: Carol Shearly, City of Sacramento

ATTACHMENT A

Specific Comments
July 25, 2002 Draft of the NBHCP

Page D-2, "NBHCP Definitions"¹

I13-9

The definition of the term "Conserved Habitat Areas" needs to be expanded to include Mitigation Lands as part of the Conserved Habitat Areas. The Conserved Habitat Areas are interchangeably mentioned throughout the NBHCP as either Mitigation Lands or Habitat Reserve lands. Rarely, if ever, are they described as "Conserved Habitat Areas" in the NBHCP's text.

Page I-5, "City of Sacramento"

I13-10

The NBHCP has added a new requirement to the Plan in the first paragraph on this page which is not related to anything in Judge Levi's decision. The next to last sentence in the first paragraph would now require all development proponents to comply with the mitigation measures contained in the CEQA mitigation monitoring plans adopted for the North Natomas Community Plan and the South Natomas Community Plan. We can see no rationale for inserting such a requirement into the NBHCP. Many of those CEQA mitigation measures pertain to issues completely unrelated to biological resource impacts, such as air quality, noise, light, cultural resources and traffic reduction measures. There is no nexus for including them as part of the NBHCP, since such an action was not required to comply with Judge Levi's ruling. Consequently, the following sentence should be deleted from the first paragraph on Page I-5:

~~"All proponents of new development in the City shall comply with the mitigation measures identified in the Mitigation Monitoring Plans approved with each community plan, as well as the measures of this NBHCP."~~

In addition, we note that the NBHCP contains no comparable provision for the proponents of urban development in Sutter County to comply with the CEQA mitigation measures adopted as part of the south Sutter County General Plan Amendment. We question why the City of Sacramento has been singled out for such special and inappropriate treatment.

¹ We have discovered that the page numbering of the NBHCP is not consistent between the bound printed copy which was sent to us and the electronic version available online via the Internet. There is as much as a one or two page discrepancy in some instances. The page numbers cited in this letter refer to the pages in the bound printed version.

Pages I-5 to I-6 "City of Sacramento Annexation Areas"

The NBHCP inappropriately attempts to regulate or restrict the City of Sacramento's control over local land use decisions and its territorial sovereignty. The last paragraph at the bottom of Page I-5 and the first full paragraph at the top of Page I-6 would constrain the City of Sacramento's ability to annex any additional land into the City limits. Both of those paragraphs automatically treat the annexation of land as a "take" of habitat. We do not agree with the concept that an annexation of land automatically amounts to a "take." An incidental take does not occur until the land is physically altered in some way which destroys or adversely modifies the habitat of a listed species under the Endangered Species Act. Mere annexation has never been held by any court to be an "incidental take" of habitat under the Endangered Species Act. This is an important distinction which appears to have been lost. Simply put, annexation does not mean development. Moreover, it may be necessary for the City to annex additional lands to the City limits within the Natomas Basin in order to remove any doubts about the City's ability to acquire land via the eminent domain process if it is needed for mitigation purposes under the NBHCP. The City's ability to condemn land outside of the City limits exclusively for mitigation purposes is an unsettled legal question, and as land prices continue to escalate in the Natomas Basin, and landowners start holding out for a higher and higher price, the City may at some point need to condemn mitigation land for the City's own public works projects. Consequently, if the last paragraph on Page I-5 is not deleted, then it should be revised as follows:

I13-11

"If the City of Sacramento annexes additional lands into the City (with the exception of the panhandle area - see Section III.C), and thereafter approves land use entitlements allowing the urban development of those additional lands, then the City would be required to comply with state and federal law, including, but not limited to, CESA, ESA, CEQA and NEPA to address the impacts of take resulting from future development of the annexed lands. As noted in Section VI. L of this NBHCP, inclusion of additional lands and approval of land use entitlements for urban development thereon may under this NBHCP would require an amendment of the Plan and the City's incidental take permits. Such an amendment would require the City to address various impacts, including impacts to the NBHCP Covered Species and the effects of such additional urban development in the annexed area the annexation on the biological viability of such species and would be subject to all applicable state and federal statutes and regulations, including the provisions of the CESA, ESA, CEQA and NEPA."

Page I-10, "Plan Operator - Natomas Basin Conservancy"

113-12 TNBC is not an entity which has a legal duty to implement species recovery plans; that duty belongs to the USFWS and CDFG when they adopt such recovery plans. Consequently, the next to last sentence on Page I-10 should be corrected to remove any implication that TNBC must implement all species recovery plan measures. Instead, TNBC would have an obligation to implement measures suggested by recovery plans only to the extent specifically required by the NBHCP:

"Additionally, TNBC may implement adaptive management plans, and to the extent specifically required by the NBHCP, mitigation program changes proposed in species recovery plans for the Covered Species, and species recovery plans as new data on listed species and habitat reserve strategies are developed."

Page I-18, "Conservation Strategy of the NBHCP"

113-13 The last sentence of the first paragraph on Page I-18 should be revised to reflect the agreement made regarding the increase in the percentage of managed marsh if a Giant Garter Snake Recovery Plan is adopted by the USFWS which calls for such a change:

"Should a Giant Garter Snake recovery plan be adopted in the future or as other new scientific information so indicates, reserve lands anticipated to be in rice production which are under the control of TNBC acquired after recovery plan adoption or the availability of such information or monitoring results could be converted to a maximum of 75% managed marsh if the recovery plan indicates: 1) the Giant Garter Snake would benefit and 2) the Giant Garter Snake would not benefit at the biological expense of another listed/Covered Species."

113-14 The second paragraph on Page I-18 concerning the scope of the Adaptive Management provisions included in the NBHCP needs significant revisions, since the previous limit on future mitigation fee increases has been removed. The purpose of incorporating adaptive management concepts was to allow for adjustments in habitat reserve management activities if it was determined that the original designs were not working. It was not to require new mitigation measures premised on new biological ideas. We recommend the following modifications:

"The NBHCP contains significant Adaptive Management provisions. Adaptive Management is a process that allows the conservation program under the NBHCP to be adjusted through time based upon approved recovery plans; the results of new research information on

113-14

the effectiveness of *the Plan's* mitigation measures generated through monitoring programs. *etc.* Under its Adaptive Management provisions, the NBHCP can be modified if necessary to ensure that the most up-to-date, *reliable, peer-reviewed, scientific* information is being used under the OCP. However, adaptive management to benefit one species will not occur at the biological expense of another ~~listed~~ Covered Species.”

Page I-19, “25% restored wetland managed for wildlife”

Subsection (3) on Page I-19 concerning an increase in the percentage of managed marsh at the TNBC reserve system needs to be revised to specify that a Giant Garter Snake Recovery Plan is the only agreed upon trigger for a change in the amount of rice land converted into managed marsh:

113-15

“(3) 25% restored wetland managed for wildlife Under the NBHCP, by the end of 50 years at least 25% of TNBC Mitigation Lands will be improved and restored as marsh habitat. If, however, USFWS provides written notification supported by documented evidence in the form of a written report and technical analysis regarding the adoption of a Giant Garter Snake Recovery Plan, ~~the availability of monitoring results from the Plan Area or new scientific information indicating an adjustment in the enhancement and management activities for managed marsh is warranted;~~ then the proportion of marsh habitat may be increased by the Permittees to as much as 75% of the Mitigation Lands acquired after the date of notification. This land will be managed to promote long term viability of wildlife populations. The enhanced marsh reserves will be of substantially greater habitat value than the current combination of *privately owned* fields and canals that are not managed to promote wildlife or avoid incidental take of species.”

Page I-27, “Other HCP/IA Modifications”

113-16

Item #21 at the top of Table I-2 on Page I-27 mentions a “Five Point Policy” as something which has been included “Throughout NBHCP.” Aside from Table I-2 on Page I-27, we cannot find any description, reference, explanation or definition made of a “Five Point Policy” included in the NBHCP. Please explain what is meant by this entry in Table I-2.

Page I-28, "Federal Permit"

I13-17

In the second full paragraph on Page I-28, the NBHCP correctly notes that the Federal Endangered Species Act does not require a habitat conservation plan to implement species recovery plans. However, the paragraph then goes on to state that the new NBHCP will incorporate into the NBHCP any mitigation measures recommended in future recovery plans adopted for any of the Covered Species. Our clients cannot support this concept, as it is a virtual blank check to include any and all possible mitigation measures into this NBHCP for full funding, so long as the ½ to 1 mitigation land ratio is not changed and the limit of 75% on managed marsh conversions is observed. It certainly leaves the Plan open to many "surprises." By seeking to incorporate any new mitigation measures set forth in adopted recovery plans, the NBHCP has been left open to wholesale changes, with only a few exceptions.

Page I-31, "Relationship of the Plan to Individual Permittees"

I13-18

Not all development beyond the areas identified in the NBHCP would necessarily result in the need for a permit amendment to the NBHCP. Such additional development may instead simply propose its own HCP and Permits. As you know, the County of Sacramento has chosen not to participate in the NBHCP and the Metro Air Park development in the County has sought and obtained approval of its own HCP and permit. Consequently, the NBHCP should not automatically assume that the NBHCP would simply be amended to include development in other areas of the Basin. We suggest the following change to the last sentence of the paragraph at the top of Page I-31:

"Coverage for any development outside of those areas will require a major amendment to the NBHCP plan and a permit amendment or a separate HCP and permit." as described under Sections III.B.1 and VII.L.3

Page II-12, "Rice Fields"

I13-19

The NBHCP incorrectly states the reasons for flooding rice fields during the winter. The record needs to reflect that rice fields in the Natomas Basin and elsewhere are not flooded in the winter for the sole purpose of attracting water fowl. The winter flooding of rice fields has become an accepted and environmentally condoned agricultural practice to decompose the rice stubble, since the advent of air quality prohibitions on burning the rice stubble. Consequently, the subparagraph on this page concerning "Winter" needs to be modified as follows:

"Winter: Giant Garter Snakes enter a dormant period inside winter retreats (e.g. small mammal burrows). While the rice fields lie fallow, many are intentionally flooded in Winter to decompose the rice stubble or to be used by migrating waterfowl."

Page IV-3, "Plan Operator"

I13-20

In the first full paragraph on Page IV-3 there is a completely new requirement for TNBC as the Plan Operator to initiate a 5-year comprehensive survey of the entire Natomas Basin for the Covered Species in 2003 and complete it in 2004. Such an enormous and expensive task was not required by Judge Levi's decision. Moreover, this is a task better suited for a government agency, such as the USFWS and CDFG, which should assume the costs of such an effort. Such a survey is not a mitigation measure which is the obligation of the Permittees and the landowners. Moreover, it would not be feasible to impose such a Basin-wide survey requirement on TNBC because it has no legal right to enter upon privately owned lands in order to conduct such a Basin-wide survey. Accordingly, any such survey should be limited to a survey of the Covered Species on TNBC reserve lands acquired between 1998 and 2003, with the written survey report completed in 2004. The total cost of these 5-year surveys and reports has been estimated by Economic and Planning Systems to add another \$780,000 to the Plan.

Page IV-6, "Basis for 0.5 to 1 Mitigation Ratio"

I13-21

Subsection (7) on Page IV-6 reiterates the new requirement for the TNBC to track Basin-wide population trends for the Covered Species and cites it as one of the bases upon which the ½ to 1 mitigation ratio can be justified. Tracking Basin-wide population trends does not justify having the ½ to 1 mitigation ratio *ab initio*. In fact, the ratio is more predicated upon a recognition of the fact that not all of the land being developed is quality habitat. The only population surveys which should be required every 5 years are surveys of the TNBC's reserve lands to determine if they are functioning and providing good quality as intended. Subsection (7) should be revised to read:

"(7) The NBHCP incorporates a detailed monitoring program that will track Covered Species population trends within TNBC reserves, ~~and throughout the Natomas Basin.~~ The NBHCP monitoring data will inform and guide the Adaptive Management process, to achieve the Plan's biological goals and objectives."

Pages IV-12 and IV-13, "Out-of-Basin Reserves"

I13-22

We do not support any of the changes made in the acquisition requirements for mitigation lands in Area B. None of them were required by Judge Levi's decision. Moreover, the new acquisition requirements could seriously jeopardize the ability of TNBC to acquire any land in Area B. It will be very difficult to demonstrate that a parcel of land in Area B is capable of supporting a population of ALL the Covered Species, because many of them are not even known to occur there, and probably never could (i.e., Sacramento orcutt grass). It is doubtful that any parcel within or outside of the Basin, supports all the Covered Species. More troublesome, however, is the second new requirement that TNBC show that no potential reserve land is available in the Natomas Basin

113-22 which can be feasibly acquired. The NBHCP provides no guidance to assist TNBC with determining what is or is not "potential reserve land." Second, there is no guidance which sets forth the grounds upon which a parcel's feasibility for acquisition can be determined. Must TNBC merely show that no land is being listed "for sale" in the Basin to prove that there is no longer any land which could be feasibly acquired, or is something more going to be required by USFWS and CDFG? Does land become not feasible for acquisition if its asking price is far above the fees collected for habitat land acquisitions by TNBC? Those are just a few of the questions raised by the new requirements for Area B acquisitions. It should not be forgotten that the listing decision for the Giant Garter Snake found that the Natomas Basin population was subject to early mortality due to a widespread parasitic worm infection, so there is a important biological reason for creating reserves out of Basin in Area B as a method to ensure the species' continued survival.

Page IV-13, "Overall Acquisition Criteria"

113-23 Subsection c.(1) on Page IV-13 is ambiguous and could be read to require each individual habitat reserve to contain managed marsh, rice lands, and uplands. That does not appear to be consistent with the overall provisions of this section of the NBHCP which recognize that the general requirements for 25% uplands, 25% managed marsh and 50% rice should be applied on an aggregate basis for the totality of the TNBC's mitigation lands, not against each particular reserve. As the final sentence in subsection c.(1) notes, it may well be prudent to have some reserves devoted entirely to rice, others devoted entirely to marsh, and yet others devoted entirely to uplands, depending on the geographical location of the individual reserves and their soil types. Consequently, we suggest deletion of the third sentence to clarify the intent of subsection c.(1) as follows:

113-23 "(1) The NBHCP provides for a general division of land uses within TNBC reserves as follows: 25% managed marsh; 50% rice production; and, 25% upland habitat. The percentages described herein apply on a Basin-wide basis and the percentages within individual reserves will vary from the percentages described above. ~~While percentages of land use types within individual reserves will vary, each reserve will generally contain a combination of managed marsh, rice production and upland habitat.~~ For example, a reserve site may be appropriate for upland habitat and not suited to rice production or managed marsh."

Page IV-14, "Overall Acquisition Criteria."

113-24 In order to clarify the NBHCP requirement that mitigation lands need only be adequately "buffered" from urban uses, rather than "adequately removed" from urban development, we suggest revising subsection c.(6) on Page IV-14 concerning mitigation land acquisition criteria as follows:

I13-24

“(6) Land is adequately *buffered removed* from incompatible urban development or uses (see Section IV.C.2.a. above).”

Page IV-21, “Management of Reserve Rice lands for the Giant Garter Snake”

I13-25

The last paragraph on this page mentions the concept that the percentage of managed marsh can be adjusted upwards by the USFWS, not only upon adoption of a Recovery Plan for the Giant Garter Snake, but also upon the grounds of an Adaptive Management change, monitoring program results, other new scientific information, the individual City and County Mid-Point Reviews, and the Overall Program Review. The percentage of managed marsh should only be adjusted upwards if the Giant Garter Snake’s Recovery Plan requires it. Judge Levi’s decision did not require the percentage of marsh to be adjusted at any other times.

Page IV-24, “Conservation Strategies for Vernal Pool Species as Mitigation for Urban Development”

I13-26

The California Tiger Salamander is not currently known to occur anywhere in the Natomas Basin, and there are no historical records of it in the Basin. It was included as a Covered Species only because there was a very small potential for it to occur in the few vernal pools which exist at the east side of the Natomas Basin. Subsection (1) at the bottom of Page IV-24 could require TNBC: (1) to create artificial habitat for the California Tiger Salamander in consultation with tiger salamander researchers, and (2) to then introduce this species into the Natomas Basin, in spite of the fact that there are no documented sightings of the California Tiger Salamander there. Those are new obligations not required by Judge Levi’s ruling and should be deleted. No species of animal or plant should ever be required to be introduced into the Natomas Basin. This is particularly true if the species is not historically documented as occurring in the Basin or if there are no current impacts to it from urban development.

In a similar vein, the requirements of Subsections (2), (3) and (4) on Pages IV-24 and IV-25 to create habitat for other species not known to be historically or currently present in the Natomas Basin such as the western spadefoot toad, the vernal pool crustaceans, Bogg’s Lake hedge-hyssop, Sacramento orcutt grass, slender orcutt grass, and Colusa grass, as well as their potential introduction into such newly created habitat, should be deleted from the NBHCP. These are new requirements and there is no constitutional nexus for requiring any of those activities unless urban development has an impact on any of those plant or animal species. In the absence of any direct impacts to those plants and animals, there is no basis for requiring such costly mitigation efforts. Moreover, such activities were never required by Judge Levi’s ruling.

Page IV-27, “General Design/Management Criteria for Site Specific Management Plans”

I13-27

The first paragraph on Page IV-27 provides that the Site Specific Management Plans must address the habitat needs of all Covered Species to the maximum extent feasible. That is a

requirement which needs some clarification in order to avoid confusion. The NBHCP has already recognized that not every parcel of mitigation land is going to be designed to provide habitat for all of the Covered Species. Moreover, some of the Covered Species require types of habitat which is not known to currently occur in the Natomas Basin, such as the high terrace formation vernal pools which support the Sacramento orcutt grass. We suggest the following modification to the very first paragraph on Page IV-27:

113-27

"Site Specific Management Plans shall specify the types of address habitat needs they are providing for the particular of all Covered Species found at each specific site. to the maximum extent feasible."

Page V-6, "Payment Into a USFWS Approved Conservation Bank"

The mitigation ratios for off-site vernal pool mitigation should specify that any vernal pool creation or preservation on TNBC owned land would be at the "Bank" ratios, rather than the "Non-Bank" ratios. The second paragraph in subsection (3) on Page V-6 should be revised to read:

"Mitigation ratios for credits dedicated in Service-approved banks and for acres of habitat of re-created vernal pools on TNBC reserve lands, as well as or for acres of habitat outside of mitigation banks or TNBC reserve lands shall be as follows:"

Table V-1 then should be changed as well by modifying the column entitled "Bank" to read "Bank or TNBC Reserve Land."

The third and fourth paragraphs of subsection (3) on Page V-6 should be revised as well:

113-28

"Preservation Component: For every acre of habitat directly or indirectly affected, at least two vernal pool credits will be dedicated within a Service-approved ecosystem preservation bank or two acres of vernal pool habitat preserved on TNBC-owned lands, or based on Service evaluation of site-specific conservation values, three acres of vernal pool habitat may be preserved on the project site or on another non-bank site as approved by the Service.

"Creation Component: For every acre of habitat directly affected, at least one vernal pool credit will be dedicated within a Service approved habitat mitigation bank or one acre of vernal pool habitat recreated on TNBC-owned lands, or based on Service evaluation of site-specific conservation values, two acres of vernal pool habitat created and monitored on the project site or on another non-bank site as approved by he Service."

Page V-7, "Measures to Reduce Take of Giant Garter Snake"

I13-29

Subsection (2) on this page has been revised from the original NBHCP to now require that pre-construction surveys for the Giant Garter Snake be performed only by a "qualified biologist approved by USFWS," rather than simply by a qualified biologist. The requirement for "USFWS approved" biologists is new and was not mandated by Judge Levi's ruling. Unless the USFWS has an officially adopted regulation for the approval of biologists with clearly ascertainable standards, this new requirement for USFWS approval of the biologist should be deleted.

Pages V-10 and V-12, "Measures to Mitigate the Loss of Swainson's Hawk Nest Trees"

I13-30

The NBHCP has created a new set of Swainson's Hawk mitigation requirements for the loss of nest trees. None of these new requirements were required by Judge Levi's ruling. The impetus for these new requirements is unclear. Moreover, these new requirements are not in keeping with the CDFG's Draft Swainson's Hawk Mitigation Guidelines attached in the Appendices to the NBHCP and its Draft EIR/EIS. Mitigation measures (1) through (5) on Pages V-10 to V-12 of the NBHCP should be deleted. It is unprecedented (and unsupported by any published or peer-reviewed scientific evidence) to require Swainson's Hawk nest tree replacement at a 15:1 ratio, as well as require a 100% success rate for all replacement trees. Moreover, it is double dipping for the NBHCP to require a developer to pay not only the standard HCP Fees, but also all additional costs incurred by the City of Sacramento associated with implementing the new Swainson's Hawk nest tree mitigation measures. The standard NBHCP mitigation fee package is already financing a tree planting program on TNBC upland reserves.

Page V-12, "Measures to Reduce Take to Valley Elderberry Longhorn Beetle (VELB)"

I13-31

A host of new and costly mitigation measures have been added to the NBHCP for VELB habitat. Again, the NBHCP is double dipping when it requires a developer with VELB habitat to separately fund the new VELB mitigation measures, as well as pay all of the standard HCP Fees. The developer should get a credit against the HCP fees in the amount of the special VELB fees it has to pay. These new mitigation measures also go far beyond anything in the USFWS Mitigation Guidelines for the VELB by requiring the developer to ensure a 60% survival rate for all replacement elderberry bushes for the 50 year life of the Permits.

Page V-20, "Swainson's Hawk"

I13-32

Subsection (7) on Page V-20 concerning the Swainson's Hawk would require TNBC to re-design the Upland Reserves, as necessary, to meet the Swainson's Hawk recovery goals once a recovery plan is adopted by CDFG. Once again, the Permittees and the landowners only have an obligation to mitigate. They do not have to bear the costs of species recovery, which is an obligation of the CDFG. This is a new requirement and is not acceptable. Instead, any new upland reserves being created for the Swainson's Hawk after the adoption of the Swainson's Hawk Recovery Plan

should incorporate those new mitigation features, to the extent it can be done without increasing the HCP fees:

I13-32

“(7) Upland reserves will initially be designed to maintain existing Swainson’s Hawk populations and, where possible, to increase such populations through the tree planting program. However, such reserves will be re-designed, as necessary, to meet Swainson’s Hawk recovery plan goals, once a Swainson’s Hawk Recovery Plan is prepared and approved by CDFG, to the extent such re-design can be accomplished without requiring an increase in the NBHCP mitigation fees or otherwise financially impacting the OCP.”

Page V-25, “California Tiger Salamander”

I13-33

The NBHCP has created a new obligation that could require TNBC to relocate and introduce the California Tiger Salamander into the Natomas Basin. Such activities were not required by Judge Levi’s ruling and were not part of the original HCP. No reintroduction should be required for any species, especially one not currently known to occur in the Basin and one not documented to have historically occurred there. Only if the California Tiger Salamander is actually found in the Basin and impacted by urban development should there be any requirement to provide specifically designed habitat for the species. There should be no obligation to introduce a species into the Basin that is not currently found there, since there is no nexus.

Pages V-25 to V-26, “Western Spadefoot Toad”

I13-34

The NBHCP could also require TNBC to create special habitat for the Western Spadefoot Toad, but not the toad’s introduction into the Basin. This is another species not documented to occur in the Natomas Basin. The requirement for the creation of toad habitat without any showing of a nexus should be deleted from the NBHCP. Only if the toad is actually found in the Basin and adversely impacted by urban development should TNBC be required to provide mitigation by way of creating the toad’s special habitat on TNBC’s reserve lands.

Page V-26, “Delta Tule Pea and Sanford’s Arrowhead”

I13-35

Subsections “n” and “o” on Page V-26 pertaining to the Delta Tule Pea and Sanford’s Arrowhead could also require TNBC to introduce these two plant species into the Natomas Basin, as well as monitor all of the known populations of Covered Species of plants within the entire NBHCP area. As we have noted before, the new NBHCP imposes new and costly monitoring on the TNBC to which we object. Moreover, TNBC has no rights to go upon private property in the Natomas Basin to monitor any plant species. In addition, we object to any requirement that TNBC must introduce any species of plant or animal into the Natomas Basin if that species is not known to occur there. Unless there are impacts to the Delta Tule Pea or Sanford’s Arrowhead from urban

I13-35 development within the Permit areas, there is no nexus to require the TNBC to take any steps to propagate and conserve these plant species on TNBC reserve lands.

Page VI-6, "Mitigation Fee Amount/Adjustments"

I13-36 The second full paragraph on Page VI-6 provides that the mitigation fee can be raised at any time the percentage of managed marsh is increased due to monitoring results or new scientific information. In addition, it provides that the fees can be increased as the result of a CDFG adopted Swainson's Hawk Recovery Plan. In the last paragraph on Page VI-6, the NBHCP provides that the mitigation fees can be increased whenever necessary to pay for changes required by any species recovery plans. As noted above, we disagree with the new provisions which allow the percentage of managed marsh to be increased for any reason other than a justification stated in the final adopted Giant Garter Snake Recovery Plan. We also strongly object to unlimited fee increases arising in order to fund Adaptive Management and other recovery plan changes to the NBHCP and its operating conservation program.

To reiterate, the costs of species recovery, in any form, are a government obligation. The Permittees' and landowners' obligation extends only to mitigation for the loss of habitat as a result of urban development. The NBHCP fails to recognize this important distinction between the roles of the federal and state wildlife agencies and the obligations of the communities they regulate.

Page VI-10, "Percentage of Managed Marsh"

I13-37 The first sentence of the first full paragraph on Page VI-10 concerning managed marsh should be revised to limit the instances in which the marsh percentage can be changed:

"A key NBHCP requirement is that at least 25% of habitat mitigation lands be established as managed marsh, unless the USFWS requires otherwise based on its future Giant Garter Snake Recovery Plan. ongoing monitoring results, or other new scientific information."

Page VI-12, "Compliance Monitoring"

I13-38 While we do not disagree with the proposition that compliance monitoring needs to be performed in order for the USFWS and CDFG to ensure that the NBHCP and Permits are being complied with by the Permittees, we object to making such compliance monitoring an obligation of TNBC. Consequently, the first paragraph on Page VI-12 concerning "Compliance Monitoring" should be revised to place this obligation back on the USFWS and CDFG who have the legal responsibility for overseeing compliance with the permits they have issued. We suggest the following changes:



“Compliance monitoring is verifying that the Permittees are carrying out the terms of the NBHCP, the IA and associated permits. *USFWS and CDFG* ~~TNBC~~ will be the primary *entities* entity responsible for monitoring compliance with the provisions and obligations contained within the NBHCP and the associated IA. Additionally, the Land Use ~~Agencies~~, ~~TNBC~~ and ~~Water Agency~~ Permittees shall conduct Compliance Monitoring and report to ~~TNBC~~, *USFWS and CDFG* on their compliance and the compliance of parties operating under their control and their Permits with regard to the Permittees’ obligations under the NBHCP. Compliance Monitoring will include the status of the implementation of the NBHCP terms and conditions (e.g., financial responsibilities and obligations, management responsibilities, and other aspects of the incidental take permits, HCP and the IA). An annual public meeting will be held jointly with ~~TNBC~~ and all Permittees to the Plan, and the USFWS and CDFG to report on the progress of the HCP conservation strategy. *The TNBC Annual Report shall summarize compliance with NBHCP obligations by the other Permittees based upon the information provided to TNBC at the public meeting.* ~~TNBC, the Land Use Agencies and the Water Agencies compliance with NBHCP obligations will be reported within the TNBC Annual Report.”~~

I13-38

Pages VI-14 and VI-15. “Basinwide Biological Monitoring Program”

We do not support the new requirement imposed by subsection “a.” on Pages VI-14 and VI-15 that requires TNBC to prepare and conduct an annual Basinwide Monitoring program. Such monitoring is a federal and state obligation. Moreover, TNBC has no legal right to conduct any species’ monitoring on lands not owned by TNBC, so it is inappropriate and infeasible to impose a Basinwide monitoring obligation. In addition, such a wide ranging monitoring obligation was not required by Judge Levi’s decision. He found no fault with the monitoring proposed in the original NBHCP, nor any reason to alter it. Finally, the scope of the annual monitoring being proposed will be extremely costly. The intense monitoring will substantially and inappropriately increase the O&M Administration component of the mitigation fees from \$1,555 to \$2,850 (an increase of 84%) and the O&M Endowment component from \$1,500 to \$1,900 (an increase of 27%). Those are the two largest increases among any of the components of the new NBHCP Mitigation Fee. O&M costs would now represent over one third (1/3) of the total mitigation fees paid under the revised NBHCP.

I13-39

Page VI-16. “Design of Biological Effectiveness Monitoring Programs”

We can perceive of no need for the new Biological Effectiveness Monitoring Programs as described on Page VI-16. This monitoring appears little different from the Site Specific Monitoring required by the previous sections of the NBHCP. In addition, it adds another \$780,000 to the cost

I13-40

I13-40

of the NBHCP according to Economic and Planning System's Economic Analysis of October 11, 2002. The entire section of the NBHCP on Biological Effectiveness Monitoring should be deleted, or abridged and combined as part of the Site Specific Monitoring. The Biological Effectiveness Monitoring program would be the same as what the Site Specific Monitoring requirement has been designed to accomplish. We cannot support this new requirement, and it was not made necessary by Judge Levi's decision.

Page VI-18, "Monitoring Guidelines for Individual Species or Types of Species"

I13-41

Subsection "d." should be revised so it is consistent with the specific responsibilities and terminology set forth earlier in the new NBHCP:

"Described in this section are guidelines for monitoring individual Covered Species or types of species covered under the NBHCP. These guidelines shall be considered by TNBC the TAC and the Wildlife Agencies during the preparation of the Basinwide Biological Effectiveness Monitoring Program and subsequent Site Specific Biological Effectiveness Monitoring Programs."

Page VI-19, "Giant Garter Snake Monitoring"

I13-42

In this section the NBHCP would create a new obligation for TNBC to do Giant Garter Snake monitoring on lands it does not own, whether in the Basin or in Area B. The estimated cost of such a plan is also substantial at \$1,600,000 according the Economic Analysis of the new mitigation fee prepared by Economic and Planning Systems. As noted previously, such a requirement is not appropriate or feasible and should be deleted from the NBHCP. Accordingly, subsection (1)(b), (1)(c) and (1)(f) should be deleted from Page VI-19:

"(1)(b) ~~Permanent transects on non-reserve lands trapped in every year (transects should be established in each of the following areas: (North of I-80 and east of I-5/SR99; north of I-5 and west of SR99; and south of I-5 and west of I-5/SR99).~~

"(1)(c) ~~Additional non-reserve survey transects trapped on a rotating basis at least once every five years. These transects would be chosen to fill in gaps in Giant Garter Snake distribution information, to assess use of corridors between reserves, and increase detections of Giant Garter Snakes necessary to determine population status and to detect dispersal, or to obtain specific information as information needs arise.~~

I13-42

"(1)(f) Out-of-basin reserves must be surveyed yearly when/if added. ~~Along with appropriate off-reserve out-of-basin transects. The off-reserve out-of-basin transects would serve as the basis for comparison of the success of the out-of-basin reserve habitat restoration and/or management.~~"

Page VI-20. "Swainson's Hawk Monitoring"

I13-43

The total cost of the proposed Swainson's Hawk monitoring in the NBHCP has been estimated at \$1 Million by Economic and Planning Systems for a Basin-wide survey every year. As noted above, TNBC has no right to go upon privately owned lands to perform field surveys of Swainson's Hawks. The provisions on Swainson's Hawk monitoring at the top of page VI-20 should be revised to delete monitoring requirements on non-TNBC owned land:

~~"Surveys to determine the status of the Swainson's Hawk shall document presence, density, and reproductive rate of the species on TNBC owned reserves. The Swainson's Hawk survey shall be conducted annually and shall address Mitigation Lands." as well as undeveloped land in the Natomas Basin.~~

Page VI-20. "Avian Species Monitoring"

I13-44

The cost of the new avian species monitoring requirements in the NBHCP are very burdensome. They were estimated to be \$750,000 just for general monitoring of wintering bird species in the Natomas Basin. As noted previously, the NBHCP should not be burdened with expensive monitoring obligations which have little connection to the Plan's primary purpose of providing mitigation. The subsection on "Avian Species Monitoring" needs to delete the obligation for TNBC to perform bird monitoring efforts on lands not owned by TNBC:

~~"The NBHCP covers six other bird species: Aleutian Canada goose, white-faced ibis, bank swallow, tricolored blackbird, loggerhead shrike, and burrowing owl. Because some of these species may be difficult to detect due to their transitory occurrence in the Natomas Basin, it may be necessary to monitor habitat characteristics as a surrogate to determine whether the conservation strategy is successfully providing habitat for these species as their existing habitat is lost to urban development. Additional surveys should also be carried out in order to attempt to detect actual presence of the species in the Basin both on and off Mitigation Lands, but because of sporadic occurrence of those species, may not provide enough data~~

I13-44

~~to statistically determine population trends.~~ A monitoring plan for these birds species should include:

(1) Annual surveys for *Covered Species* of wintering birds and for breeding birds *such as the Aleutian Canada goose, white-faced ibis, bank swallow, tricolored blackbird, loggerhead shrike, and burrowing owl* on all TNBC reserve lands, ~~and at selected non-reserve locations.~~”

Page VI-21, “Rarely Occurring Species”

The third sentence in the last paragraph on Page VI-21 concerning the monitoring of “Rarely Occurring Species” should be corrected to delete any monitoring requirement on lands not owned by TNBC. In the interest of clarification, it would also be helpful if the NBHCP specified which of the Covered Species should be considered a “rarely occurring species”, since no definition is provided in the NBHCP:

I13-45

“It is expected that some Covered Species may occur very rarely in the Natomas Basin or may be very difficult to detect. For these species, *including the _____, _____, _____, and _____*, direct abundance estimates of population estimates of population sizes or relative abundance may not be possible because of low detection rates. In these cases, the Biological Monitoring programs should include: 1) efforts to actually detect the species on TNBC reserve lands ~~and at limited, selected non-reserve sites~~; and 2) a methodology for estimating the amount and suitability of habitat available and trends in those habitat characteristics.”

Page VI-22, “Adaptive Management”

I13-46

The second paragraph of subsection F.1. concerning adaptive management should be revised as follows in order to delete unacceptable new provisions. As noted previously, not every new mitigation measure suggested in a recovery plan for the species’ recovery should be the obligation of the NBHCP unless the state or federal wildlife agency is willing to fund the increased cost of such changes. The NBHCP needs to be revised to reflect that fact:

“Future NBHCP modifications, through the Adaptive Management process, may be needed as a result of the following significant uncertainties:

(1) new information resulting from monitoring of habitat reserve or other lands ~~in the Natomas Basin~~ and ongoing research on the Giant Garter Snake (See Section II.C.2.), Swainson’s hawk, or other Covered Species, *provided such changes do not require the*

commitment of additional land or funding or an increase in the mitigation fees collected by the Permittees;

(2) recovery strategies under the future USFWS Giant Garter Snake Recovery Plan, CDFG Swainson's Hawk Recovery Plan, or newly listed Covered Species recovery plans, that could differ from the measures currently described in the NBHCP (see below, Section VI.G) provided such changes do not require the commitment of additional land or funding or an increase in the mitigation fees collected by the Permittees;

(3) minimization and mitigation measures described in the NBHCP that may need to be revised based on new information or the Plan's monitoring data (e.g. marsh configuration and design; reintroduction of certain plants into reserve areas, etc.) that can be accomplished without the commitment of additional land or funding from the Permittees or an increase in the mitigation fees collected by the Permittees;

(4) the 2,500 acre and 400 acre minimum habitat block size requirements for wetland reserves may need to be revised;

(5) significant land use changes outside of the reserve system;

(6) uncertainties associated with the Plan implementation."

I13-46

Page VI-23, "Adaptive Management/General Information"

Adaptive management changes should not include every mitigation measure proposed by new recovery plans, unless the state or federal government agency suggesting the new measures is prepared to fund them. Such changes are not required by law. Consequently, subsection (1) on Page VI-23 concerning the adaptive management process should be revised to read:

I13-47

"(1) regularly scheduled periodic evaluations of the NBHCP monitoring data ~~for the TNBC reserve lands~~ other new scientific information or future recovery plan recommendations by TNBC and/or the NBHCP TAC and a determination linking the information to the Plan's success in implementation and achieving the biological goals and objectives; and"

Page VI-25, "Changes Due to Future Recovery Plans Other than Changes to Managed Marsh Component"

I13-48

We do not agree with the proposition that the NBHCP may be changed virtually without limit under the premise of "Adaptive Management" to include any new mitigation measures proposed by adopted recovery plans for any of the Covered Species. Again, changes almost always have financial implications. Such costs are exclusively those of the federal or state agency adopting the recovery

plans. Consequently, any such changes may only be made if they do not require the commitment of additional land or additional funding from the Permittees, as required by the No Surprises Policy. Consequently, to the extent that USFWS requires the right to change the terms and provisions of the NBHCP for purposes of "Adaptive Management," the following revisions need to be made to the second and third full paragraphs on Page VI-25 of the NBHCP:

"The NBHCP Adaptive Management Plan allows for revisions to management strategies to incorporate new or modified management strategies, such as those which may be included in recovery plans or in response to monitoring results on TNBC reserve lands in the Plan Area or to new scientific information concerning TNBC reserve lands, provided such changes can be made without requiring the commitment of additional mitigation lands or funding by the Permittees or increases in the mitigation fees collected by the Permittees. However, it is necessary to define the scope of any such revisions with respect to the NBHCP's original purpose and goals. The specific purpose of the NBHCP is to establish a conservation program to minimize and mitigate for the effects of Covered Activities within the NBHCP Plan Area on the NBHCP Covered Species, and to meet the statutory requirements for issuance of federal and state Incidental Take permits under the ESA and CESA, respectively. With respect to recovery of NBHCP Covered Species, it is the intent of the NBHCP to contribute to such recovery to the maximum extent feasible consistent with the plan's other goals and purposes, without requiring the commitment of additional mitigation lands or funding or an increase in the mitigation fees being collected by the Permittees.

"The NBHCP will incorporate recommendations made pursuant to its adaptive management provisions ~~future recovery plans~~ when such recommendations can be implemented without requiring the commitment of additional mitigation lands or funding or an increase in the mitigation fees being collected by the Permittees and such changes:

- A. Relate to the physical management of Mitigation Lands.
- B. Would improve the effectiveness of the NBHCP's Operating Conservation Program by identifying relevant new information, approaches, techniques, or species protection needs;
- C. Can be implemented within the NBHCP Plan Area *without requiring the commitment of additional funding or an increase in the mitigation fees being collected by the Permittees;* and

I13-48

D. Fit within the overall intent ; *and framework of the NBHCP and* are consistent with the NBHCP's biological goals and objectives and would not exceed the established Mitigation Ratio of the Plan."

Page VI-26. "Changes to Managed Marsh Component"

I13-49

Subsection 2 pertaining to "Changes to Managed Marsh Component" departs significantly from the original HCP. Moreover, the expansion of the rights the USFWS and CDFG would now possess to require a higher percentage of managed marsh, in the absence of any Giant Garter Snake Recovery Plan, was not required by Judge Levi's ruling and is unacceptable to our clients. We suggest the following changes to the second paragraph of this subsection on Page IV-26:

"The NBHCP establishes an initial habitat enhancement obligation for Giant Garter Snakes and allows adjustments to be made based on the adopted Giant Garter Snake Recovery Plan, as amended." ~~monitoring conducted in the Plan Area or in response to new scientific information.~~

Pages VI-26 to 27. "Proportion of Managed Marsh Habitat"

I13-50

The first, second and third paragraphs below Table VI-4 on Pages VI-26 and VI-27 should be revised to read:

"The maximum levels would apply to future TNBC Reserve Land ~~(including Mitigation Land)~~ acquisitions which occur after written notification from USFWS indicating the ~~results of monitoring in the Plan Area, in response to new scientific information,~~ or Giant Garter Snake Recovery Plan ~~adoption~~ so warrants the shift in level.

"Thus, the NBHCP may be adapted to require TNBC to increase the proportion of managed marsh enhanced on Mitigation Lands which are acquired by the TNBC after *receipt of written notice from the USFWS following Giant Garter Snake Recovery Plan adoption,* ~~if such changes are supported by monitoring results from the Plan Area or new scientific information.~~ Should a Giant Garter Snake Recovery Plan, ~~monitoring results from the Plan Area or new scientific information~~ precipitate such a conversion, and should USFWS provide written notification supported by evidence and technical analysis *in the Recovery Plan,* then future Mitigation Lands acquired after such USFWS notice may be enhanced and managed by the TNBC to provide up to 75% managed marsh on the balance of such Mitigation Lands.

113-50

↑
"Any modifications to the NBHCP necessitated by a future Giant Garter Snake Recovery Plan ~~or by other future recovery plans approved for listed Covered Species,~~ are is considered a part of the Plan's Adaptive Management Program and will not trigger an amendment to the Permits."

Page IV-27, "Swainson's Hawk Recovery Plan"

Subsection 2 concerning changes which can be made if a Swainson's Hawk Recovery Plan is adopted needs to be revised as follows:

113-51

"Results of any future CDFG Swainson's Hawk Recovery Plan may also suggest or result in the need for NBHCP modifications. Although such modifications are unlikely to be as potentially significant or extensive as those that might be made for the Giant Garter Snake, the NBHCP nevertheless allows for appropriate revision to the Swainson's Hawk conservation strategy based on any such plan. Any significant changes to the NBHCP resulting from a Swainson's Hawk Recovery Plan are considered a part of the Plan's Adaptive Management Program *provided such changes can be accomplished without the commitment of additional funding or an increase in the mitigation fees being collected by the Permittees* and will not trigger an amendment to the permits."

Page VI-29, "Independent Mid-Point Reviews for Land Use Agencies"

113-52

The new requirement for Independent Mid-Point Reviews for the City of Sacramento and Sutter County would provide an opportunity for USFWS or CDFG to increase the percentage of managed marsh, without the condition precedent of adopting a Giant Garter Snake Recovery plan to support such a change. The second paragraph in Subsection "J." on Page VI-29 should be deleted. The percentage of Managed Marsh should be increased only if required by an adopted Recovery Plan for the Giant Garter Snake.

Page VI-31, "Applicability of the 'No Surprises' Protections"

113-53

Subsection "I." on Page VI-31 describes the "Applicability of the 'No Surprises' Protections" in the new NBHCP. We disagree with the manner in which the No Surprises Policy has been described in the NBHCP. As proposed, the only terms not subject to revision by the USFWS are the 1/2:1 mitigation ratio, the 75% cap on the percentage of managed marsh which can be required, and the acquisition of up to 20% of the mitigation land in Area B. In all other respects, the NBHCP has defined what would be considered an "Adaptive Management" change so broadly that any other feature or aspect of the NBHCP can be completely revised without any regard to the practical and

financial impacts of doing so. Consequently, Subsection 1 concerning the Applicability of the No Surprises Protections should be revised as follows:

~~"In light of the NBHCP Adaptive Management provisions (see Section VI.f), Overall Program Review (see Section VI.i), and individual Land Use Agency's Independent Mid-Point Review (see Section VI.j) which allow certain changes to occur throughout the term of the Plan provided they can be accomplished without the commitment of additional funding or an increase in the mitigation fees being collected by the Permittees, it is necessary to identify aspects of the NBHCP conservation program that are subject to the 'No Surprises' rule and for which the USFWS may not require additional mitigation for an unforeseen circumstances finding without the consent of the Permittees. The NBHCP Adaptive Management provisions allow the NBHCP to be revised as a result of new recovery plans, new research into the Covered Species, ongoing monitoring programs. As a result, revisions may be made to the NBHCP's Operating Conservation Program, including reserve land management and enhancement, and monitoring of the Covered Species pursuant to the plan's adaptive management plan that may result in additional mitigation provided such revisions meet the requirements of Section VI.E. and VI.F. Because such revisions and changes are provided for under the Plan, they are not subject to the restrictions on additional mitigation contained in the No Surprises Rule.~~

I13-53

Page VII-8. "Impacts to Giant Garter Snakes from Development within the City of Sacramento under NBHCP"

The discussion of the City of Sacramento's impacts to the Giant Garter Snake in the first and third paragraphs on Page VII-8 is somewhat inconsistent and contradictory. In the first paragraph, the discussion finds that the City would be providing 2,013 acres of rice land and 1,006 acres of managed marsh as mitigation, while the loss of rice land within the City's Permit Area is only 970 acres and the loss of canals is 117 acres. Far more mitigation marsh and rice land is being provided in the aggregate than will be lost when the existing canals and rice lands in the City are converted to urban development. However, in the third paragraph on Page VII-8, the NBHCP concludes that urban development within the City's Permit Area would result in a net loss of Giant Garter Snake habitat. If there are only 970 acres of rice and 117 acres of canals being lost, which will be replaced with 1,006 acres of managed marsh and 2,013 acres of rice lands in the reserves, we do not find any support for the NBHCP's conclusion. There is no analysis provided to support such a net loss conclusion, and it is inconsistent with the findings made in the first paragraph which precedes it. Frankly, this goes to the heart of the appropriateness of the mitigation ratio. All land being

I13-54

developed pays for mitigation, even though all land is not habitat for threatened or endangered species. Please provide some support for the NBHCP's conclusion or remedy this inconsistency.

113-54

In addition, the third paragraph on Page VII-8 also concludes that the mitigation being provided is mitigation to the maximum extent practicable, without supporting that conclusion with an analysis of why it is the maximum. Insofar as this was one of the deficiencies noted by Judge Levi, the NBHCP needs a further explanation of why there is no nexus to require greater mitigation. Both the ratio analysis mentioned above and the financial analysis provide this missing explanation.

Page VII-12. "Extent of Take of Swainson's Hawk as a Result of Covered Activities"

The first and second paragraphs on this page mention the 15:1 mitigation ratio being required for the 4 Swainson's Hawk nest trees which could potentially be lost within the Plan Area. Given the small size of the Swainson's Hawk population, there does not appear to be a shortage of nest trees in the Natomas Basin. Impacts to the Swainson's Hawk will more likely come from the loss of foraging habitat, not a loss of nest trees, yet the NBHCP fails to mention this factor. Moreover, TNBC is already implementing a tree planting program on TNBC mitigation lands, so there is no nexus for requiring any extraordinary Swainson's Hawk nest tree mitigation effort for only 4 nest trees. Insofar as the NBHCP recognizes and acknowledges that TNBC already has a tree planting program in the second paragraph on Page VII-12, the special nest tree mitigation measures previously described in the NBHCP are not needed. As a result, the first paragraph on Page VII-12 should be revised to read:

113-55

"However, the actual loss of nesting habitat would be effectively less than this amount because: 1) it is estimated that only 4 of the active nest sites are located in the area of potential nesting habitat lost to urban development; 2) riparian habitat, suitable for nesting trees, would be incorporated into the habitat reserves; and 3) tree mitigation will be advanced for these four trees following approval of the HCP regardless of when or if the nest trees are actually disturbed; and 3)4) measures would be implemented to protect trees that are used by Swainson's Hawks during the active nesting season; and 4) new nesting trees are already being planted by TNBC on mitigation lands with foraging habitat for the Swainson's Hawk to increase the availability and quality of suitable nesting trees."

Page VII-16. "Overall Impacts to Swainson's Hawk under NBHCP"

113-56

The discussion in the NBHCP of the overall impacts to the Swainson's Hawk is unclear. We suggest it be revised to read as follows:

113-56

“The greatest impact of urban development on the Swainson’s Hawk in the Natomas Basin would occur if significant portions of the Swainson’s Hawk Zone (Figure 13) were developed. Only 252 acres of urban development located within the City of Sacramento Permit Area is anticipated under the NBHCP within the Swainson’s Hawk Zone. An approximately one mile wide buffer along the east side of the Sacramento River *for along the length of the Natomas Basin will be created where urban development will be restricted.* Of these 252 acres of land in the Swainson’s Hawk Zone, about 80 acres will be a 250 foot wide agricultural buffer along the City’s side of Fisherman’s Lake. Sutter County’s Permit Area ~~NBHCP Permit Area~~ also excludes the Swainson’s Hawk Zone *from urban development.* and Upon execution of the NBHCP IA, the Sutter County will initiate a General Plan Amendment to remove the existing Industrial/Commercial Reserve General Plan designation from Sutter County lands within the Swainson’s Hawk Zone. *Also In addition,* the NBHCP protects *Swainson’s Hawk* nesting habitat along Fisherman’s Lake ~~in that area adjacent to Fisherman’s Lake is protected by~~ *with* a minimum 250 foot wide non-urbanized buffer on the east side. ~~And There is~~ no proposed urban development on the west side of *Fisherman’s Lake* in the unincorporated portion of Sacramento County.”

Page VII-20, “Significance of the Natomas Basin to Tricolored Blackbird”

113-57

The last two sentences in the first paragraph of “Section 4. Significance of the Natomas Basin to Tricolored Blackbird” on Page VII-20 needs to be corrected:

“During surveys conducted in 1997 and 1999, no breeding sites for tricolored blackbird were found in the Natomas Basin. However, subsequent surveys *identified* located a nesting colony ~~was identified~~ in ~~TNBC’s~~ reserve in the eastern edge of the ~~TNBC’s~~ Basin (~~Betts-Kismat-Silva mitigation~~ property.”)

Page VII-27, “Impacts to White-faced Ibis from Development within the City of Sacramento under NBHCP”

113-58

In Section 6 on Page VII-26, the NBHCP states that no suitable nesting habitat occurs in the Natomas Basin for the White-faced Ibis. In the second paragraph on Page VII-27 which discusses impacts from urban development within the Natomas Basin for this species, the NBHCP states “potential nesting habitat is very limited.” That implies that some nesting habitat is found in the Basin. The second sentence of the second paragraph on Page VII-27 should be corrected to read:

I13-58

“White-faced ibis do not nest in the Natomas Basin and potential nesting habitat (e.g., large emergent marshes) *does not exist is very limited* in the Basin; therefore the species is not likely to nest there in the future.”

Page VII-27, “Impacts to White-faced Ibis from Development within Sutter County under NBHCP”

I13-59

The same inconsistencies for the White-faced Ibis are found later on Page VII-27 where the NBHCP describes impacts to the White-faced Ibis in Sutter County. The first sentence of the last paragraph needs to be corrected to remove its mention of nesting habitat:

“While the large amount of rice fields make the Natomas Basin an attractive habitat for *foraging breeding*, rice fields and the associated farming practices are often incompatible with the nesting and breeding patterns of the white faced ibis.”

Page VII-33, “Significance of Plan Area to Bank Swallow”

I13-60

The first paragraph in Section 9 concerning the “Significance of the Plan Area to Bank Swallow” repeats the sentence “Suitable nesting habitat for the species is limited in the Plan Area for several reasons” twice. One of them should be deleted.

Page VII-35, “Measures to Avoid, Minimize and Mitigate Take of Bank Swallow”

I13-61

In its discussion of “Measures to Avoid, Minimize and Mitigate Take of Bank Swallow” the NBHCP says the TNBC could create riparian habitat with suitable nesting habitat for the Bank Swallow. That is not possible, since the Bank Swallow only nests in vertical cliffs and riverbanks, neither of which would be within any riparian habitats created by the TNBC within the interior of the Natomas Basin. In any event, there is no nesting habitat present within the Natomas Basin and none will be impacted by urban development in the Permit Areas. Consequently, the third and fourth sentences of this section of the NBHCP should be corrected to read:

“The species could benefit from any riparian habitats protected or created under the NBHCP because it could use the ~~created~~ habitat for ~~nesting or~~ foraging. In addition, the following measures would be implemented to avoid and minimize take of the species: 1) TNBC would use applicable USFWS or CDFG approved bank swallow recovery or management plans *provided they do not require the commitment of additional lands or additional funding from the Permittees or an increase in the mitigation fees to be collected by the Permittees*, 2) disturbance of nesting colonies would be strictly avoided within the nesting season by TNBC during their construction

113-61

activities, and 3) disturbance of nesting colonies would be strictly avoided within the nesting season by urban development during their construction activities.”

Page VII-35. “Overall Impacts to Bank Swallow under NBHCP”

113-62

A similar correction concerning Bank Swallow nesting habitat needs to be made to the second sentence of the last paragraph on Page VII-35:

“Consequently, it may benefit from any riparian habitats protected or created under the NBHCP, which it could use for nesting or foraging.”

Pages VII-38 to VII-40. “California Tiger Salamander”

113-63

The NBHCP lacks any legal nexus to require the introduction of the California Tiger Salamander into the Natomas Basin as part of the TNBC’s obligations. On Pages VII-38 to VII-40, the NBHCP explicitly states that the Tiger Salamander has not been documented to occur either historically or presently in the Natomas Basin. At the top of Page VII-39, the NBHCP concludes that the Plan Area does not represent a significant area to the continued existence or preservation of the California Tiger Salamander. In the complete absence of the species in the Basin, there is no legal justification for requiring creation of special California Tiger Salamander habitat and the introduction of this species into the Basin as a mitigation measure. Only if the California Tiger Salamander is actually found in the Basin and the species and its habitat taken should there be any obligation to provide mitigation. Moreover, there should be no obligation whatsoever to introduce the species into the Basin. Consequently, the second and third paragraphs in the section entitled “Measures to Avoid, Minimize and Mitigate Take of California Tiger Salamander” on Pages VII-39 to VII-40 should be modified to read as follows:

“In addition to the above vernal pool actions, *in the event that pre-construction biological surveys determine that California Tiger Salamanders are present in an area being developed*, then ~~the HCP requires~~ TNBC will consult with the TAC and California Tiger Salamander researchers and experts periodically during implementation of the Plan to determine what, if any, additional conservation opportunities for this species might exist *which could be incorporated into Site Specific Management Plans. within the Plan’s proposed reserve system* Such opportunities might include but are not limited to establishment ~~of creation~~ of wetland and upland habitats suitable for Tiger Salamanders within the reserve system (e.g., stock ponds or *created “artificial”* vernal pools). ~~And if appropriate,~~

I13-63

~~possible reintroduction of.~~ *However, under no circumstances will TNBC be required to introduce Tiger Salamanders into the Basin.*

Page VII-41, "Western Spadefoot Toad"

A similar problem is presented by the NBHCP with regard to the Western Spadefoot Toad. The NBHCP acknowledges that the Toad is not known to historically or presently occur in the Natomas Basin, yet Page VII-41 would require TNBC to consult with the TAC and Western Spadefoot Toad experts to implement additional conservation measures for the Toad. Such an action should only be required if the Toad is actually found during a pre-construction survey. The last paragraph on Page VII-41 should be revised as follows:

I13-64

"In addition to the above vernal pool actions, ~~the HCP requires that in the event Western Spadefoot Toads are discovered during any pre-construction surveys, then~~ TNBC will consult with the TAC and Western Spadefoot Toad experts periodically during implementation of the NBHCP to determine what, if any, conservation opportunities for this species ~~could be incorporated into Site Specific Management Plans' habitat designs.~~ might exist within the Plan's proposed reserve system. Any such opportunities shall be incorporated into the NBHCP's conservation program through its Adaptive Management provisions. However, under no circumstances will TNBC be required to introduce the Western Spadefoot Toad into any TNBC mitigation lands."

Page VII-43, "Measures to Avoid, Minimize and Mitigate Take of the Vernal Pool Fairy Shrimp"

I13-65

The third full paragraph on Page VII-43 would require TNBC to consult with the TAC and create new habitat on TNBC mitigation lands for the Conservancy fairy shrimp, longhorn fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp and midvalley fairy shrimp. This new obligation is being imposed even though there is no loss of habitat for these species and no incidental take of any of those species. Moreover, the Conservancy fairy shrimp and the longhorn fairy shrimp have been removed from the list of Covered Species. There should be no obligation to create vernal pool habitat for species that are not being impacted by urban development. Consequently, there is no nexus for the NBHCP to require the creation of any new habitat for these species in the absence of take. Moreover, if a developer impacts a vernal pool, the new NBHCP contains explicit and independent obligations for that developer to create and preserve vernal pool habitat. We see no nexus for requiring TNBC to also require the creation of new additional vernal pool habitat upon its mitigation lands. We suggest deleting the following paragraph from Page VII-43:

"In the event that pre-construction biological surveys determine that the vernal pool fairy shrimp are present in an area being developed,

113-65

~~then in addition, the HCP requires that TNBC will consult with the TAC, and fairy shrimp and tadpole shrimp experts periodically during implementation of the NBHCP to determine what if any additional conservation opportunities for Conservancy fairy shrimp, longhorn fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp and midvalley fairy shrimp might exist within the Plan's proposed reserve system to assist landowners in fulfilling their mitigation obligations. Any such opportunities shall be incorporated into the NBHCP's conservation program through its Adaptive Management provisions."~~

Page VII-45. "Vernal Pool Tadpole Shrimp"

The third paragraph on Page VII-45 should be deleted, since impacts to the vernal pool tadpole shrimp will be independently mitigated by the measures already imposed directly on landowners by the NBHCP in Chapter V. There is no nexus for also requiring TNBC to provide additional mitigation for the loss of vernal pool tadpole shrimp habitat, especially when the creation of such new habitat would be required by the NBHCP in the absence of any "take." The paragraph to be deleted reads:

113-66

~~"In the event that pre-construction biological surveys determine that the vernal pool tadpole shrimp are present in an area being developed in addition, the HCP requires that TNBC will consult with the TAC, and fairy shrimp and tadpole shrimp experts periodically during implementation of the NBHCP to determine what if any additional conservation opportunities for Conservancy fairy shrimp, longhorn fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp and midvalley fairy shrimp might exist within the Plan's proposed reserve system to assist landowners in fulfilling their mitigation obligations. Any such opportunities shall be incorporated into the NBHCP's conservation program through its Adaptive Management provisions."~~

Page VII-47. "Measures to Avoid, Minimize, and Mitigate Take of the Midvalley Fairy Shrimp"

113-67

The measures to avoid and minimize take of the midvalley fairy shrimp suffer from the same problems as those noted above for the vernal pool tadpole shrimp. The creation of new habitat is being required by the NBHCP in the absence of any impacts or take of the species. Consequently, the third paragraph on Page VII-47 should be deleted:

~~"In the event that pre-construction biological surveys determine that the midvalley fairy shrimp are present in an area being developed, in addition, the HCP requires that TNBC will consult with the TAC, and~~

113-67

fairy shrimp and tadpole shrimp experts periodically during implementation of the NBHCP to determine what if any additional conservation opportunities for Conservancy fairy shrimp, longhorn fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp and midvalley fairy shrimp might exist within the Plan's proposed reserve system *to assist landowners in fulfilling their mitigation obligations.* ~~Any such opportunities shall be incorporated into the NBHCP's conservation program through its Adaptive Management provisions.~~²²

Page VII-49. "Measures to Avoid, Minimize and Mitigate Take of the Delta Tule Pea"

113-68

Insofar as the Delta Tule Pea is not known to occur in the Natomas Basin and the Basin is not an area important to the continued existence or preservation of this plant species, there is no nexus for requiring TNBC to introduce the Delta Tule Pea into the Natomas Basin. The plant was not historically known to occur there and the development in the Natomas Basin will have no impacts on it. Only if a pre-construction biological survey discovers the Delta Tule Pea should TNBC be required to create new habitat suitable for this plant. Consequently, the NBHCP's requirement for TNBC to introduce the Delta Tule Pea into the Natomas Basin should be deleted. Instead, the paragraph on Page VII-49 concerning measures to avoid and mitigate the take of the Delta Tule Pea should be revised to read:

"In the event pre-construction biological surveys discover the presence of the Delta Tule Pea, then the NBHCP includes a shall implement measures to include suitable Delta Tule Pea habitat in the Site Specific Management Plans prepared for TNBC reserve lands. For TNBC to consider introducing the Delta tule pea into suitable locations in the Natomas Basin. Introducing Creating suitable habitat for the Delta Tule Pea into the system of habitat reserves would benefit the species by increasing population size and distribution. In addition, the NBHCP requires TNBC to monitor any known populations of covered plant species within the TNBC mitigation lands." NBHCP area

Page VII-50. "Impacts to Delta Tule Pea"

113-69

A change needed on Page VII-50 is a revision of the sentence which mentions the introduction of the Delta Tule Pea into the Natomas Basin by TNBC. TNBC should not be required to introduce any new species into the Basin. If the Delta Tule Pea is found in a pre-construction survey, then TNBC's obligation would be to create habitat for it in the TNBC reserves so as to provide opportunities for individual plants it to be transplanted under applicable state and federal laws. The second full paragraph on Page VII-50 should have its second sentence changed:

I13-69

"The combination of the overall measures (i.e., pre-construction surveys for Covered Species and their habitat); species-specific measures (i.e., *potential for creation of suitable habitat if the species is found in a pre-construction survey introduction into suitable habitats in the reserve system*); and long-term protection, creation and enhancement of upland and suitable wetlands habitats (i.e., emergent marsh) in the reserve system will effectively compensate for potential adverse effects to this species under the NBHCP."

Page VII-50, "Sanford's Arrowhead"

I13-70

The NBHCP contains inconsistent and conflicting descriptions of the type of habitat used by the Sanford's Arrowhead on Page VII-50. In the third full paragraph on Page VII-50, the NBHCP describes suitable habitat for this plant as unmaintained agricultural supply and return ditches. In the last paragraph on Page VII-50, the NBHCP states the potential habitat for the Sanford's Arrowhead consists of ponds and marsh habitat. Ponds are not the same as unmaintained ditches and canals. This discrepancy needs to be corrected.

Page VII-51, "Measures to Avoid, Minimize, and Mitigate Take of the Sanford's Arrowhead"

I13-71

In the first full paragraph on Page VII-51, TNBC is required to introduce the Sanford's Arrowhead into the Natomas Basin. This plant is not found in the Basin or known to occur there. TNBC's obligation should be to provide suitable habitat if a pre-construction survey reveals that this plant currently exists in the Basin. This requirement should be modified as follows:

"The NBHCP includes a measure for TNBC to *create suitable habitat for the Sanford's Arrowhead on reserve lands if it is found during pre-construction surveys in the Plan Area. Consider introducing Sanford's arrowhead into suitable locations in the Natomas Basin. Introducing Creating suitable habitat for the Sanford's arrowhead in* into the system of habitat reserves would benefit the species by increasing population size and distribution. In addition, TNBC shall monitor any known populations of covered plant species within the NBHCP TNBC mitigation lands." ~~area~~

Pages VII-51 and VII-52, "Impacts to Sanford's Arrowhead from Development within Sutter County under NBHCP"

I13-72

The last paragraph on page VII-51 should be corrected to have its first sentence read as follows:

“Because the species has not been documented to occur either historically or presently within the Plan Area and because the Plan Area only supports a limited extent of suitable habitat for the species, development within Sutter County is *not* anticipated to have a substantial effect on the continued existence or preservation of the species.”

The second paragraph on Page VII-52 concerning the overall impacts to the Sanford’s Arrowhead under the NBHCP should have its first and second sentences revised to read:

“Although not known to occur in the NBHCP area, suitable habitat for Sanford’s Arrowhead is present wherever *agricultural ditches and canals seasonal marsh occurs are found* in the area. The combination of the overall measures (i.e., pre-construction surveys for Covered Species and their habitat); species-specific measures (i.e., *potential for creation of suitable habitat if the species is found in a pre-construction survey introduction into suitable habitats in the reserve system*); and long-term protection, creation and enhancement of ~~upland~~ and suitable wetlands habitats (i.e., emergent marsh *in agricultural ditches and canals and seasonal marsh*) in the reserve system will effectively compensate for potential adverse effects to this species under the NBHCP.”

I13-72

Page VII-53. “Boggs Lake Hedge Hysopp”

Insofar as the NBHCP requires a developer to separately mitigate for the impacts of any urban development on vernal pools and associated vernal pool species, it is improper for the NBHCP to also require TNBC to create special habitat on the reserves or introduce vernal pool plant species such as the Bogg’s Lake Hedge Hyssop which is not known to have ever occurred in the Plan Area. As a result, the first full paragraph on Page VII-53 should be deleted:

~~“In addition, TNBC shall evaluate the potential for furthering the conservation of covered plant species within the NBHCP’s vernal pool areas or its wetland reserve system through appropriate means including but not limited to, the introduction of Boggs Lake hedge-hysopp, Sacramento orcutt grass, slender orcutt grass, Colusa grass and legenece into the vernal pool areas or other suitable locations in the NBHCP Plan Area.”~~

I13-73

Page VII-54, "Sacramento Orcutt Grass"

The first and second full paragraphs on Page VII-54 directly contradict each other on the issue of whether the Natomas Basin contains any habitat for the Sacramento orcutt grass. Insofar as Sacramento orcutt grass is only known to occur in high terrace formation vernal pools found in South Sacramento County, the second paragraph on Page VII-54 must be corrected:

113-74

"The NBHCP identifies small, relatively undisturbed areas of vernal pools at the east side of in the Natomas Basin. Currently, the Basin does not contain a significant component of vernal pools and implementation of the NBHCP is not expected to affect the continued existence of the Sacramento orcutt grass. vernal pool species. Because potentially suitable habitat for the Sacramento orcutt grass vernal pool species does not occurs in the Basin, there is not expected to be any take of this species. However, vernal pool conservation and establishment of wetland and upland reserves would protect and enhance habitat values for this vernal pool species if it were found to exist in the Plan Area."

Page VII-54, "Measures to Avoid, Minimize and Mitigate Take of the Sacramento Orcutt Grass"

113-75

The fourth full paragraph on Page VII-54 would require TNBC to introduce the Sacramento orcutt grass to the Natomas Basin as a mitigation measure. That would not be possible, given that the Natomas Basin is not known to contain the unique geologic characteristics of the vernal pools where the Sacramento orcutt grass is known to occur in South Sacramento County. Consequently, the fourth paragraph on Page VII-54 should be changed by revising it:

"In the event that pre-construction biological surveys determine that Sacramento orcutt grass is present in an area being developed ~~In addition,~~ TNBC shall evaluate the potential for furthering the conservation of covered plant species within the NBHCP's vernal pool areas or its welland reserve system to assist landowners in fulfilling their mitigation obligations; ~~through appropriate means including but not limited to, the introduction of Bogg's Lake hedge-hysopp, Sacramento orcutt grass, slender orcutt grass, Colusa grass and legenero into the vernal pool areas or other suitable locations in the NBHCP Plan Area."~~

The last paragraph on Page VII-54 also needs to be corrected, since the Sacramento orcutt grass has no currently known suitable habitat in the Natomas Basin:

113-75

“Sacramento orcutt grass has not been documented in the Plan Area and potential habitat *is not found at the* is limited to few vernal pools on the far eastern edge of the Plan Area. Development within the City of Sacramento *is not likely to result in the loss of any marginally suitable habitat for the Sacramento orcutt grass. in the form of seasonal wetlands and vernal pools.* This habitat loss may result in the loss of individuals of this federally protected species; however, because of the limited extent of *Due to the absence of any currently known potential habitat and the relatively low possibility of suitable quality of the habitat being present in the Plan Area,* City development is not anticipated to have an effect on the species as a whole. Also, the areas with the highest *potential for suitable habitat quality* are not in areas designated for development.”

Page VII-56, “Measures to Avoid, Minimize, and Mitigate Take of the Slender Orcutt Grass”

The third paragraph on Page VII-56 concerning Slender orcutt grass mitigation needs to be revised since this plant species is not presently known to occur in the Plan Area:

113-76

“In the event that pre-construction biological surveys determine that Slender orcutt grass is present in an area being developed in addition, TNBC shall evaluate the potential for furthering the conservation of covered plant species within the NBHCP’s vernal pool areas or its wetland reserve system through appropriate means to assist landowners in fulfilling their mitigation obligations, including but not limited to, the introduction of Dagg’s Lake hedge-hyssop, Sacramento orcutt grass, slender orcutt grass, Colusa grass and legenera into the vernal pool areas or other suitable locations in the NBHCP Plan Area.”

Page VII-56, “Impacts to Slender Orcutt Grass from Development within the City of Sacramento under NBHCP”

113-77

Please revise the fourth paragraph on Page VII-56 concerning slender orcutt grass in the City of Sacramento as follows:

“Slender orcutt grass has not been documented in the Plan Area and there currently is no known suitable potential habitat within the City of Sacramento’s Permit Area. is limited to few vernal pools on the far eastern edge of the Plan Area. Development within the City of Sacramento could is not currently expected to result in the loss of marginally suitable habitat for the slender orcutt grass. In the form of

~~seasonal wetlands and vernal pools. This habitat loss may result in the loss of individuals of this federally listed species, however. Because of the absence of any known limited extent of potential habitat and relatively low quality of the habitat present in the Plan Area, City development is not anticipated to have an effect on the species as a whole. Also, the areas with the highest potential for habitat quality are not in areas designated for development.~~

The second paragraph on Page VII-57 concerning overall impacts to Slender orcutt grass under the NBHCP should be revised as follows:

"The Plan Area generally does not include vernal pools with the required high terrace formation that supports this species. However, if pre-construction surveys reveal the presence of Slender orcutt grass, then vernal pool restoration programs would be adapted to provide enhanced habitat for this species. Due to the current lack of suitable habitat and the lack of known occurrences of this species, development and other Covered Activities under the NBHCP are not likely to effect the continued existence or preservation of this species." ~~These HCP measures will avoid take of the species to the maximum extent practicable in accordance with the ESA and will minimize and fully mitigate effects in accordance with CESA.~~

113-77

Page VII-58. "Measures to Avoid, Minimize, and Mitigate Take of the Colusa Grass"

The first full paragraph on Page VII-58 could require TNBC to introduce Colusa Grass to the Natomas Basin, even though it is not known to occur in the Basin's vernal pools. Consequently, this third paragraph should be deleted. If Colusa Grass is found during a pre-construction survey, the separate vernal pool mitigation requirements imposed on a developer will fully mitigate for its loss, so TNBC should have no additional obligations to do so:

113-78

~~"In the event that pre-construction biological surveys determine that Colusa Grass is present in an area being developed In addition; TNBC shall evaluate the potential for furthering the conservation of this covered plant species within the NBHCP's vernal pool areas or its wetland reserve system through appropriate means in order to assist landowners with fulfilling their mitigation obligations; including but not limited to, the introduction of Bogg's Lake hedge-hysopp, Sacramento orcutt grass, slender orcutt grass, Colusa grass and legenero into the vernal pool areas or other suitable locations in the NBHCP Plan Area."~~

The second full paragraph on Page VII-58 should be revised to read:

~~“Colusa grass has not been documented in the Plan Area and no suitable potential habitat is currently found in the Plan Area. Limited to few vernal pools on the far eastern edge of the Plan Area. Development within the City of Sacramento is not currently expected to could result in the loss of marginally any suitable habitat for this species. in the front of seasonal wetlands and vernal pools. This habitat loss may result in the loss of individuals of this federally listed species; however, because of the limited extent of potential habitat and relatively low quality of the habitat present in the Plan Area, City development is not anticipated to have an effect on the species as a whole.” Also, the areas with the highest habitat quality are not in areas designated for development.~~

In order to make the NBHCP internally consistent on the subject of Colusa grass, the last paragraph on Page VII-58 should also be revised:

~~“Although not known, or expected, to occur in the NBHCP area, should pre-construction surveys discover the presence of Colusa grass, the NBHCP would provide mitigation. marginally suitable habitat for Colusa grass is present in he easer edge of the area. The combination of the overall measures (i.e., pre-construction surveys for Covered Species or their habitat), the vernal pool protections incorporated into the NBHCP, and long-term protection, creation, and enhancement of upland and suitable wetland habitats (i.e. seasonal wetlands) in the reserve system will effectively compensate for potential adverse effects to this species under the NBHCP. These HCP measures will avoid, minimize and mitigate take of the species to the maximum extent practicable in accordance with the ESA and will minimize and fully mitigate effects in accordance with CESA.”~~

113-78

Page VII-59. “Measures to Avoid, Minimize, and Mitigate Take of the Legenere”

The fourth paragraph on Page VII-59 should be deleted to reflect the fact that TNBC should have no obligation to introduce the legenere plant to the Natomas Basin; any legenere plants taken will be fully mitigated by the developer who fills the deep vernal pools or other wetlands where such plants are found, as required by the NBHCP.

113-79

The last paragraph on Page VII-59 should be corrected to be consistent with the rest of the NBHCP concerning the legenere plants:

I13-79

~~“Development within the City of Sacramento is not expected to could result in the loss of suitable *deep vernal pool or lake shore wetland* habitat for the legenera.” This habitat los may have a substantial effect on individuals of this special status species, however, because of the limited extent and relatively low quality of the habitat present in the Plan Area, City development is not anticipated to have a substantial effect on the species as a whole. Also, the areas with the highest habitat quality are not in areas designated for development.~~

Page VII-64, “Species Recovery”

The rationale for allowing out-of-Basin mitigation land acquisitions described in the fourth paragraph on Page VII-64 should be revised as follows:

I13-80

“The NBHCP also allows, if certain conditions are met, for some mitigation lands to be purchased out-of-Basin (See Section IV.B). The purpose of this provision is potentially to reduce the cost of the Plan by allowing acquisition of lower-cost land and to reduce the impact of land acquisition on farming in the Basin. However, this provision *will* may also benefit Giant Garter Snake recovery by creating reserves on behalf of important out-of-Basin Giant Garter Snake populations *and preserving a more diverse gene pool for the Giant Garter Snake. This factor was earlier recognized in the USFWS’ listing decision for the Giant Garter Snake which noted that: (a) the Natomas Basin population of the snake was infested with unidentified parasitic worms from 5 to 8 cm in length which posed an unknown degree of threat [58 Fed.Reg. 54061 (1993)]; and (b) the breeding of closely related individuals can cause genetic problems in small populations, particularly the expression of deleterious genes (known as inbreeding depression)[58 Fed.Reg. 54064 (1993)].*”

Page VII-66, “Summary of Findings Under ESA and CESA”

The last paragraph on Page VII-66 should have its first sentences revised to read:

I13-81

“From a biological standpoint, the mitigation ratio of 0.5 to 1 is appropriate given the paucity of extant *natural, undisturbed* habitat for the Covered Species found within the Plan Area when compared to the enhanced value of the reserve lands that will result from habitat restoration, creation and management. *There is virtually no natural habitat left. Some of the artificial habitat which exists in the form of farm lands and agricultural drainage canals and drainage ditches within the Permit Areas subject to urban development is of high quality and some is of very low or limited value.*”

ATTACHMENT 2

Responses to Comments

Letter G1—U.S. Army Corps of Engineers

Response to Comment G1-1

The Applicants and the Lead Agencies understand that the discharge of dredged or fill material into waters of the United States will require Department of the Army authorization pursuant to the Clean Water Act. The ITPs would authorize incidental take associated with the Covered Activities. The ITPs would not provide take authorization for discharge of dredged or fill material into waters of the United States. This is clearly stated in Section V.A.4 of the NBHCP and in Section 2.3.4 of the EIR/EIS. For this reason, no changes to either document are necessary.

Letter G2—Environmental Protection Agency, Region IX

Response to Comment G2-1

In this introductory comment, the commentor summarizes key elements of the NBHCP and ITP process. The Lead Agencies acknowledge the statement of support for the NBHCP process as presented in the last paragraph of this introductory comment.

Response to Comment G2-2

The USFWS will consider the effect of the takings, including effects on species resulting from planned development. The non-federal decisions regarding the need for development in the Natomas Basin and the nature of that development are decisions that have been made by the City and Sutter County. The USFWS is not considering the types of land uses proposed or land use patterns, and has no authority to modify land use within the jurisdictions of the City and Sutter County. This is consistent with the USFWS HCP Handbook, which states, “The purpose of the habitat conservation planning process and subsequent issuance of ITPs is to authorize the incidental take of threatened or endangered species, not to authorize the underlying activities that result in take.”

In the context of the Applicants, the following response on the nature and extent of urban development in the Natomas Basin is provided.

The North Natomas Community Plan, the largest area allowed to develop within the City’s Permit Area, was designed through a consensus-building process involving stakeholders in the process (the North Natomas Working Group), including ECOS, Sierra Club, Natomas Community Association, North Natomas Landowners Association, independent North Natomas landowners, City staff, and representatives from other local agencies (Regional Transit, school districts, County Agriculture Commissioner, SMUD, etc.). The resulting plan, based on the planning principles written by the North Natomas Working Group, envisions a “new urban form” that incorporates many of the principles of Smart Growth:

1. The Town Center is the focus of the community;
2. Each neighborhood has an elementary school as its focus, and it includes a variety of housing types, transit service, commercial opportunities, and parks and open space;
3. The Employment Center designation is primarily office, but also allows a mix of residential, retail, and industrial uses to allow employees to live and shop near their workplace; and
4. Public transit services will be provided at each phase of development, starting with express bus and community shuttle service and ultimately light rail, will link the downtown, Natomas area, and the Sacramento International Airport.

Despite the floodplain and the proximity of endangered species habitat, the North Natomas area allows development within 3 miles from downtown, which is the urban employment, cultural, and entertainment center of the region. The proximity to downtown allows traffic management and air quality benefits, unlike areas that are developing further away from the regional center.

Issuance of the proposed ITPs for Planned Development in South Natomas would enable the buildout of this existing community; South Natomas is even closer to downtown than North Natomas.

The City adopted Smart Growth Principles in 2002. These principles are used to guide development within the entire City, as well as in North and South Natomas. The Smart Growth Principles are the basic foundation blocks for compact development. Similarly, an Infill Incentive Policy was adopted in 2002 and implementation ordinances are to be considered in 2003.

Planned Development in Sutter County is for industrial and commercial uses. These employment-generating uses will provide employment to the predominantly residential base of Sutter County. Such employment opportunities may result in fewer Sutter County residents seeking employment in Sacramento, thereby reducing their commute and consequently reducing traffic congestion and adverse air quality impacts.

Response to Comment G2-3

Several planned and funded projects were constructed to provide 100-year-plus flood protection to the areas within the City's Permit Area, specifically North and South Natomas. First, the Sacramento Area Flood Control Agency (SAFCA) sponsored the Local Area Project to reinforce the Sacramento River levees; this was completed in 1997. This project reinforced the large levees encircling the Natomas Basin and helped protect the entire Basin from flooding, which prevents property damage and personal injury to the urbanized areas, and it protects the agricultural areas from inundation. This is beneficial to the plant and animal species inhabiting the Basin, as well as to the crops farmed in this area.

Second, after the City approved development in North Natomas, the North Natomas Comprehensive Drainage Plan (CDP) was planned and funded by the Community Facilities District No. 97-01, a Mello-Roos Community Facilities District, with proceeds used to build the drainage improvements. The CDP was designed to raise and reinforce the levees along the East and West Main Drains, providing flood protection from the internal floodplains within the North and South Natomas Community Plan areas. Third, the developers within each in-basin watershed area build the detention basin and canal improvements necessary to provide flood protection, stormwater drainage, and water quality improvements to benefit the development in that in-basin watershed area. These drainage improvements detain stormwater runoff within the detention basin until after the storm event, when the local canals and rivers are full, until the runoff can be safely and, in a controlled manner, conveyed to the canals, river, and ocean. This set of detention basins and year-around lakes serve to mimic the original American Lakes that were located within the Natomas Basin prior to reclamation efforts in the 1910s. These basins allow stormwater to stay in the Basin without damaging urban and agricultural areas until the runoff can be drained safely. The basins serve three purposes: flood protection, stormwater drainage, and water quality.

Regarding the statement included in the MAP EIS regarding flood impacts, it is important to note that this statement is based on, and referenced to, a 1991 storm drain report that pre-dates the substantial amount of additional studies and improvements to the flood protection and drainage system of the Natomas Basin. The exact statement in the Final EIS for that project also states that flood flows from storm drainage will be mitigated through a detailed

storm drainage plan that addresses both onsite and offsite improvements, and that the MAP project includes a financing plan for these improvements (see page 4.8, MAP Final EIS).

Response to Comment G2-4

The Applicants propose a 50-year permit term (Section VI.A. of the NBHCP) with both overall and independent mid-point reviews (Sections VI.I. and VI.J of the NBHCP, respectively). The commentor suggests that the NBHCP should be subject to a shorter permit duration (10 or 20 years) or more frequent reviews. The 50-year permit term is proposed based on (1) the schedule for buildout of the authorized development and (2) the time required for the habitat reserves to become fully operational (see Response to Comment G2-14). The NBHCP does include several review and assessment requirements. The overall midpoint review would occur at 9,000 acres of Planned Development in the Natomas Basin. At this review, the success of the Operating Conservation Program, status of the Mitigation Lands and covered species, and overall NBHCP success and compliance is reviewed. In addition to this overall review, the City and Sutter County must each conduct independent midpoint reviews for their Permit Areas. The NBHCP also contains extensive provisions for adequately funded monitoring and adaptive management (Sections VI.E. and VI.F. of the NBHCP, respectively), as well as a provision for changes in response to new recovery plans for the giant garter snake and Swainson's hawk (Section VI.H. of the NBHCP). Therefore, the USFWS has determined that the additional measures suggested by the commentor are not necessary because the NBHCP measures effectively provide for review, assessments, monitoring, and adaptive management policies to ensure that impacts are avoided, minimized, and mitigated over the course of the permit term. Finally, it is important to note that the three required reviews were developed specifically to reflect points in the NBHCP process at which the estimated Planned Development and Mitigation Land development can be assessed relative to the success of the mitigation program.

Response to Comment G2-5

The Lead Agencies have provided sufficient information as described throughout the Draft EIR/EIS and Final EIR/EIS for the reasons described in the responses to the commentor's general and detailed comments, both in the responses to this comment letter and to other letters received on the Draft NBHCP and EIR/EIS. For responses on the mitigation ratio, see Response to Comment G2-6 and Master Response 1 (Mitigation Ratio). For a discussion of the feasibility of implementing the NBHCP, see Response to Comment G2-7. For a detailed summary of the approach to the cumulative impacts analysis, see Response to Comment G2-9 and Master Response 4 (Cumulative Impacts). For responses to the commentor's specific concerns on the environmental consequences analysis, see Responses to Comments G2-10 and G2-11. Also see Responses to Comments G2-8 and G2-12 through G2-17.

Response to Comment G2-6

The commentor acknowledges the proposed 0.5:1 mitigation ratio and also acknowledges that actively managed, restored, and enhanced habitat would provide greater habitat value than the existing rice fields and land to be converted to Planned Development. The commentor suggests that the EIR/EIS does not include the scientific basis for the proposed mitigation ratio. In response, the scientific basis for the proposed mitigation ratio is encompassed in the NBHCP and its Appendices, not in the EIR/EIS. The purpose of the

EIR/EIS is to assess the impacts of the NBHCP, not to develop or justify the NBHCP. The scientific and economic basis for the mitigation ratio is included throughout the NBHCP, with a summary provided on pages IV-5 through 6 of the Draft NBHCP (also see Appendix A of the Draft NBHCP, which contains the Economic Analysis of the NBHCP).

The commentor also notes that other HCPs employ different mitigation ratios. In accordance with the HCP Handbook, the ratio was devised to address most effectively the types of impacts proposed by the Covered Activities of this HCP. The NBHCP mitigation ratio is only part of an Operating Conservation Program, which includes substantial avoidance, minimization, and mitigation measures for each species. Chapter 3 of the USFWS HCP Handbook for instance states:

Mitigation programs under HCPs and section 10 permits are as varied as the projects they address. Consequently, this handbook does not establish specific “rules” for developing mitigation programs that would limit the creative potential inherent in any good HCP effort. On the other hand, the standards used in developing HCPs must be adequate and consistent regardless of which Service office happens to work with a permit applicant. Mitigation programs should be based on sound biological rationale; they should also be practicable and commensurate with the impacts they address.

Thus, for example, the San Joaquin County Multi-Species Conservation Plan (MSCP) includes different tiers of mitigation related to different types of habitat in their county (which includes a significantly larger and more diverse habitat than the Natomas Basin) and has devised their mitigation ratio to address 97 special-status species. Thus, the biological rationale, impacts, and mitigation for the San Joaquin County MSCP is different from that employed by the NBHCP.

The commentor further recommends that the EIR/EIS consider the habitat value of reserves relative to the habitat impacted and also review higher mitigation ratios. In response, the EIR/EIS considers a number of alternatives including Alternative 1 (a 1:1 mitigation ratio) and Alternative 2 (habitat-based mitigation). Thus, the EIR/EIS does review the alternatives recommended by the USEPA.

For further information, please see Master Response 1 (Mitigation Ratio).

Response to Comment G2-7

The NBHCP includes safeguards to ensure the cost of land does not hinder implementation, as follows:

- The mitigation fee can be raised to ensure that land acquisition can occur
- Two hundred acres of land must be acquired in advance of each new construction season (May 1)
- If the permittees do not meet their Mitigation Land acquisition obligations (adequate acquisition is not obtained), they are not allowed to issue grading permits (i.e., Urban Development Permits) until such obligations are met

- A rising cost of land encourages the developers to buy land to transfer to the TNBC subject to all acquisition criteria
- TNBC is not obligated to accept fees if land cannot be purchased at current rates.

Identifying specific reserve sites is infeasible because this would result in speculation that would artificially inflate land cost, as demonstrated by TNBC's land acquisition history and further described below (also see Responses to Comments O1-42 through O1-60).

One of the basic premises of a willing buyer/willing seller transaction is a free market. If the area in which land can be purchased is artificially constrained, the number of potential sellers decreases and the price of the commodity (i.e., land) increases. If the area is larger (i.e., not constrained by the requirement that the land be purchased in a particular area, the number of potential sellers increases and the price will be more competitive, potentially lower. The obligations of the Settlement Agreement related to the 1997 NBHCP lawsuit were expensive because the area in which habitat land could be acquired was very small and the number of owners, few; this forced the price of land to increase. The dilemma is to establish the NBHCP so that a balance is reached regarding acquisition. Constraints on the number of willing sellers through restrictions in the NBHCP force the land price to escalate to a level that is too high for the level that can be supported. Therefore, the NBHCP cannot be implemented, development does not occur, preservation of mitigation land does not occur, and the goals and objectives of the plan are not met. The NBHCP is designed to allow acquisition within a wide area of the Natomas Basin, including, when necessary, acquisition in Area B outside the Basin, subject to specific acquisition criteria. These criteria help TNBC with Wildlife Agency concurrence, and with select lands that are or can be restored and enhanced to provide quality habitat in perpetuity. Land that already provides quality habitat and requires little investment in restoration and enhancement could be purchased at a higher acquisition cost because smaller amounts of restoration costs would be needed.

Other acquisition requirements that could hinder acquisition include the following:

- **Sellers.** If insufficient numbers of sellers are available, potential actions could include the following: (1) permittees stop issuing grading permits (i.e., Urban Development Permits) until acquisition obligations are met (see Section VI.D of the NBHCP), and (2) developers buy Mitigation Lands in coordination with TNBC to meet their obligations and transfer the land, in lieu of the land acquisition portion of the fees, to TNBC as described in Section VI.D of the NBHCP. In both instances, the number of sellers increases.
- **Water Rights.** Most non-urban land in the Natomas Basin is devoted to agriculture. Therefore, most of the land has water rights through Natomas Mutual, wells, etc.

The NBHCP specifies acquisition criteria to define the type of land that would provide quality habitat in the Basin without constraining the areas in which the land can be acquired, and without artificially raising the cost of land. Proponents of the HCP would rather have the choice to buy large reserve sites at a lower price and fund restoration activities, than be forced to acquire smaller reserve sites with limited restoration and enhancement potential because higher land costs have constrained opportunities for land acquisition. Increases in cost attributable to land speculation are greater than increases in cost to restore or enhance land.

The commentor recommends comparative analysis of each alternative regarding the reserve lands and water rights, and whether fees cover acquisition and management of land in perpetuity. The Economic Analysis (Appendix A of the NBHCP) contains the comparative analysis regarding availability of land, water rights, and what the fee would need to be to implement each alternative. The Fee Study (Appendix I of the NBHCP) indicates what fee would be required to implement the NBHCP, and cover the cost of acquisition and management. The commentor is referred to the NBHCP, Economic Analysis, and Fee Study for this information.

Response to Comment G2-8

The NBHCP does not advocate mitigating the impacts of incidental take solely through increased mitigation funding and acquisition of Mitigation Lands. Detailed avoidance, minimization, and mitigation measures are presented throughout Chapters IV and V of the NBHCP. Many of the measures are designed to accomplish the full avoidance of take. For example, to avoid impacts to the concentration of Swainson's hawk nests along the Sacramento River, the NBHCP designates a Swainson's Hawk Zone within 1 mile of the river. In this area, 1,015 acres of land designated for Industrial/Commercial Reserve was removed from the NBHCP Permit Area to limit development in this sensitive area. Additionally, most of the take avoidance, minimization, and mitigation measures currently recommended by the USFWS for giant garter snakes and by CDFG for Swainson's hawks are incorporated into the NBHCP. Other USFWS- and CDFG-approved take avoidance, minimization, and mitigation measures are incorporated for other covered species, as well (pp. V-7 through V-27 of the Draft NBHCP). For land development, these measures are typically implemented on a project-by-project basis as acceptable take avoidance practices. Because the NBHCP already includes the full suite of standard take avoidance, minimization, and mitigation measures as part of its Operating Conservation Program, another alternative that includes avoidance, minimization, and mitigation is not necessary. The NBHCP also includes additional measures to those typically required by the Wildlife Agencies by implementing a habitat preservation program in which 8,750 acres of Mitigation Lands would be acquired for the benefit of Covered Species.

Providing 8,750 acres of Mitigation Land, primarily within the Natomas Basin, is key to understanding why the NBHCP would "result in improved on-the-ground conditions which would not be achieved through existing conservation and resource management plans." The NBHCP applies the mitigation ratio requirement and avoidance, minimization, and mitigation requirements to all lands within the Permit Areas, regardless of habitat value. This provides for a more comprehensive treatment of habitat effects than would be achieved through case-by-case, parcel-by-parcel mitigation programs.

It is also important to note that there is relatively little remaining native habitat in the Natomas Basin. Figure 8 of the NBHCP shows that current native habitat comprises less than 5 percent of the Natomas Basin. The majority of land uses in the Permit Areas have been disturbed through reclamation and agricultural activities. Thus, the NBHCP mitigation program will improve conditions for the species through the creation of 8,750 acres of reserves specifically managed to support the Covered Species. As discussed above, it is likely that similar take avoidance, minimization, and mitigation measures would be applied to the planned development with or without the NBHCP. Providing mitigation land in

compensation for habitat loss in the absence of the NBHCP, however, is less certain because there are no other conservation and resource management plans that apply in the Natomas Basin. With regard to giant garter snakes, there is little certainty as to USFWS's ability to require development to provide mitigation lands. The primary mechanism for the USFWS to become involved in the protection of giant garter snakes is through the ESA Section 7 consultation process, which is triggered by a federal nexus such as a federal approval required by the Clean Water Act.

For example, under the Clean Water Act, the U.S. Army Corps of Engineers (USACE) may authorize the discharge of dredge or fill material into Waters of the United States. USACE approval of a Section 404 permit would require consultation with the USFWS. This would occur on a project-by-project basis. For each project undergoing consultation, the USFWS could require the creation of replacement habitat, potentially at a replacement ratio of up to 3:1 (for example, see the *Programmatic Formal Consultation for U.S. Army Corps of Engineers 404 Permitted Projects with Relatively Small Effects on the Giant Garter Snake within Butte, Colusa, Glenn, Fresno, Merced, Sacramento, San Joaquin, Solano, Stanislaus, Sutter, and Yolo Counties, California* [USFWS, 1997]). Notwithstanding the question of defining giant garter snake habitat, there are likely to be few opportunities to trigger Section 7 consultation or to apply this level of mitigation because of the general absence of wetlands in the City and Sutter County's Permit Areas (see the habitat/land use tables in Table III-4 of the NBHCP and Table 4-2 of the EIR/EIS). In consideration of this factor, habitat conditions for giant garter snakes are expected to improve under the NBHCP for the following reasons:

- The lack of opportunity for the USFWS to apply a higher mitigation standard would result in a smaller amount of habitat created for the giant garter snake compared with the amount of habitat created under the NBHCP.
- Any project-by-project mitigation would likely be fragmented, and would not necessarily occur in the Natomas Basin. Under the NBHCP, TNBC is required to acquire reserve sites in a manner that would contribute to a minimum reserve block size of 400 acres. The NBHCP, in contrast, requires that not more than 20 percent of the mitigation lands be acquired outside of the Natomas Basin.
- The value of habitat created is expected to be higher because current high-value areas subject to planned development total 425 acres (404 acres of canals/drains [not subject to Corps jurisdiction] plus 21 acres of ponds and seasonally wet areas). Even at a 3:1 mitigation ratio, this results in only 1,275 acres of created habitat relative to 2,187.5 acres under the NBHCP with 25 percent of the Mitigation Lands in managed marsh. The NBHCP would also provide 4,375 acres of rice fields that could be used by giant garter snakes.

Increased participation by the USFWS would require extensive monitoring of converted potential habitat areas (e.g., drained rice fields and canals) for snake mortality and subsequent prosecution under the provisions of the ESA. In response to this potential, individual landowners could seek protection under the ESA through site-specific HCPs (i.e., individual Section 10 processes for individual developments). This would provide another mechanism for the USFWS to apply increased mitigation. This scenario is unlikely, however, because it would be a piecemeal approach to conservation and a poor substitute for an effective basin-wide program.

There are no standard mitigation requirements for loss of foraging habitat, although CDFG's *Staff Report* provides guidance regarding types of mitigation approaches. It should be noted however, that CDFG, in its letter of comment (Letter G3), stated that the *Staff Report* does not apply to the NBHCP and should not be used to assess the adequacy of mitigation.

Conservation of Swainson's hawk habitat in accordance with the *Staff Report* is more uncertain than conservation of giant garter snake habitat in the absence of a comprehensive program such as the NBHCP. This is especially true considering that take under the CESA requires a more direct link to mortality than the ESA does. The nest tree protection measures in the NBHCP are similar to (and in many respects, more comprehensive and strict than) those provided in the *Staff Report* (see Management Condition 1 on p. 10 of the *Staff Report*). The application of the foraging habitat compensation provisions of the *Staff Report*, however, is unclear.

According to Management Condition 3 of the *Staff Report*, all projects within 10 miles of an active Swainson's hawk nest are required to acquire mitigation habitat at a ratio of at least 0.5:1. For projects within 1 mile of an active Swainson's hawk nest site, the ratio increases to 1:1 unless reserve sites are owned in fee title, which is the case for TNBC's current parcels. Where mitigation reserve lands are owned in fee title and managed for habitat, the mitigation ratio for is 0.5:1 for projects within 1 mile of a nest site. In practice, however, a comprehensive conservation or banking program for Swainson's hawk foraging habitat has not been developed, and it does not appear that CDFG has required compliance with the *Staff Report*.

(It should be noted that most actions in the Sacramento region occur within 10 miles of an active Swainson's hawk nest, and to the Applicants' knowledge, there is not widespread compliance with the *Staff Report*. It should also be noted that, in Comment G3-22, CDFG has advised that the *Staff Report* does not apply to the NBHCP.)

Regardless of the reasons, other mechanisms to protect the Swainson's hawk do not appear to provide substantial protection to foraging habitat. In contrast, the NBHCP would provide 3,371.9 acres of upland habitat (see Table 3-1 in Master Response 1 [Mitigation Ratio]).

The commentor also refers to this question in the context of cumulative impacts. For a discussion of the adequacy of the cumulative impacts analysis in the Draft EIR/EIS, see Master Response 4 (Cumulative Impacts).

Response to Comment G2-9

The cumulative impacts analysis is appropriate for the reasons described in Master Response 4 (Cumulative Impacts). As discussed in Chapter 4 of the EIR/EIS and in Master Responses 3 (Joint Vision) and 4 (Cumulative Impacts), the development that could occur at some point in the future (other than the approved 17,500 acres of Planned Development) is speculative because if it occurred, it would be at some future unknown date. Specifically, no applications have been filed pursuant to the Joint Vision and, if they were, additional environmental review would be conducted.

The significant cumulative effects of the potential taking of listed species is presented throughout the analysis in Chapter 4 of the EIR/EIS (in accordance with the methods described in Section 4.1.2 of the EIR/EIS). In accordance with their local land use authority, cumulative effects of Planned Development have been evaluated by the City and Sutter

County during the adoption of their respective General Plans and Community/Specific Plans. With regard to cumulative impacts associated with flood control projects, potential projects are considered in the EIR/EIS (Section 4.1.2.3). It should be noted that the NBHCP effort was precipitated by Wildlife Agency actions associated with the American River Watershed Investigation and associated local projects (see Master Response 4 [Cumulative Impacts] and Responses to Comments G2-3, O1-18, and O1-19). Although projects associated with the American River Watershed Investigation have the potential to occur in the future (see Section 4.1.2.3 of the EIR/EIS for a discussion of Sacramento River levee improvements), data are insufficient to conduct a meaningful analysis of their cumulative impacts for several reasons that are explained on page 4-7 of the Draft EIR/EIS.

Other activities referenced by the commentor (e.g., agricultural and irrigation practices) are routine, non-discretionary activities that take place on agriculturally zoned land throughout the Natomas Basin. Continuation of these routine activities is considered part of the baseline and future conditions under all alternatives, with no changes to these activities caused by the NBHCP. Thus, it would not be appropriate to include ongoing agricultural and irrigation activities as a specific project to consider in the analysis of cumulative effects.

Response to Comment G2-10

The environmental consequences associated with reduced Planned Development were evaluated in prior environmental documents associated with the North Natomas Community Plan. Alternative B of the North Natomas Community Plan reduced development by retaining the area west of I-5 in agriculture, as well as a substantial portion of the land south of Elkhorn Boulevard. This would have reduced Planned Development in North Natomas by about 3,600 acres. In addition, the South Sutter County Specific Plan evaluated a Reduced Development Area alternative that reduced the area of Planned Development in the Specific Plan area (3,500 acres out of the 7,487-acre Sutter County Permit Area) by about 1,100 acres. Between the City and Sutter County, the total previously evaluated reduction would be approximately 4,700 acres, or a total amount of development of 12,800 acres. Assuming that additional analysis of reduced development would occur as part of future land use planning in the remainder of Sutter County's Permit Area, a reasonable land use scenario under the Natomas Basin EIR/EIS Reduced Development Alternative was determined to be approximately 12,000 acres of development. Also see Appendix C of the EIR/EIS.

Socioeconomic impacts are addressed in Section 4.7 of the EIR/EIS. The socioeconomic impacts associated with Planned Development are presented in Appendix C of the EIR/EIS.

Response to Comment G2-11

Additional discussion has been added to the Final EIR/EIS to revise Section 4.11 of the Draft EIR/EIS regarding the potential impacts of bird strikes associated with Planned Development (see Section 4.11 in the EIR/EIS). Note that no new impacts are anticipated because concern over bird strikes is primarily associated with large flocks of migratory waterfowl, which would not be attracted to new urban areas. See Section 2.1 of this EIR/EIS for the new text in the Final EIR/EIS relevant to bird strikes.

Encroachment issues (e.g., airport noise) were extensively considered in prior environmental documents for the City, but were not summarized in Appendix C of the EIR/EIS. In response to this comment, however, additional text has been added to Appendix C to summarize prior consideration of airport/residential conflicts related to initial approval of plans. See Section 2.1 of the Final EIR/EIS.

Response to Comment G2-12

The general methodology for selection of Covered Species is included in Chapter II of the NBHCP (Biological Data), specifically on pages II-7 and II-8 of the Draft NBHCP. The Applicants used the following basic principles that are based on agreements initially reached with USFES in 1997 to guide the selection of Covered Species for inclusion in the NBHCP:

- Fish species are not included because the NBHCP covers terrestrial species and the National Marine Fisheries Service is not a permitting agency. Further information regarding the reasons fish species are not covered species in the NBHCP is included in Section II.C.1.b of the NBHCP.
- Fully protected species are not included because incidental take coverage cannot be issued for them. Therefore, the greater sandhill crane and the American peregrine falcon were removed from the 1997 list of Covered Species. Other fully protected species that may inhabit the Natomas Basin were also not included on the list of covered species for the same reason. Also see Response to Comment G2-13 for a discussion of Fully Protected Species.
- Extremely rare vernal pool species are not included (i.e., Conservancy fairy shrimp and longhorn fairy shrimp). The NBHCP provides that if they were found in the Basin, every effort would be made to protect them and incidental take would not be permitted.
- Listed plant and animal species (or those species with the potential to become listed during the permit term) were generally included if these species either currently occur in the Natomas Basin or may occur once Mitigation Lands are restored, enhanced, and managed as quality habitat. Several species that are not known to occur in the Basin could locate in the Basin on appropriate habitat provided for the covered species through implementation of the NBHCP. TNBC, as a permittee and plan operator, conducts acquisition, restoration, enhancement, and management activities that could result in take of covered species. For example, if the delta tule pea started to grow on the Mitigation Lands, it would be appropriate for TNBC to have incidental take coverage for it. Consequently, these species are covered by the NBHCP.

Response to Comment G2-13

The Fish and Game Code includes a list of fully protected species, as well as protected reptiles and amphibians (see Sections 3511, 4700, 5050, and 5515 of the Fish and Game Code). In recognition that CDFG cannot authorize *any* take of fully protected species, the Applicants are not proposing take coverage for fully protected species. Text has been added to Section 1.5 of the EIR/EIS to describe CDFG's fully protected species requirements. See Section 2.1 of this Final EIR/REIS for the text change.

Response to Comment G2-14

The following information was considered in determining the appropriate term of proposed permits:

- The North Natomas Community Plan area is anticipated to build out in 25 to 40 years. The South Natomas Community Plan area is expected to complete its build-out within 10 to 15 years (although it should be noted that even developed areas like Downtown Sacramento are not 100 percent built out). Buildout of the Sutter County Industrial/Commercial Reserve is expected to take 30 to 50 years.
- TNBC, as plan operator, is responsible for restoring, enhancing, and managing Mitigation Lands in perpetuity. It takes a considerable period of time to complete all of the revegetation and other restoration activities (e.g., for managed marshes) that necessary for the establishment of a sustainable natural community. The Mitigation Lands will not be fully in place until after buildout occurs. The 50-year permit is intended to be extended or renewed as needed to allow TNBC to continue its program in perpetuity.
- The overall mid-point review and the independent mid-point reviews for the City and Sutter County are intended to evaluate the success of NBHCP implementation to date, make modifications as appropriate based on the experience and analysis, or consider revocation of the permit if successful implementation of the NBHCP and meeting the plan's goals and objectives are not possible. The Applicants are very aware of the possibility of having the permits revoked if obligations are not met.

Given the safeguards of the mid-point reviews and the desirability of long-term establishment of quality habitat reserve sites and biological needs of the Covered Species, it is appropriate to propose a 50-year term with opportunities to extend/renew as needed.

Response to Comment G2-15

The commentor requests subsequent environmental analysis for project-level actions. As described on pages 4-10 through 4-12 of the Draft EIS/EIR, the City and Sutter County have conducted extensive review under CEQA related to their respective approvals of Planned Development. The EIS/EIR is intended to support the actions of the USFWS in approving the NBHCP, issuing ITPs for incidental take of Covered Species associated with the Covered Activities, and entering into an Implementation Agreement(s). Additionally, the EIS/EIR provides environmental review for CDFG's (a responsible agency) issuance of incidental take permits, issuance of take authorizations related to specific urban development applications, and other Covered Activities, and for TNBC's activities related to the conservation strategy in the NBHCP. Because the NBHCP includes conservation measures and adaptive management strategies for the 22 Covered Species addressed in the NBHCP, the EIS/EIR covers the environmental impacts associated with the implementation of these measures and with the adaptive management provisions.

When it considers the next discretionary approval, the City or Sutter County, as may be appropriate, will review a specific development application to determine if the development proposal requires subsequent environmental review in accordance with CEQA (e.g., Pub.

Resources Code 21166, 14 Cal. Code Regs. 15162). The USFWS will review activities undertaken by TNBC or a permittee to determine whether the proposed activities constitute a major federal action triggering further environmental review under NEPA. Similarly, CDFG will consider whether future activities requiring CDFG discretionary approvals will trigger subsequent environmental review in accordance with CEQA.

Response to Comment G2-16

With regard to “existing scientific evidence documenting the effectiveness of habitat conservation planning and restoration in assuring species viability,” Section 10 of the ESA and its implementing regulations provide the authority and guidance for the NBHCP, and it is beyond the scope of the analysis of both the NBHCP and EIR/EIS to justify the USFWS’s HCP program.

It is important to note that HCPs are works-in-progress. Because many ITPs are issued for long-term planning efforts and have not yet expired, the USFWS believes that it is premature to evaluate in general the effectiveness of HCPs in assuring species viability. Although there have been a number of studies of HCPs, to the USFWS’s knowledge, none to date has specifically analyzed the effectiveness of the HCP planning process in assuring species viability, or the effectiveness of habitat restoration for the species proposed to be covered by the NBHCP.

If the commentor is referring to the effectiveness of *this* HCP, no specific examples of areas of uncertainty are provided by the commentor that could help focus our response. Nevertheless, the Applicants are committed to meeting the biological goals and objectives of the NBHCP (as articulated in Section I.C) and believe that the NBHCP will be effective in assuring species viability. In support of this, the NBHCP provides detailed sections that address monitoring, surveys, and adaptive management (see Chapter VI of the NBHCP – Plan Implementation).

The commentor is also referred to the responses to Comment Letters G3, O1, O2, O3, O4, I4, and I5.

Response to Comment G2-17

An acronym list was inadvertently omitted from the Draft EIR/EIS, and has been added to the beginning of this Final EIR/EIS. Primary canals and water bodies have been labeled on the revised versions of Figure 2-4, which is the primary figure that illustrates canals and drains in the Natomas Basin. This change is included in Section 2.1 of the Final EIR/EIS.

Letter G3—CDFG

Response to Comment G3-1

CDFG summarizes the two key regulatory processes relevant to the NBHCP process: take authorization permits under the ESA and CESA. It is the Applicants' intent, in accordance with CDFG direction, to seek Section 2081 Permit authorization. That is, the City will apply for an amendment of its existing 2081 Permit, and Sutter County and TNBC will apply for CDFG take authorization permits. This is described in Section 1.3.2 of the EIR/EIS.

Response to Comment G3-2

CDFG describes the context for its comments and states that it is acting both as a trustee agency and a responsible agency under CEQA. This is consistent with CDFG's role as described in Section 1.3.2 (p. 1-11) of the Draft EIR/EIS and Section I.B.1.b (p. I-4) of the Draft NBHCP. The Applicants understand that CDFG's comments are not intended to substitute for future detailed review of permit applications that are submitted by future Applicants not otherwise covered by the NBHCP.

Response to Comment G3-3

CDFG states that its issuance of management authorization to the City in 1997 remains valid, and presents background information regarding its determination. The Applicants agree with this interpretation. Please see Section I.G of the NBHCP and in Section 1.3.2 of the EIR/EIS for a discussion of CDFG's review and authority throughout the NBHCP process.

Response to Comment G3-4

The Applicants and Lead Agencies concur with CDFG's summary of the federal trial court process, which states that CDFG "believes the revised NBHCP addresses the issues identified by the court during the federal litigation" and "believes the revised NBHCP improves upon the earlier version of the Plan."

Response to Comment G3-5

CDFG is referred to Responses to Comments I3-1 and I3-2 regarding the status of the Water Agencies' participation in the NBHCP. The USFWS and the Land Use Agencies are not aware of the current status of the Water Agencies' consultation process with CDFG. Nonetheless, it is the Land Use Agencies' and USFWS' intent that the NBHCP may be relied upon by the Water Agencies to seek incidental take authorizations from the Wildlife Agencies, including CDFG, to the extent the NBHCP and associated technical analyses in the EIS/EIR address the Water Agencies' Covered Activities. CDFG's comments are noted acknowledging that the EIR/EIS contains a sufficient description and analysis of the potential impacts associated with the Water Agencies' Covered Activities to satisfy the requirements of NEPA and CEQA. The Water Agencies' HCP was not submitted to the USFWS as a final application – see response to Comment Letter I3.

Response to Comment G3-6

As CDFG is aware, the activity being authorized by a Section 10 permit or Section 2081 permit is incidental take, and not the underlying activities resulting in take. As such, Sutter County, in conjunction with the City of Sacramento and USFWS have completed a combined EIS/EIR for the NBHCP under NEPA and CEQA to evaluate the environmental effects associated with issuance of incidental take authorizations. This EIS/EIR, in conjunction with other pertinent environmental documents pertaining to the Planned Development activities, is being submitted to CDFG in support of Sutter County's incidental take permit application.

With respect to the authorized activities requiring incidental take authorizations, Sutter County conducted appropriate CEQA analysis of its prior approvals of the Sutter County Comprehensive General Plan Revision and South Sutter County Specific Plan. The General Plan Revision and Specific Plan authorize the development activities that may occur with Sutter County's Permit Area. Specifically, the County's General Plan Revision EIR addressed the environmental effects of the Planned Development of up to 7,467 acres in the Sutter County portion of the Natomas Basin. Sutter County certified the Final EIR for the General Plan Revision on September 10, 1996, and adopted the General Plan Revision on November 25, 1996. No lawsuits challenging the adequacy of this EIR were filed; consequently, the General Plan Revision Final EIR is conclusively deemed valid. The findings of the Sutter County General Plan EIR are summarized in Appendix C of the EIR/EIS and incorporated by reference into the EIS/EIR.

Sutter County intends to prepare specific plans and subsequent environmental review for specific development proposals within its Permit Area. In this regard, as the Draft EIS/EIR states on page 4-11, Sutter County prepared a Specific Plan and completed a Final EIR for the development of 3,500 acres within the 7,467 acres allowed by the General Plan Revision. Prior to the release of the NBHCP EIS/EIR, Sutter County certified the South Sutter County Final EIR. As CDFG notes in its comment letter, while a legal challenge to the Sutter County Specific Plan has been filed, the analysis is presumed adequate unless successfully challenged (Pub. Resources Code § 21167.3).

Response to Comment G3-7

CDFG correctly notes that TNBC is both the Plan Operator and a potential permittee, and that it has certain obligations independent of its obligations implemented on behalf of the Land Use Agency permittees. In this regard, TNBC is required to implement the NBHCP as described in Chapter IV of the NBHCP and the take avoidance, minimization, and mitigation measures for the Mitigation Lands described in Chapter V of the NBHCP.

As the Plan Operator for the NBHCP, TNBC performs an important function for the NBHCP by establishing and overseeing a concerted program for acquiring, enhancing, and managing Mitigation Lands in perpetuity on behalf of the permittees (see Draft NBHCP, page IV-4). These obligations have been determined to be more appropriately implemented by TNBC in its Mitigation Land acquisition and management functions than by the Land Use Agencies.

The Implementation Agreement further defines the Land Use Agency permittees' and TNBC's respective obligations. For example, Section 3.1 sets forth the obligations of the City

and Sutter County including, among other obligations, the requirements to (1) limit total development in the Basin (§ 3.1.1); (2) limit development within the Swainson's Hawk Zone (§ 3.1.2); (3) comply with the NBHCP timing of Mitigation Land acquisitions; and (4) ensure that Planned Development proponents implement all onsite take avoidance, minimization, and mitigation measures described in Chapter V of the NBHCP. These responsibilities are obligations of the Land Use Agency permittees and have not been delegated to TNBC.

As stated in Section 3.1.11 of the Implementation Agreement and the NBHCP, the City and Sutter County have selected TNBC to serve as the Plan Operator and implement the permittee's respective mitigation requirements, as well as their reporting and monitoring obligations. Section 3.2 governs the obligations of TNBC in this capacity. For example, among other obligations, Section 3.2 requires TNBC to: (1) serve as the Plan Operator and acquire, locate, operate, manage, and maintain Mitigation Lands in accordance with the NBHCP and the Implementation Agreement (§ 3.2.1); (2) accept mitigation fees from the Land Use Agency permittees and use the fees to implement TNBC's obligations set forth in § 3.2.1; (3) implement specified management obligations on specific reserve sites; and (4) conduct annual surveys in accordance with the NBHCP [§ 3.2.3(c)].

Notwithstanding TNBC's role as the Plan Operator, the Land Use Agency permittees have not absolved, and legally may not absolve themselves of their ultimate responsibility to implement and comply with the NBHCP. The NBHCP and accompanying Implementation Agreement plainly state that in the event the Wildlife Agencies determine TNBC has violated the terms of the NBHCP, the permits, or the Implementation Agreement, the violation is considered a failure by the City and Sutter County to implement their respective obligations of the Operating Conservation Program. Moreover, the City and Sutter County acknowledge that they are obligated under their permits to fully implement the NBHCP, including funding of each of the obligations assigned to TNBC as the Plan Operator. That is, a failure of the City or Sutter County to fund fully TNBC's obligations under the plan could compromise the plan's effectiveness and trigger a reevaluation of the plan and permits and potentially result in suspension or revocation of the permits (IA, §§ 3.1.11, 6.6).

The Implementation Agreement also acknowledges that a violation by TNBC of its permit obligations is considered a failure by the City and Sutter County to implement their obligations of the NBHCP Operating Conservation Program. If such a violation occurs and the City and/or Sutter County remedies the violation, the permit may not be revoked or suspended unless USFWS or CDFG determines that continuation of the permits would appreciably reduce the likelihood of the survival and recovery of a covered species in the wild (IA, § 7.6.5). Thus, the City and Sutter County remain responsible for their obligations, as well as TNBC's obligations, under the NBHCP.

Response to Comment G3-8

CDFG commends the Draft NBHCP for designating a Swainson's Hawk Zone and suggests that all upland reserves be acquired in the Swainson's Hawk Zone or within 1 mile of this zone. CDFG also acknowledges that the NBHCP discusses the difficulties of designating specific reserves sites.

In response, the NBHCP gives priority to acquisition of upland habitat that best meets the needs of the Swainson's hawk. Pages IV-25 and IV-26 of the Draft NBHCP state:

Generally, priority for acquiring upland habitat is as follows (in descending priority order): (1) sites located within the Swainson's Hawk Zone; (2) sites that, in the judgment of TNBC and the Technical Advisory Committee, would provide specific, important benefits to other upland-associated covered species (e.g., tricolored blackbird nesting colonies); (3) sites supporting Swainson's hawk nests or foraging habitat outside the Swainson's Hawk Zone; (4) sites that would provide a good potential for enhancement of upland habitat values; and (5) any other site that would result in a benefit to any upland covered species.

The acquisition criteria, therefore, encourage acquisition within the Swainson's Hawk Zone or in other areas which specifically would benefit the Swainson's hawk. In particular, criteria 3 gives priority to sites with hawk nests and foraging habitat outside of the Swainson's Hawk Zone, which could include areas within 1 mile of the Swainson's Hawk Zone that provide supportive nesting and foraging habitat characteristics. Thus, we believe that the existing criteria for uplands habitat is consistent with CDFG's concepts, but does not limit upland acquisitions exclusively to the Swainson's Hawk Zone and 1 mile of the zone.

The Applicants believe that exclusively limiting the upland reserve acquisitions to within 1 mile of the Swainson's Hawk Zone would be counterproductive to the NBHCP's biological goals and objectives for a number of reasons. Foremost among these is the inconsistent distribution of suitable upland habitat within 1 mile of the Swainson's Hawk Zone. For example, within the City's Permit Area, substantial urban development already has occurred along the I-5 corridor within a 1-mile distance from the Swainson's Hawk Zone. Thus, limiting acquisitions to this area would result in the acquisition of smaller, non-contiguous parcels located within the City's Permit Area or in proximity to existing urban development. Both of these results would be inconsistent with the NBHCP's reserve acquisition criteria and would not ensure the acquisition of upland reserve sites that would meet the NBHCP's biological goals and objectives.

Similarly, in the County of Sacramento, the Sacramento International Airport occupies much of the Sacramento County area located within 1 mile of the Swainson's Hawk Zone. In this area, the County of Sacramento owns substantial lands for the airport footprint and buffer zone. In the past, Sacramento County has not been interested in the sale of any of these lands for reserves because Sacramento County must control these lands for aviation safety. Given this, the likelihood of acquisition of reserves in this area is remote and would, therefore, constrain the lands in which the TNBC could acquire uplands if the CDFG-recommended limitation on upland acquisitions were imposed. A large amount of airport lands are "buffer lands" designed to protect the airport and flight footprint from encroachment by urban development or other incompatible uses. Thus, some amount of this land is anticipated to be retained in open space by Sacramento County, but may not be available to TNBC for purposes of reserve management, in part, because of the Wildlife Hazards Management Plan adopted by Sacramento County to reduce bird strikes.

In Sutter County, lands within 1 mile of the Swainson's Hawk Zone are predominantly used for rice production, and they have known occurrences of the giant garter snake (See Figure 12 of the NBHCP). The NBHCP would not prohibit reserve sites in this area. In fact, TNBC has substantial holdings in this area. These sites, however, are not exclusively upland; they provide a "mosaic" of habitat (uplands, lowlands, and rice) to accommodate the needs of

species known to occur in the area. For example, the existing Bennett South Reserve, within 1 mile of the Sacramento River, includes 29.05 acres of native grass and selected tree planting as part of the habitat types of this reserve. This reserve has been carefully planned to minimize impacts to species currently using the area, and to make selective enhancements to habitat for the Covered Species, including the hawk. Additionally, lands within 2 miles of the Sacramento River in Sutter County (and outside of the Swainson's Hawk Zone) are largely within the Sutter County Permit Area. This is depicted on the attached figure. Within this Permit Areas, the NBHCP seeks to limit reserve acquisitions to avoid conflicts between urban and reserve uses. It also is important to note that there are no nest site occurrences within the Sutter County Permit Area (see Figure 13 of the NBHCP).

Secondly, the NBHCP seeks both to preserve existing habitat in the Swainson's Hawk Zone to the maximum extent possible, and also create new nesting and foraging areas in the Basin overall. For example, the NBHCP includes substantial provisions to introduce new nesting trees in upland reserves to ensure that, over time, adequate nesting trees in the Basin are located with upland foraging habitat. Understandably, the existing nest trees along the Sacramento River are older, mature nest trees. During the 50-year period, the NBHCP seeks to ensure new nest trees are available as these existing relatively "even-aged" trees decline or die.

Additionally, the NBHCP system of reserves is designed to achieve maximum integration between upland and wetland areas in order to provide the highest value and most productive habitat for the Covered Species. The upland edges of marsh areas for example, are included as cover and foraging areas for a number of the Covered Species. Specific to the Swainson's hawk, it is important to note that many of the reserves include upland areas adjacent to water or marshlands. By including upland components of the managed marsh reserve sites, additional foraging area is created, and prey abundance increased. For example, pages V-19 and V-20 of the Draft NBHCP notes that:

In the Central Valley, meadow mice and insects make up a significant portion of the Swainson's hawk's diet. In the management of nearby similarly designed preserves (e.g., Beach Lake Mitigation Bank, Stones Lakes National Wildlife Refuge), the increased availability of water in previously dry grasslands has increased *Microtus* (meadow mice) abundance (Caltrans, 1991). This would be expected given the biological requirement of *Microtus* for green food. This species has been found to increase its reproductive rate nearly ten-fold in the presence of persistent green food over dry grasses (Batzli, 1986; Bowen, 1987; Gill, 1976). Those green plant species generally preferred by *Microtus* (bent grass, chickweed, bedstraw, sorrel, plantain and bromus) are tolerant of limited inundation and will do well in a seasonally wetland environment, as well as those ruderal habitats associated with agricultural and water conveyance systems (Ostfeld and Klosterman, 1986).

TNBC already has acquired several reserves for a total of 1,237 acres within 1 mile of the Swainson's Hawk Zone or within the Swainson's Hawk Zone. These include: Lucich North (Sutter County, 267.9 acres); Lucich South (Sutter County, 351.9 acres); Bennett North (Sutter County, 226.7 acres); Bennet South (Sutter County, 132.5 acres); Souza and Natomas Farms (Sacramento County, 141 contiguous acres); Cummings (Sacramento County, 66.8 acres); and Alleghany (Sacramento County, 50.2 acres). In accordance with our reserve acquisition

policies, these clusters of reserves contribute to the framework for securing future acquisitions that would be consolidated to meet the 400-acre minimum reserve policies.

If the Plan Operator were unable to acquire Swainson's hawk mitigation land beyond 1 mile of the Swainson's Hawk Zone, then the non-riparian nesting sites essentially could become abandoned. For example, TNBC evaluated a Swainson's hawk nest site (NB-14 from the 2002 Swainson's Hawk Monitoring Report), a highly productive Swainson's hawk nest site of long standing in the Natomas Basin. This nest site ultimately could be isolated if the upland reserves were to be located only within the Swainson's Hawk Zone or within 1 mile of the Swainson's Hawk Zone. Similarly, nest sites NB-12 and NB-13 could become isolated with such a reserve acquisition approach. Moreover, CDFG representatives have documented hawk foraging in these areas, which also could be affected.

Under the reserve acquisition approach recommended by CDFG, the Plan Operator would be unable to expand Swainson's hawk habitat. The Plan Operator's current Mitigation Land acquisition strategy is designed to ensure that the above-noted nests are supported by foraging area, and to provide sufficient area for additional foraging and nesting sites. In this regard, TNBC already expended considerable funds acquiring land consistent with this approach, including maintaining and enhancing interior foraging areas (e.g., irrigated pasture, planting ideal Swainson's hawk foraging ground cover), planting of perching and nesting trees in restoration and enhancement construction projects, and land acquisition.

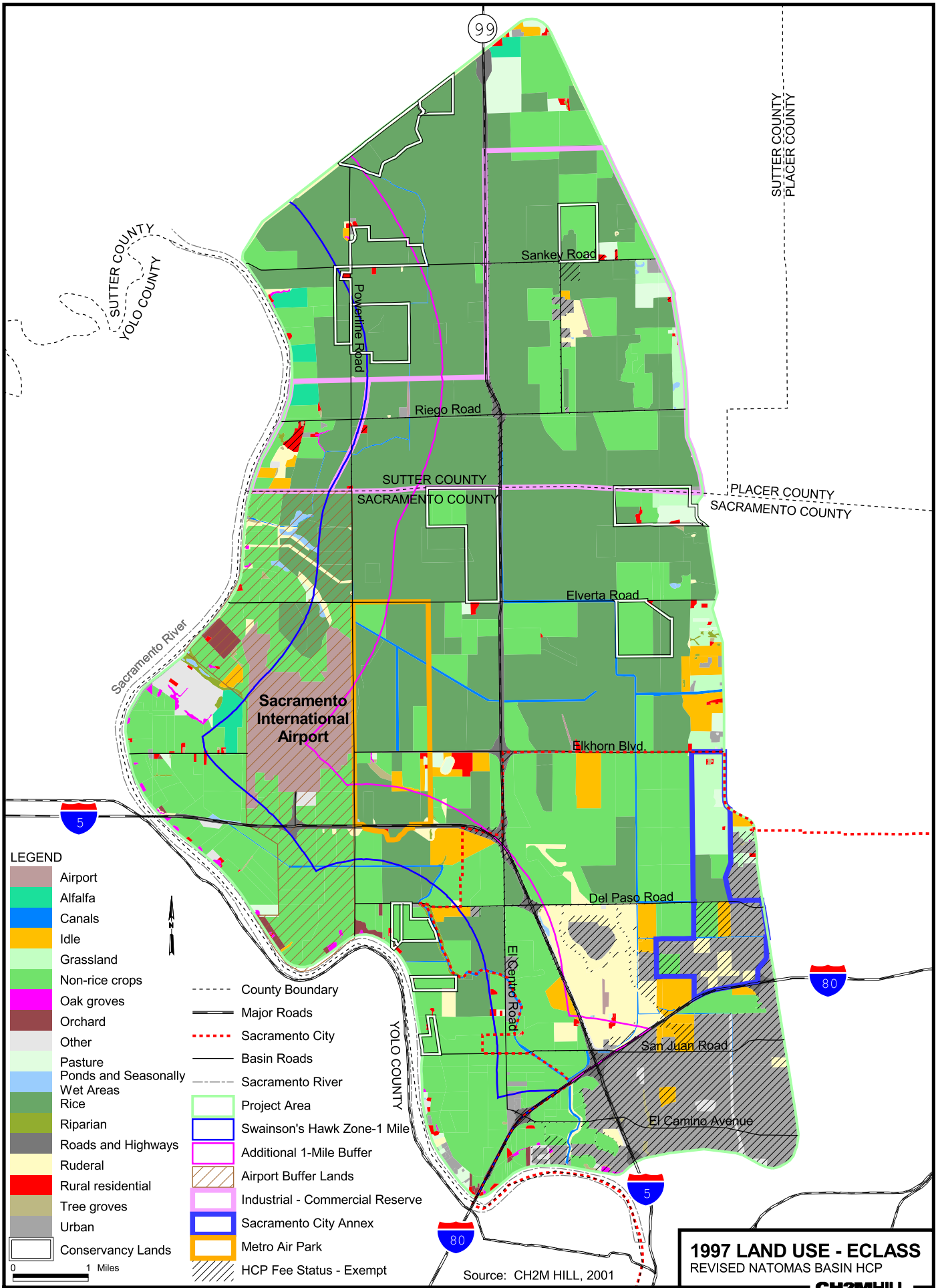
Response to Comment G3-9

CDFG is concerned that impacts, including temporal impacts, to Mitigation Lands from trade-out or relocation should be fully mitigated. CDFG suggests that the NBHCP include a requirement that: (1) an equal amount of reserve lands be acquired; (2) restoration and maintenance of reserve lands be comparable to the former reserve, including compensation for temporal effects; and (3) the former reserve be maintained until the new reserve is fully established.

In response, the Applicants have amended the NBHCP to include new sections in Chapter IV, Conservation Plan. (See the attachment to the Final NBHCP for specific text changes.)

CDFG suggests that if an existing reserve is relocated as part of the 17,500 acres of Planned Development, then the habitat mitigation fees should also be paid. It is important to note that Section IV.C.2 (p. IV-11 of the Draft NBHCP) regarding reserve acquisition guidelines limits TNBC's ability to purchase Mitigation Lands within the Permit Areas comprising 17,500 acres of Planned Development for the express purpose of limiting conflicts between urban uses and habitat uses. Therefore, it is a very remote possibility that TNBC would be purchasing and selling lands within the 17,500-acre area. Compliance with the habitat mitigation requirement is applied to all Land Use Agency permittees within the 17,500-acre area. Therefore, even if a reserve is sold and subsequently developed within the 17,500-acre area, the developer would be required to comply with the habitat mitigation requirements of the NBHCP.

CDFG is concerned that if an existing reserve is sold and developed beyond the authorized 17,500 acres, independent authorization must be granted by CDFG in accordance with CESA. Regarding development beyond the 17,500 acres, Section I.B.2 (pp. I-5 through I-7 of the Draft NBHCP) specifically limits the applicability of the ITP to the specified acreage of



LEGEND

- Airport
- Alfalfa
- Canals
- Idle
- Grassland
- Non-rice crops
- Oak groves
- Orchard
- Other
- Pasture
- Ponds and Seasonally Wet Areas
- Rice
- Riparian
- Roads and Highways
- Ruderal
- Rural residential
- Tree groves
- Urban
- Conservancy Lands

- County Boundary
- Major Roads
- Sacramento City
- Basin Roads
- Sacramento River
- Project Area
- Swainson's Hawk Zone-1 Mile
- Additional 1-Mile Buffer
- Airport Buffer Lands
- Industrial - Commercial Reserve
- Sacramento City Annex
- Metro Air Park
- HCP Fee Status - Exempt

1997 LAND USE - ECLASS
 REVISED NATOMAS BASIN HCP
 CH2MHILL

Source: CH2M HILL, 2001

covered by the permittees that comprise the 17,500 acres. This is further reinforced in Section 3.1.1 (Limitation on Total Development in Natomas Basin and Individual Permit Areas) of the Implementation Agreement. Further, Section VI.L.3.b (p. V1-41 of the Draft NBHCP) regarding amendments to the NBHCP specifically states that any increase beyond the 17,500 acres constitutes an amendment to the NBHCP and an amendment to the federal Section 10 and state Section 2081 permits. Section VI.L.3.d (p V1-42 of the Draft NBHCP) requires all amendments to the Section 2081 permits to be processed in accordance with CESA regulations. Thus, any development beyond the 17,500 acres or the Permit Areas would constitute an amendment and be subject to additional analysis, appropriate mitigation and would be a separate discretionary decision under the ESA and CESA. The commentor is also referred to Master Response 4 (Cumulative Impacts).

Response to Comment G3-10

CDFG summarizes numerous citations related to the preference of the giant garter snake for managed marsh habitat, and questions why the reserve system is set up for 50 percent rice reserves and only 25 percent managed marsh.

The purpose of the NBHCP is to mitigate the impacts of Planned Development. Section II.C.2.c (p II-11 of the Draft NBHCP) notes that native marsh habitat is nearly non-existent in the Natomas Basin. This is confirmed in the Biological Resources Technical Memo (Table 5-1; Appendix H of the NBHCP) and the EIR/EIS (Table 4-8), which show the changes in potential habitat for giant garter snakes. Based on the GIS mapping system of habitat for giant garter snakes, only 96 acres of wet areas remain in the Basin, of which 21 acres would be affected by Planned Development. To mitigate for this loss of 21 acres, the NBHCP proposes to create 2,187.5 acres of managed marsh, which is a substantial increase in habitat for this species (see Draft NBHCP, pages VII-4 through VII-11).

Similarly, related to impacts, Planned Development would result in a greater effect on rice habitat (8,087 acres as shown in Table VII-2 on p. VII-5 of the Draft NBHCP), which is also known to support the giant garter snake. The snake has adapted to, and uses the landscape of rice fields in the Natomas Basin for habitat. Section II.C.2.c (p. II-11 of the Draft NBHCP), for instance, states that:

Giant garter snakes are known to utilize rice fields for some of their habitat needs (Brode and Hansen, 1992), along with associated features of the Natomas Basin rice growing landscape, including the canals, ditches, and drains of the Basin's water conveyance systems, the higher ground of levees and railroad embankments, and sloughs and marshes. Gravid female garter snakes, for example, have been observed to utilize maturing rice fields and to remain in the rice fields to feed after parturition; neonate garter snakes have also been observed feeding in rice fields (Hansen, 1992). In studies conducted by the USGS. Biological Resources Division (BRD), 50 percent of radio-telemetered giant garter snakes have been observed in rice fields, especially along the edges of the fields, and when the rice plants are high enough to provide sufficient cover (Wylie, 2000).

In reference to the comment that the NBHCP concludes that an all-marsh alternative is not "biologically optimal," this statement does not conflict with other statements in the NBHCP

regarding the benefits of managed marsh to the giant garter snake. The phrase “biologically optimal” refers to the goals and objectives of the NBHCP. The NBHCP (Section I.C) states that the overall biological goal of implementing the NBHCP is to “establish and manage in perpetuity a biologically sound and interconnected habitat reserve system that mitigates impacts on covered species resulting from Covered Activities and provides for existing, and new viable populations of covered species.” Because the NBHCP has been developed to address the needs of 22 covered species (not only the giant garter snake), that allocation of reserve lands has been designed to effect this comprehensive biological goal. Thus, the NBHCP seeks to preserve portions of the rice landscape that currently support the giant garter snake, and also to make a substantial addition to the amount and quality of managed marsh in the Basin. The NBHCP further includes in the adaptive management practices procedures for assessing whether or not the percentage of managed marsh should be increased to benefit the species.

Response to Comment G3-11

In this comment, the CDFG raises several issues related to connectivity. The responses are organized as follows:

- Comments Regarding Water Agencies’ Role in Connectivity
- Conservation Easements Related to Canal Connectivity
- Conservation Easements Related to Conservation Strategy

Comments Regarding Water Agencies’ Role in Connectivity

The commentor notes concern over the participation of the Water Agencies in the NBHCP, and questions the ability to maintain connectivity if the Water Agencies do not participate in the NBHCP. The Lead Agencies and the Applicants do not agree that there is conflicting information about the Water Agencies’ past and future participation in the NBHCP. The Water Agencies have decided not to file an application for an ITP relevant to their proposed Covered Activities (as presented in the NBHCP and analyzed in the EIR/EIS). As discussed in Section 1.2.1 of the EIR/EIS, the Water Agencies removed themselves from the NBHCP planning process in March 2002 based on the fact that coverage for pesticides would not be granted by the USFWS.

It is important to note that the NBHCP does not cover canal closures or any other form of alteration to existing ditches or canals in the Water Agencies’ Covered Activities. If the Water Agencies choose at some future date to seek coverage for their activities under the NBHCP, the Water Agencies still could choose to seek separate take authorizations for canal closures or other ditch and canal modifications. While the Draft NBHCP provides guidelines for Water Agencies’ canal maintenance, implementation of the canal maintenance guidelines is not required to ensure the success of the NBHCP Operating Conservation Program. Section V.C of the NBHCP identifies the measures the Water Agencies would implement to avoid, minimize, and mitigate take of Covered Species. Pursuant to this section, the Water Agencies are limited to major ditch maintenance, including excavation, desilting, and/or re-sloping of channels, to not more than 10 percent per year of the total ditches under each Water Agency’s jurisdiction. This limitation is consistent with historic practices of the Water Agencies and does not represent a substantial change in channel management practices.

As discussed in Appendix H of the NBHCP (pages 5-10 to 5-11), the Water Agencies have identified those key drainage canals that are most likely to be retained regardless of urban development. As shown on Figure 17 of the NBHCP, various types of drainage and irrigation channels exist within the Natomas Basin. Channels designated as “most likely to remain during permit term” are major flood control channels that will be required regardless of the extent and location of development. Channels designated as “water delivery system” and “water drainage system” will be required to serve either the existing agricultural uses or potential future urban uses. As such, implementation of the NBHCP is not anticipated to substantially affect the operation of these major drainage channels.

In determining the scope of analysis to be conducted within the EIR/EIS, consideration was given to the likelihood of a canal closing. Closing of minor irrigation and drainage canals within the Permit Areas of the City and Sutter County would be likely to accommodate planned development because the canals are in the way of development. The system of canals and ditches located outside the City and Sutter County Permit Areas, however, are most critical to reserve connectivity because the Mitigation Land reserves are located almost exclusively outside the City and Sutter County Permit Areas. Closing of the canals that are located outside the City and Sutter County Permit Areas and that are most critical in maintaining connectivity among Mitigation Lands is not anticipated to occur because these channels will be required for drainage and irrigation purposes and because there is no identified benefit that would promote the closure of such canals. There is no known benefit to planned development, agricultural interests, private property owners, or the Water Agencies from closure of canals outside the Permit Areas. Further, there is no indication at this time that the Water Agencies intend to close these canals located outside of the Permit Areas. Nonetheless, the NBHCP contemplates changes in water delivery as “changed circumstances” (see NBHCP, pages VI-35 to VI-36).

Finally, as noted above, the NBHCP would not authorize the Water Agencies to dewater and/or close ditches and channels should the Water Agencies choose to participate in the NBHCP. Regardless of the Water Agencies’ participation within the NBHCP, the Water Agencies would likely be required to address the impacts of canal closure under a CEQA and/or NEPA analysis, and would likely be required to secure permits from the USFWS (under the ESA) and the USACE for features determined to be subject to Clean Water Act jurisdiction. Moreover, to the extent any alterations are proposed to the bed, bank, or channel of any stream or take of state-listed species would occur, the Water Agencies also would be required to comply with CESA and the Fish and Game Code provisions regarding streambed alterations. Any canal closure impacts to either species in general or on the viability of the Mitigation Lands would be analyzed and mitigated through the environmental review process and consultations as CDFG acknowledges in its comment letter.

In consideration of the fact that: (1) under the NBHCP, the Water Agencies would not considerably alter their channel management practices; (2) the identification by the Water Agencies of the canals most likely to remain; and (3) the lack of any indication that the Water Agencies intend to close the canals located outside of the Permit Areas, canals and ditches would remain in areas continuing to be in agricultural production. Because snakes readily and routinely use canals and ditches in the Natomas Basin (Wylie and Cassaza, 2000), the canal and drainage systems would provide for movement of snakes among the

Mitigation Lands, thereby minimizing the potential occurrence of adverse effects resulting from small and isolated populations.

Conservation Easements Related to Canal Connectivity

CDFG has requested that the NBHCP consider four mitigation measures to ensure canal connectivity. CDFG states that it is likely that compliance with two of the four recommended measures will be required as part of any Section 2081 permit issued under CESA that relies on the NBHCP. The following response addresses each specific recommendation proposed by CDFG, as related to the provision of canal connectivity.

CDFG requests that it be designated as third-party beneficiary on all conservation easements held by the plan operator for reserve lands to maintain canal connectivity. Designating CDFG as a third-party beneficiary on a TNBC conservation easement would not be effective in ensuring canal connectivity because TNBC would not be the holder of any conservation easements over canals owned by RD 1000 or Natomas Mutual in easement or fee title. In many instances, a private property owner owns fee title to the property underlying the canal and RD 1000, or Natomas Mutual own easements over the canal. In other instances, RD 1000 or Natomas Mutual owns the canal in fee title. Moreover, neither RD 1000 or Natomas Mutual has agreed to convey the canals or easements over the canals to TNBC, whether or not such canals or ditches are located on the Mitigation Lands. Even if the CDFG were designated as a third-party beneficiary of an easement over the Mitigation Lands (see discussion below), unless these canals are located on the Mitigation Lands, CDFG may have limited enforcement rights to preclude the Water Agencies from removing the canals if the canals themselves are not subject to the easement. While the holder of a conservation easement may seek injunctive relief or be entitled to monetary damages in the event of an actual or threatened injury to or impairment of a conservation easement, an easement holder (or third-party beneficiary) would not have the right to enforce the easement against another property owner or easement holder not subject to the same easement (Cal. Civ. Code § 815.7). Thus, it is unclear how CDFG's designation as a third-party beneficiary would ensure canal connectivity. The easement holder, however, potentially could have a right to enforce the continued delivery of water as a landowner/shareholder in the water district, and thus ensure that Natomas Mutual or RD 1000, as may be appropriate, would continue to deliver the entitled water supply.

CDFG also requests that it be granted a conservation easement on all Mitigation Lands held by the Plan Operator in fee title to guarantee canal connectivity. For the reasons explained above, we also do not believe it is necessary for CDFG to be the easement holder of conservation easements on TNBC reserve sites for purposes of maintaining canal connectivity. Where TNBC owns the Mitigation Lands in fee title and canals are present on the reserve, TNBC may retain certain rights as the property owner related to its real property interest in the land underlying the canals. As such, TNBC may be able to prevent RD 1000 or Natomas Mutual, as may be appropriate, from removing or otherwise obstructing any canals located on the Mitigation Lands. This right (if any), however, would not necessarily extend to canals or ditches located off of the reserves. (Notwithstanding this uncertainty, TNBC may be able to enforce its rights to water as a landowner.) For the reasons described above, designating CDFG as the easement holder would not be effective in ensuring canal connectivity.

CDFG requests that the NBHCP acknowledge that: (1) any discretionary canal modification by the Water Agencies, including dewatering, will result in significant impacts subject to CEQA; and (2) canal modification and dewatering of canals that provide biological connectivity to habitat reserves will require compliance with CEQA and other pertinent provisions of the Fish and Game Code. Items 3 and 4 in CDFG's comment letter have been incorporated into the fourth and fifth paragraphs of Section IV.C.1.d of the NBHCP. See the attachment to the Final NBHCP for specific text changes.

Conservation Easements Related to Conservation Strategy

CDFG has suggested that the Applicants also consider the recommended mitigation measures addressed above as they may relate to the overall NBHCP conservation strategy. As CDFG is aware, the NBHCP is intended to provide flexibility for TNBC to acquire replacement reserve sites if, after it has acquired a reserve site (i.e., trade-out), either: (1) the reserve fails to function in accordance with the NBHCP requirements; (2) development occurs adjacent to the reserve and compromises the success of the reserve; (3) another public agency (other than the Land Use Agency permittees) acquires the reserve for a different purpose; or (4) acquisition of a replacement reserve would enable TNBC to acquire more Mitigation Lands with less of an expenditure of resources. The NBHCP intends to limit the trade-out provisions so that Mitigation Lands acquired and contemplated for sale or trade for the purpose of improving biological value of the habitat would not be the target of restoration and enhancement spending. These prospective trade-out lands would remain in the 50 percent allocation for rice fields or a portion of the 25 percent portion in upland reserves. Moreover, this process would be subject to Technical Advisory Committee (TAC) and/or CDFG and USFWS approval.

To address the concern that TNBC may trade out reserve sites as Mitigation Lands, CDFG requests that it be designated as third-party beneficiary on all conservation easements held by the Plan Operator. We understand that CDFG is particularly concerned with the NBHCP's provisions enabling TNBC to trade out acquired reserve sites for new reserve sites. CDFG has suggested that the trade out provisions may be inconsistent with the perpetual nature of conservation easements. While a conservation easement is perpetual in nature, neither the Civil Code provisions governing conservation easements nor case law indicate that an easement holder is precluded from quitclaiming its interests in the conservation easement. Furthermore, as a matter of real property law, other real property interests that are perpetual can be terminated by mutual agreement of the parties. Since a conservation easement is a real property interest, as a matter of real property law, it is possible to terminate a conservation easement by mutual agreement of the grantor and easement holder. We also believe that providing TNBC with flexibility to acquire replacement reserves to improve habitat quality within the Basin is consistent with the NBHCP biological goals and objectives, and is in the best interest of all of the NBHCP participants.

Pursuant to California Civil Code Section 815.3.a, TNBC, the Plan Operator, would serve as the holder of the conservation easement if it chooses not to acquire fee title to a reserve site. In accordance with the NBHCP, the Implementation Agreement, and ITPs, TNBC would be required to implement any and all of its obligations related management of the Mitigation Lands, whether or not it chooses to acquire the reserve in fee or easement. If TNBC fails to abide by the terms of the NBHCP, the Implementation Agreement, and the ITPs, the

Wildlife Agencies have the authority to suspend or revoke the permits. Specifically, CDFG retains the right to suspend or revoke the Section 2081 permit (IA, § 7.62).

As further explained in the Response to Comment G3-7, above, the NBHCP and accompanying Implementation Agreement plainly state that if the Wildlife Agencies determine TNBC has violated the terms of the NBHCP, the ITPs, or the Implementation Agreement, the violation is considered a failure by the City and Sutter County to implement their respective obligations of the Operating Conservation Program (IA, §§ 3.1.11, 6.6). If such a violation were to occur and the City and/or Sutter County were to remedy the violation (e.g., by replacing the Plan Operator, rectifying the violation, itself, etc.), the Section 2081 and/or Section 10(a)(1)(B) permits may not be revoked or suspended, unless USFWS or CDFG determines that continuation of the permits would appreciably reduce the likelihood of the survival and recovery of a covered species in the wild (IA, § 7.6.5). Thus, the NBHCP, the Implementation Agreement, and ITPs provide CDFG with authority to enforce the terms of the NBHCP with respect to all of the permittees where an issue arises regarding TNBC's management of the Mitigation Lands.

The permittees have added text to Section IV.C.2.c of the NBHCP clarifying that where the Plan Operator acquires conservation easements on Mitigation Lands, CDFG and/or USFWS shall be designated as a third-party beneficiary of the easement.

CDFG also requests that it be granted a conservation easement on all Mitigation Lands held by the Plan Operator in fee title. Where TNBC acquires fee title in a reserve, TNBC also does not hold a conservation easement. That is, TNBC performs its obligations under the NBHCP, notwithstanding the nature of its interest (either easement or fee title) in the reserve. Moreover, TNBC is required to comply with the terms of the Section 2081 permit, whether the Mitigation Lands are owned by TNBC in fee or easement. Consequently, we do not believe it is necessary that CDFG hold title to the conservation easement in such instances because it retains the right to enforce TNBC's obligations under the NBHCP, Implementation Agreement, and Section 2081 permit related to the management of the Mitigation Lands.

Moreover, designating CDFG as a conservation easement holder or third-party beneficiary of land already subject to TNBC management is considered infeasible in the near-term because TNBC requires certain flexibility in the acquisition of the Mitigation Lands to maximize the amount of land that may be purchased with the available land acquisition funds. As land prices increase, TNBC continues to look for ways to keep its acquisition costs down to minimize the need for frequent adjustments in the mitigation fee. One mechanism TNBC may rely on to achieve this goal is the trade-out provision. Thus, if TNBC is unable to trade a poorly functioning reserve site for a higher-quality reserve site, TNBC may need to seek an increase in the mitigation fee to fund the cost of acquiring a more expensive reserve to supplement the poorly functioning reserve site. This approach likely would not effectively achieve the NBHCP's biological goals and objectives. Also, efforts have been made to encourage TNBC to consolidate the reserves, and this consolidation will be difficult to achieve if the Plan Operator is unable to freely trade land. If a conservation easement also were required on lands under TNBC ownership, the additional limitations imposed by the easement would delay acquisition and create extra approval layers which could discourage property owners from conveying their land to TNBC, and impact TNBC's ability to meet its acquisition timeframes.

Nonetheless, the Applicants and Wildlife Agencies concur that ensuring management of Mitigation Lands in perpetuity is an important aspect of the NBHCP conservation strategy. Consequently, text is added to Section IV.C.2.c of the NBHCP clarifying that conservation easements will be secured on all Mitigation Lands acquired in fee title by the Plan Operator after the Plan Operator has confirmed: (1) the final location of each of the reserves; and (2) management and/or restoration and enhancement measures are being implemented on the final reserve site (see the Final NBHCP). Notwithstanding the foregoing, all such conservation easements on the Mitigation Lands shall be secured prior to expiration of the NBHCP and the permits.

As stated above, the text of the NBHCP has been revised to acknowledge that: (1) any discretionary canal modification by the Water Agencies, including dewatering, will result in significant impacts subject to CEQA; and (2) canal modification and dewatering of canals that provide biological connectivity to habitat reserves will require compliance with CEQA and other pertinent provisions of the Fish and Game Code.

Response to Comment G3-12

CDFG states that reducing habitat fragmentation through compact development is a key conservation goal of the NBHCP. As a point of clarification, this is not a stated goal of the NBHCP, insofar as the NBHCP is not a land use document. Compact development, however, is a goal of the Land Use Agencies in preparation of the general plans and community plans previously adopted for the Natomas Basin. These planning documents relevant to the Planned Development are discussed in Section 4.1.3 of the EIR/EIS relevant to the disclosure of the previously evaluated effects of the Planned Development (see Appendix C of the EIR/EIS).

The NBHCP does, however, promote compact and consolidated development by virtue of the limited Permit Areas within which Planned Development may occur. As noted by the commentor, the Sutter County Permit Area contains approximately 1,100 acres more in land than may be developed under the NBHCP. Similarly, the City of Sacramento has limited development to 8,050 contiguous acres pursuant to the adopted North Natomas Community Plan. The North Natomas Community Plan contains substantial policies regarding compact development (see Response to Comment G2-2 regarding compact development and smart growth). These policies are further reflected in the City's zoning and development policies applicable to the North and South Natomas Community Plan areas.

Although no specific policy in either the Sutter County General Plan or the South Sutter County Specific Plan requires compact and contiguous growth, the natural progression of development relies upon extending existing infrastructure. Future development within the Sutter County Industrial/Commercial Reserve will be authorized through Specific Plans that will build upon the approved South Sutter Specific Plan. Infrastructure will be extended in a compact and consolidated manner both for purposes of orderly land planning and for the financial benefits of minimizing infrastructure costs.

Planning efforts to designate future phases of development in the Industrial/Commercial Reserve will be subject to review under CEQA, and CDFG would be afforded the opportunity to comment on whether development is planned in a compact form. Finally, the

Sutter County Mid-Point Review allows the opportunity to determine whether compact and consolidated development is occurring, and provides an opportunity to require measures to consolidate development if required.

Following adoption of the NBHCP and issuance of ITPs, Sutter County also has committed in the NBHCP and IA to initiating a general plan amendment to remove the land within the Swainson's Hawk Zone (1,015 acres) from the Industrial/Commercial Reserve and designate such land for agricultural uses.

Response to Comment G3-13

Section IV.C.1.e of the NBHCP authorizes TNBC, with the approval of the NBHCP TAC, to acquire Mitigation Lands that are less than 400 acres. This flexibility is included to allow TNBC to preserve smaller areas of special biological significance. Unique habitat areas, possibly supporting active Swainson's hawk nest trees or dense populations of giant garter snake, may become available to TNBC. Acquisition of such sites represent unique opportunities that TNBC may pursue if the Wildlife Agencies determine that such an acquisition is appropriate based on the biological value of the acquisition under consideration. In addition to acquisition of unique Swainson's hawk or giant garter snake sites, TNBC may also propose to acquire sites less than 400 acres to protect habitat for other covered species, including plant and invertebrate species, or to maintain or restore key canals or waterways that provide connectivity between Mitigation Lands.

The final portion of the comment states that reserves smaller than 400 acres should not serve as habitat for Swainson's hawk and giant garter snake. However, this is not consistent with the NBHCP Operating Conservation Program in that such small reserves would also serve as Swainson's hawk and/or giant garter snake habitat.

In response to the commentor's concern over minimum reserve size, the NBHCP has been revised to clearly specify that permanent reserves smaller than 400 acres may only be approved subject to Wildlife Agency approval (see Section IV.C.1.e of the NBHCP).

Response to Comment G3-14

Section IV.C.1.e of the NBHCP establishes the requirement to meet minimum habitat reserve sizes. TNBC will monitor progress in meeting these requirements through the annual reporting process. Sections VI.I and VI.J of the NBHCP specify the requirements for both an Overall Mid-Point Program Review and Independent Mid-Point Reviews for both of the Land Use Agency permittees. The NBHCP Review Board, a group comprising the affected permittees, TNBC, CDFG, and USFWS representatives, will conduct the Mid-Point Reviews. CDFG and USFWS will make the findings as to whether the NBHCP is functioning properly or whether corrective measures to the NBHCP are required. Each of these three Mid-Point Reviews provides the Wildlife Agencies the opportunity to apply corrective measures if they determine that adequate progress has not been made toward meeting the 400-acre and the 2,500-acre reserve size obligations.

Response to Comment G3-15

In accordance with CDFG's request, a matrix of the NBHCP mitigation measures will be included in the application for the Section 2081 permits.

Response to Comment G3-16

CDFG suggests that elements of information regarding the Swainson's hawk mitigation program included in the City's November 20, 2002 letter to CDFG also be included in the NBHCP. CDFG further requests information regarding the estimated 1,500 acres of upland edges to managed marshlands. CDFG further requests further information as to why mitigation similar to MAP HCP is not included for the Swainson's hawk.

The November 20, 2002 letter from the City to CDFG is attached as Appendix J of the Final EIR/EIS. In addition, the table of mitigation acreage included in the letter will be added to Chapter VII of the NBHCP. See the attachment to the Final NBHCP for specific text changes.

Regarding detailed management practices for rice fields and the upland edges of managed marsh fields, Section V.B.4.b of the NBHCP (pp. V-18 through V-22 of the Draft NBHCP) includes a comprehensive list of measures to be employed by TNBC to support the Swainson's hawk. Specific to management of upland portions of managed marsh reserves and rice fields, Section V.B.4.b provides specific guidance for management of these areas to benefit the hawk. Section V.B.4.b of the NBHCP, specifically Sections 3 and 4, state:

- (3) For rice fields operated by TNBC, best management practices to increase habitat for Swainson's hawk shall be incorporated. This includes allowing at least 10 percent of rice fields to fallow each year as well as allowing foraging before and after rice flooding. It is estimated that during the time hawks are present in the Basin, drained or flooded rice fields provide foraging habitat for an average of 2 months every year. Additionally, it is expected, that wildlife friendly agricultural practices (organic farming, providing crop residual for rodent production, similar to those used at the nearby Cosumnes River Preserve), will greatly increase the habitat value of ricelands to the hawk and other covered species.
- (4) Where possible develop or restore upland components of wetland reserves such that upland covered species, including the Swainson's hawk also benefit from the habitat. Thus, wetland reserves, along with the upland reserves described above, will help offset habitat losses affecting the Swainson's hawk within the NBHCP Plan Area. Also, the upland component of wetland reserves will benefit some of the upland covered species, especially those that also have wetland habitat needs (e.g., the tricolored blackbird).

Regarding the Metro Air Park's HCP mitigation for a single nest tree, it is important to note that the NBHCP emphasizes *avoidance* of nest tree sites, and includes a substantial amount of additional mitigation for both nesting and foraging areas, including the Swainson's Hawk Zone. The primary nesting in trees is in the Swainson's Hawk Zone. In addition, refer to specific avoidance measures for nest trees in Sections V.A.5.b and V.B.4.b of the NBHCP above and beyond those measures included in the MAP HCP.

Response to Comment G3-17

CDFG requests that the NBHCP and related documents be revised to clarify that take authorization for Covered Species that are unlisted is not automatic when listing of the

species. CDFG requests that it be provided an opportunity to review a report demonstrating that there are no changed biological conditions with respect to the species being listed.

We appreciate CDFG's efforts to work with the Applicant to provide a process for issuing incidental take authorization for currently unlisted species that may be listed in the future. As CDFG is aware, the NBHCP and associated technical analyses evaluate the effects of the proposed Covered Activities on all covered species to support CDFG's initial findings regarding the issuance of incidental take coverage. Existing law and the NBHCP and Implementation Agreement also provide mechanisms for addressing concerns that may arise if such species are listed in the future, and CDFG retains sufficient regulatory authority to seek permit amendments.

The NBHCP, EIR/EIS, and supporting biological analyses have evaluated the effects of the proposed Covered Activities on listed and non-listed covered species. These analyses will assist CDFG in its initial decisions regarding issuance of the Section 2081 permit or modifications to existing permits. Moreover, the NBHCP's adaptive management provisions provide for ongoing monitoring of the effectiveness of the NBHCP's Operating Conversation Program (see Section VI.F of the NBHCP). Specifically, the adaptive management process established by the NBHCP allows the Operating Conservation Program to be adjusted during the life of the permits to ensure that the most up-to-date information is being used, and that the plan's biological goals and objectives are being achieved for all Covered Species (page VI-22 of the Draft NBHCP). As such, the Applicants believe CDFG will be provided with the necessary data to support its Section 2081 permit findings and issuance criteria, including the necessary data to support the automatic coverage of non-listed covered species when it is listed.

The Implementation Agreement currently provides CDFG with two mechanisms for addressing potential changes associated with the provision of incidental take authorization for non-listed Covered Species. First, Section 6.2.4 of the Implementation Agreement provides, consistent with the Section 10.a permit that the Section 2081 permit shall become effective when a non-listed Covered Species is listed, *except* as provided by the Agreement or controlling law. If the Section 2081 permit does not become effective, then CDFG is required to process a permit amendment or issue a new permit in accordance with its provisions pursuant to Section 783 of Title 14 of the California Code of Regulations. Under Section 783.c.(2), CDFG may amend a Section 2081 permit to conform to the requirements of CESA, without the concurrence of the permittee. Through this process, CDFG is required to approve any amendments if the amended permit would continue to meet the Section 2081 Permit review standards. Thus, both under CDFG's regulations and the Implementation Agreement, CDFG would have an opportunity to amend the permit if the future listing of a non-listed covered species triggered further CDFG review of the Section 2081 permit under CESA. One reason the Section 2081 permit may not become effective on listing would be, for example, if CDFG were to find that coverage for a non-listed species on listing constituted a "changed condition" necessitating a permit amendment. In this regard, Section 6.2.5 of the Implementation Agreement provides a second mechanism for addressing conditions related to incidental take coverage for non-listed Covered Species in that it establishes the applicable procedures CDFG must follow in the event of a "changed condition."

We note that CDFG's comment acknowledges that it did not impose these additional requirements on the Metro Air Park Property Owners Association when it approved the

MAP HCP for property located entirely within the Natomas Basin. As CDFG is aware, the NBHCP Implementation Agreement provisions regarding coverage for non-listed Covered Species is modeled after the MAP Implementation Agreement provisions. We also believe CDFG is aware that MAP will become subject to the terms of the NBHCP if the NBHCP is adopted. We are concerned that if the NBHCP is adopted and MAP is required to implement the NBHCP, potential inconsistencies may arise if the MAP Section 2081 Permit provides for automatic coverage of non-listed Covered Species upon listing and the NBHCP related Section 2081 Permits do not. Consequently, we hope to continue to work with CDFG to avoid future confusion by adopting a consistent approach with respect to the coverage of non-listed Covered Species.

For the above-mentioned reasons, the NBHCP and Implementation Agreement provide opportunities for CDFG to address the listing of non-listed covered species in accordance with CESA. Nonetheless, revisions have been made to Section 6.2.4 of the IA, and clarifying text has been added to Section VI.L.4.b of the NBHCP. See the attachment to the Final NBHCP for specific text changes.

Response to Comment G3-18

The general strategies for protection of vernal pool associated species are contained in Section V.A.4 of the NBHCP. This section applies to all vernal pool associated species, including plant species such as legenera, Sacramento Orcutt grass, and other vernal pool associated covered plants. Section V.A.4.a of the NBHCP requires a species survey. The NBHCP text regarding species surveys has been revised to clarify this assumption. This will allow identification of species within vernal pool complexes and within the adjacent area, and it will identify potential indirect effects of the development. See the attachment to the Final NBHCP for specific text changes.

Regarding specific mitigation measures, Sections V.A.4.a.2 and V.A.4.a.3 identify the process for determination *in consultation with USFWS and CDFG (regarding plant species)* of appropriate mitigation measures, including buffer areas. Specifically, these sections currently state, among other requirements:

If vernal pool species are found within proposed project areas, the project proponent shall coordinate with the USFWS and CDFG to ensure conservation measures are incorporated to avoid and protect the sensitive plant species. In some cases, USFWS and CDFG may require complete avoidance of vernal pool species, such as where covered species such as slender orcutt grass, Sacramento orcutt grass, Colusa grass and/or vernal pool tadpole shrimp are found to be present. Such measures shall be identified by USFWS and CDFG within 30 days or as soon as possible thereafter of notification and submittal of biological data to the agencies by the Land Use Agency.

Further, Sections V.A.4.a and V.A.4.b do allow onsite preservation as part of dedication of land, including a buffer area to the Mitigation Lands. Section V.A.4.b further states:

TNBC Board and the TAC shall consider the location, connections, species present, condition of the proposed site to be dedicated, and may decide to accept the dedication in lieu of payment of the land acquisition fee portion of

the NBHCP mitigation fee for the affected acreage. TNBC Board may accept or decline the offer based on the balance of habitat needs and the biological goals of the HCP.

This section is intended to allow the Board and TAC (CDFG and USFWS) representatives to consider habitat fragmentation, types of enhancement, and other issues related to the biological feasibility of onsite preservation.

Recognizing that vernal pool habitat is limited in the Natomas Basin, the preservation option (preservation in conjunction with acquisition, enhancement, and management by TNBC) is only one method of mitigation that may not be appropriate in all cases. Creation on Mitigation Lands is also a limited option in so far as substantial portions of the Natomas Basin do not have the soils and conditions for successful vernal pool creation. As such, Section V.A.4.b.3 sets forth the circumstances under which a developer would mitigate through payment of additional mitigation to a USFWS-approved mitigation bank.

Response to Comment G3-19

Page VI-14 of the Draft NBHCP has been revised to specify the requirement for peer and public review prior to approval of the NBHCP Biological Monitoring Program. Additionally, the term Basin-wide has been replaced with the term NBHCP in recognition that while monitoring will occur throughout the Basin to provide supplemental information on species occurrences, the primary emphasis of this program will be to monitor the biological effectiveness of the NBHCP. See the attachment to the Final NBHCP for specific text changes.

Response to Comment G3-20

Section VI.E.2 of the NBHCP addresses the requirements for monitoring the Biological Effectiveness of the NBHCP. Section VI.E.3 provides detailed parameters for a Biological Effectiveness Monitoring Program to be prepared following issuance of ITPs under the NBHCP. Additionally, a description of TNBC's monitoring database has been added following the second paragraph of Section VI.F of the NBHCP. See the Final NBHCP for specific text changes.

Response to Comment G3-21

The commentor notes the need to maintain some portion of the monitoring data collected through the NBHCP in a spatial database format. Section VI.F.3 of the NBHCP has been revised to clarify the Plan Operator's obligations for database management under the NBHCP. See the attachment to the Final NBHCP for specific text changes.

Response to Comment G3-22

Appendix B, CDFG Staff Report regarding the Swainson's hawk, was included in the Draft NBHCP the request of the CDFG. On the basis of this most recent request, the report has been removed.

Response to Comment G3-23

TNBC uses a variety of best management practices that are updated as new information and practices become available. The NBHCP includes those practices that have been proven to be effective as mitigation measures to benefit the Covered Species. These are included on Pages IV-21 and IV-22 of the Draft NBHCP. Note that best management practices specific to each rice reserve are to be included in the Site Specific Reserve Management Plans and include consultation with the NBHCP TAC. Additional best management practices that serve as mitigation measures are also outlined in Chapter V of the NBHCP. For example, the requirement to fallow at least 10 percent of rice reserves to provide foraging habitat is included in page V-19 of the Draft NBHCP. For additional information on best management practices for rice reserves, please also see Response to Comment O1-24f.

Response to Comment G3-24

The commentor correctly notes that the NBHCP will not create a self-sustaining natural community. Such a goal is not feasible given the substantial land modifications that have occurred within the Natomas Basin. Additionally, the existing giant garter snake population within the Basin clearly utilizes rice as a form of habitat, supporting the inclusion of rice within the Mitigation Lands. The first paragraph of Section IV.D.3 of the NBHCP has been modified. See the attachment to the Final NBHCP for specific text changes.

Response to Comment G3-25

Page VI-2 of the NBHCP details the options available to developers to pay the required Mitigation Fee. A developer may complete the payment of the Mitigation Fee requirement in two ways: (1) pay the full Mitigation Fee, including the Land Acquisition component, or (2) transfer land to TNBC in lieu of all or a part of the Land Acquisition component of the fee and pay the non-land acquisition components of the Mitigation Fee. The transfer of land option is subject to all acquisition criteria and other requirements of the NBHCP, as well as concurrence by the Wildlife Agencies and TNBC.

If the amount of land transferred to TNBC is insufficient to meet in full the Mitigation Land requirement for the development, the developer must pay the required balance of the Land Acquisition component, as well as the non-land acquisition components of the fee to meet in full the obligation.

If the amount of land transferred to TNBC is in excess of the developer's Mitigation Land requirement, the developer may choose to: (1) credit herself or himself for Mitigation Land to meet the obligations of a future development, if applicable; and/or (2) at the time of transfer of land to TNBC, transfer the credit to a specific developer. Written notice of such a transfer of credits must be submitted to the applicable Land Use Agency and TNBC. Any payment associated with the credit transfer is between the private parties and land is credited as acres of Mitigation Land--not cost per acre. Neither developer is mitigation banking because the land is transferred to and owned by TNBC. The fee credits are similar to transportation impact fee or park fee credits.

Because land is not generally available in an amount necessary for a developer to meet the exact Mitigation Land obligation, it is appropriate for the NBHCP to anticipate the two

events: (1) too little land to fully meet the requirement; and (2) too much land (in excess of the requirement).

The Applicants encourage developers to buy Mitigation Land, in coordination with TNBC, that meets all acquisition and other criteria and transfer it to TNBC; land that is acquired by a developer and transferred to TNBC does not cost TNBC time and money to find willing sellers. Also, the Applicants desire to encourage developers to buy large tracts of land, even too large for their own needs, because: (1) it is beneficial for TNBC to remain ahead of its Mitigation Land requirement; and (2) larger tracts of land owned by TNBC help meet the minimum block sizes of 400 and 2,500 acres required by the NBHCP. Although the option of a developer transferring land to TNBC was allowed in the 1997 NBHCP, the details of handling a transfer too large for a developer's needs was not defined. The revised NBHCP defines how such a transfer would occur.

In sum, no developer is a mitigation bank or participating in a mitigation bank under the NBHCP because the land is transferred to TNBC, and the credits to another developer are tracked by TNBC and the Land Use Agency permittee.

Response to Comment G3-26

Significant land use changes, as noted on page VI.22 of the Draft NBHCP, are further defined through the revision of Section VI.F.1(5). See the attachment to the Final NBHCP for specific text changes.

Response to Comment G3-27

Page VI-22 of the Draft NBHCP provides that future NBHCP modifications, through the adaptive management process, may be needed as a result of significant uncertainties associated with the plan implementation. Consistent with the USFWS Five-Point Policy, the adaptive management program is designed to address uncertainties associated with plan implementation that could arise as a result of the discovery of specific information about the ecology of the species or its habitat (e.g., food preferences, relative importance of predators, territory size), changes in habitat or species management techniques, or the degree of potential effects of the activity on the covered species. The NBHCP responds to this in Sections VI.F.2 and VI.F.3, and in Section VI.F.8, and the changed circumstances provisions outlined in Section VI.K.2.

Response to Comment G3-28

The commentor asks for clarification as to what research needs are contemplated by the adaptive management provisions described on page VI-23 of the NBHCP.

Page VI-23 of the NBHCP states that the process by which adaptive management changes to the NBHCP management actions, monitoring, and research needs may be implemented in numerous ways. The NBHCP describes three approaches used as part of this effort. Consistent with the HCP Handbook guidance, the NBHCP refers to "research needs" to provide opportunities for the collection of data and peer-reviewed scientific information. Research opportunities are considered useful in filling data gaps and/or testing the effectiveness of management and mitigation strategies, which can then be modified as new information is obtained (HCP Handbook, page 3-25). In this regard, the monitoring program

outlined in the NBHCP will be an important component in ensuring data will be properly collected, analyzed, and used to adjust mitigation, if necessary.

The October 2002 updated cash flow model used to estimate the NBHCP mitigation fees included within the Operations & Maintenance assumes a total cost of \$210,540 per year for ongoing mitigation monitoring and adaptive management. These costs also cover research and data collection needs anticipated under the Adaptive Management Program. Of the \$210,540 in total costs, \$7,500 is an annual fixed amount to cover the costs of the Mid-Point Program review. The remainder of the costs, \$203,040, is escalated annually by 3 percent to cover the additional costs of monitoring and adaptive management as additional Mitigation Lands are acquired. Once all Mitigation Lands have been acquired, the cost is assumed to be fixed.

Response to Comment G3-29

The commentor notes that management thresholds are discussed within the Draft NBHCP, but that no specific details related to the guidelines are provided. The Draft NBHCP has been revised to provide interim management thresholds. The revision also requires that detailed management thresholds included within the detailed and refined NBHCP Monitoring Program must be completed within two years of issuance of permits under the NBHCP. Specific changes to the Section VI.F.1 of the NBHCP are provided in the attachment to the Final NBHCP.

Response to Comment G3-30

The Applicants and Lead Agencies appreciate CDFG's interest in obtaining further clarification regarding the nature of the changes to the adaptive management program that may arise as a result of CDFG's adoption of a Swainson's hawk recovery plan. The Applicants and Lead Agencies understand CDFG's desire to obtain detail for the hawk that is commensurate with the detail provided in the NBHCP for adoption of a giant garter snake recovery plan. However, the availability of the draft giant garter snake recovery plan since 1999 facilitated a more detailed explanation of the types of measures that could be incorporated for garter snake than are currently available from CDFG for the hawk. Because CDFG has not yet prepared a Swainson's hawk recovery plan, it is difficult to predict with specificity the types of measures that may be incorporated into a future recovery plan.

Nonetheless, the NBHCP explains when management strategies may be revised in response to recovery plan adoption. The Draft NBHCP states on pages VI-25—V-26, as revised, that recovery plan recommendations will be incorporated into the NBHCP where such changes are supported by monitoring results from the Plan Area or new peer-reviewed scientific information, and when such recommendations meet five key criteria. Based on these criteria, Swainson's hawk recovery plan adoption could result in adjustments in TNBC's management of upland reserves on Mitigation Lands, or in its techniques or approaches in maintaining a hawk prey base and enhancing existing habitat. Moreover, these adjustments must be considered with the overall biological goals and objectives, including those specific to upland species such as Swainson's hawk, as specified on page I-16 of the NBHCP. For example, the recovery plan may identify effective techniques that can be implemented to establish a mosaic of upland habitats for breeding, foraging, and cover. Similarly, the recovery plan may suggest measures to enhance upland reserve connectivity.

Response to Comment G3-31

The scope of the Overall Program Review included in Section VI.I of the NBHCP has been revised. This modification will also apply to the Independent Mid-Point Reviews to be conducted by the Land Use Agency permittees. See the attachment to the Final NBHCP for specific text changes.

Response to Comment G3-32

The requirement for a 7-day notice to the Wildlife Agencies in the event of a toxic event is based on the assumption that this type of changed circumstance would be clearly observable, and that the Wildlife Agencies may be in a position to assist in the capture and relocation or treatment of wildlife affected (similar procedures to those employed during an oil spill, for example). Other changed circumstances, such as drought, may be more difficult to assess relative to emergency response. Nonetheless, it is important to note that the NBHCP TAC includes representatives from CDFG and USFWS to ensure coordination and notification of reserve activities and circumstances.

Response to Comment G3-33

CDFG correctly notes that non-participation in the plan by one of the Land Use Agency permittees would require an assessment of impacts to maintain proportionality of mitigation. This assessment is already included in the NBHCP. Starting on page VI-12, Compliance Monitoring, the compliance monitoring accounting to be completed by each permittee is detailed and includes in Section VI/E.1.b(1) on page VI-13 of the Draft NBHCP, “The amount and location, in written and GIS mapping formats of all lands approved for authorized development by private parties for which Mitigation Fees were paid to TNBC in the preceding year including the following information: a. Acreage ..., b. Location ..., and c. Type (e.g., vegetation type, vernal pool, Swainson’s hawk potential nest habitat).” Section b(2) asks for the same information for public works projects.

The Applicants anticipate using the 1997 Habitat Types Map (Figure 10 of the NBHCP) as the baseline map. Then Planned Development can be overlaid on the baseline map and habitat type changes can be evaluated. This information will be useful for the mid-point reviews when the NBHCP calls for an evaluation of the success in meeting these goals and objectives.

Response to Comment G3-34

The correction has been incorporated to page VI-8 of the Draft NBHCP. See the attachment to the Final NBHCP for specific text changes.

Response to Comment G3-35

The comment refers to page IV-22 of the Draft NBHCP, which refers to Figure 13, but no reference to Figure 14 is found on this page. The reference to Figure 13 relates to the Swainson’s Hawk Zone, a feature that was omitted from Figure 13, but has been added in the Final NBHCP.

Response to Comment G3-36

Reference to CESA has been added to page VI-28 of the Draft NBHCP. See the attachment to the Final NBHCP for specific text changes.

Response to Comment G3-37

Reference to goals has been added to page VI-40 of the Draft NBHCP. See the attachment to the Final NBHCP for specific text changes.

Response to Comment G3-38

Reference to CESA has been added to page VI-41 of the Draft NBHCP. See the attachment to the Final NBHCP for specific text changes.

Response to Comment G3-39

No reference to amphibians is found in the second paragraph of page VI-42 of the Draft NBHCP.

Response to Comment G3-40

Figure 13 has been updated to include the boundary of the Swainson's Hawk Zone and to identify the nest trees that have been removed by Sacramento County.

Response to Comment G3-41

Information on Figure 15 failed to reproduce during document production. Adjustments will be made to ensure clear depiction of information.

Response to Comment G3-42

Shading patterns of Figure 16 have been adjusted to convey correctly the data of this figure.

Response to Comment G3-43

CDFG's ongoing participation is appreciated. All effort will be made to understand its concerns and direction, and to address issues within the NBHCP.

Letter G4—Caltrans, Division of Aeronautics

Response to Comment G4-1

The Lead Agencies agree that public safety concerns related to Sacramento International Airport should be an important part of any planning effort in the area. A detailed analysis of the primary public safety concern (bird strikes) is presented in Section 4.11 of the EIR/EIS. Consistent with Section IV.D.5 of the NBHCP, TNBC coordinates with Sacramento International Airport regarding reserve management planning. Impacts are anticipated to be less than significant.

Response to Comment G4-2

No consistency determination by the Sacramento County Airport Land Use Commission (ALUC) is required at this time for any of the actions involved in the proposal. The proposal under consideration is the City and Sutter County's adoption of the NBHCP, and the USFWS's and the CDFG's issuance of ITPs based on the NBHCP. Under Public Utilities Code Sections 21670 through 21679.5, the ALUC has limited authority to review the actions of local government agencies for consistency with the ALUC's comprehensive airport land use plan (compatibility plan). (See Public Utility Code § 21675). The purpose of these reviews is to assist cities and counties in ensuring compatible land uses near airports, and coordinate land use planning at state, regional, and local levels to provide for the orderly development of air transportation (*Id.* § 21674.b-c). The ALUC's enabling statutes further these purposes by providing for ALUC review of certain, statutorily specified land use actions by cities and counties that may affect lands within the area covered by an ALUC compatibility plan (*Id.* § 21676.b-c). In limited circumstances, these statutes provide for ALUC review of a broader range of city and county land use decisions (*Id.* §§ 21676.b, 21676.5). However, the NBHCP is not a land use planning document and, under these enabling statutes, the City and Sutter County's approval and adoption of the NBHCP is not a land use decision subject to ALUC review.

Under Section 21674, the ALUC is empowered to "review the plans, regulations, and other actions of local agencies and airport operators pursuant to Section 21676" (*Id.* § 21674.d). Under Section 21676, cities and counties are required to refer to the ALUC only certain types of actions to the ALUC for consistency determinations. (See Public Utility Code § 21676.) These actions are the proposed adoption or amendment of a general plan or specific plan, the adoption or approval of a zoning ordinance or building regulation, or, if the city or county owns a public airport, any modification to its airport master plan (Covered Actions) (*Id.* § 21676.b-c). The City and Sutter County's approval and adoption of the NBHCP is not a Covered Action under 21676. Therefore, no ALUC review is required under Section 21676.

Under Section 21676.5, the ALUC may under certain circumstances review city and county actions other than the Covered Activity described in Section 21676. Under Section 21676.5.b, if a city or county takes a Covered Activities without referring it to the ALUC for a consistency determination, or if the ALUC determines that a Covered Activity is inconsistent with its compatibility plan and the city or county has not overruled the ALUC's inconsistency determination in the manner required by Section 21676 (see *Id.*, § 21676.b), then the ALUC may require the city or county to refer all subsequent "actions, regulations

or permits” affecting lands covered by the ALUC’s compatibility plan to the ALUC for consistency review (*Id.* § 21676.5). Although the ALUC has broader review authority under Section 21676.5 than it has under Section 21676, its authority under the latter Code section does not extend to review of the NBHCP, for two reasons.

The NBHCP is not a local land use document, but rather a mitigation plan for impacts to endangered species that may be the result of locally approved development. The NBHCP, therefore, serves as the conservation and mitigation plan for local land uses previously approved in the North Natomas Community Plan and the Sutter County General Plan. ALUC consistency for the land uses approved in the North Natomas Community Plan (City of Sacramento) and the Sutter County General Plan and Specific Plan were previously conducted by the Sacramento County ALUC. The 1986 North Natomas Community Plan (1986, ALUC Review Number 86-05) was determined to be consistent with the Sacramento Metropolitan Airport Comprehensive Land Use Plan. The 1994 North Natomas Community Plan update was determined to be outside of the Safety Zone and Noise Contour Zone of the revised Sacramento International (formerly Metropolitan) Airport Comprehensive Land Use Plan. The Sutter County General Plan (amendment) was reviewed in 1991 and 1992 (ALUC Review Numbers 91-2 and 92-8). At that time, the ALUC determined that with amendments included in the General Plan Amendment, which require ALUC review for all specific plans and conditional land use permits, consistency would be ensured. Therefore, the NBHCP need not be referred to the ALUC for a consistency determination.

In addition, compatibility between the Operating Conservation Program of the NBHCP and the Comprehensive Land Use Plan was addressed in detail in the EIR/EIS with regard to the potential for bird strikes. For additional information on this topic, see Sections 3.11 and 4.11 in the EIR/EIS and Responses to Comments G8-18, G8-25, and G8-36.

Finally, neither of the Wildlife Agencies are local agencies or airport operators within the meaning of Public Utilities Code Section 21674. Consequently, the Wildlife Agencies’ approvals of the NBHCP and issuance of ITPs to the City and Sutter County are not actions subject to review by the ALUC under the ALUC’s enabling statute.

Response to Comment G4-3

Caltrans District 3 received a copy of the documents, and have responded (see Comment Letter G5).

Letter G5—Caltrans, District 3

Response to Comment G5-1

This introductory comment from Caltrans District 3 describes District 3's support for coordinating species planning in the Natomas Basin with future highway improvements. See Response to Comment G5-4 for additional information regarding linkages between the NBHCP and the widening of I-5 and S.R. 99. In summary, additional project-specific coordination with the USFWS and CDFG will be required because Caltrans is not a participant in the NBHCP.

Response to Comment G5-2

The commentor requests that additional mechanisms be included in the NBHCP to ensure coordination with Caltrans for planned highway improvements in the Natomas Basin. The Applicants have considered this request, and do not believe that it is necessary to add this additional implementation requirement. TNBC will consider future highway improvements to the extent feasible in its acquisition decisions (see additional information in Response to Comment G5-4 below). The Applicants recommend a coordination meeting between District 3 staff and TNBC's Executive Director to discuss anticipated future highway improvements.

Response to Comment G5-3

The commentor refers to the contribution of Caltrans facilities (e.g., I-5 and S.R. 99) to the Basin-wide drainage system, operated by RD 1000, and addresses the management of "the State's stormwater." The commentor expresses concern that Planned Development could result in changes in the existing drainage system, and specifically states that "[t]he HCP should ensure that existing drainage patterns are perpetuated or improved within State right-of-way." The environmental effects of Planned Development have been addressed by the City and Sutter County as described in Section 4.1.3 of the EIR/EIS, and specific water quality effects described in prior evaluations are summarized in Appendix C (Table C-2). Development in North Natomas is following the Comprehensive Drainage Plan, including an extensive system of source and treatment controls. The City does not use state right-of-way (ROW) to accommodate North Natomas drainage. Stormwater runoff from the South Sutter County Specific Plan area would be directed to the RD 1000 drainage system, and is not intended to use culverts within the S.R. 99 ROW. Specific elements of the Sutter County drainage system are still under consideration, however, and Sutter County encourages participation by Caltrans District 3 in the ongoing planning process.

As described above, both the City and Sutter County are, or will be, implementing measures to manage stormwater quality in a manner consistent with Clean Water Act requirements (as implemented and enforced by the Central Valley Regional Water Quality Control Board, as described in Section 4.3.1.1). Their obligations, however, are directed at stormwater generated as a result of Planned Development within their respective Permit Areas. There is not an obligation for take coverage to be provided for runoff from Caltrans facilities because that is not a Covered Activity and Caltrans is not an Applicant for take coverage under the NBHCP.

Response to Comment G5-4

Freeway improvements of S.R. 99 and I-5 within the City's Permit Area have been planned to include the necessary ROW widenings. The City and Caltrans have worked together closely on freeway improvements along I-5 and S.R. 99 through the City limits in that area. ROW for freeway improvements is preserved through appropriate conditions on planning entitlements approved by the City. The need for ROW does not conflict with the NBHCP because habitat preservation is not intended along I-5 and S.R. 99 within the City limits.

Development of other portions of S.R. 99 and I-5 within the Natomas Basin will be required to comply with state and federal regulations, as necessary. Projects with a federal nexus would be subject to Section 7 consultation with the USFWS. The NBHCP and ITP does not include mitigation of impacts associated with projects with a federal nexus, including freeway improvements, both within the City's Permit Area and outside the Permit Areas. Any freeway widening will be required to comply with appropriate state and federal regulations.

TNBC currently owns Mitigation Land adjacent to S.R. 99 at the southwest corner of S.R. 99 and the Sacramento/Sutter County line. TNBC and Caltrans should coordinate to ensure that funds are not invested by TNBC in the land for restoration and enhancement that will be lost when the highway is widened. Also, when Caltrans takes possession of the ROW, TNBC must be made whole. That is, Mitigation Land condemned or otherwise acquired for ROW must be accounted for by TNBC by purchasing an equal or larger amount elsewhere, subject to the acquisition requirements of the NBHCP (see Section IV.C of the NBHCP). Early coordination would be beneficial to both parties. Specific procedures for this type of transaction would be beneficial to TNBC.

Letter G6—California Department of Water Resources

Response to Comment G6-1

The NBHCP Plan Area is the Natomas Basin, which is defined as the interior of the surrounding levees (i.e., does not extend up the levee slope). Activities that could affect project levees under the jurisdiction of the Reclamation Board, therefore, would not occur. A portion of TNBC's Permit Area, however, is proposed to extend to the edge of water immediately outside of the Natomas Basin levees. TNBC activities, therefore, could fall under the jurisdiction of the Reclamation Board. Management of Mitigation Lands, however, is not expected to have a substantial impact on project levees. Revisions have been made to Section 2.3.4 of the EIR/EIS to include the Reclamation Board processes (see Section 2.1 of this Final EIR/EIS for the text of the changes).

Letter G7—Placer County Transportation Planning Agency

Response to Comment G7-1

Several of the alignment alternatives for Placer Parkway are within the Industrial/Commercial Reserve of Sutter County, and are therefore within Sutter County's Permit Area. Under the proposed application, however, incidental take authorization would be granted to Sutter County, not the Placer County Transportation Planning Agency (PCTPA). Descriptions of Sutter County's authority as a Land Use Agency permittee and its Covered Activities are provided in Sections I.B.2.b and I.N.1.a of the NBHCP, respectively.

Response to Comment G7-2

See the Response to Comment G7-1 above.

Letter G8—County of Sacramento

Response to Comment G8-1

The commentor's introductory comments are noted. Refer to the detailed responses to this comment letter for additional discussion of the points raised by the commentor.

Response to Comment G8-2

One of the overall goals of the NBHCP is to “establish and manage in perpetuity a biologically sound and interconnected habitat reserve system that mitigates impacts on covered species resulting from Covered Activities and provides habitat for existing and new viable populations of covered species” (pages I-14 and 15 of the Draft NBHCP). The commentor questions how such a system can be established without the power of eminent domain, relying only on sellers willing to sell their land at an affordable price to TNBC, without necessarily assuming that existing land uses, other than those that are allowed to develop, will continue. The commentor points out that most of those lands that will become part of the reserve system are not under the jurisdiction of the Applicants (i.e., most of the future reserve sites are in Sacramento County, not a permittee of the proposed NBHCP).

Under the NBHCP, 8,750 acres of Mitigation Lands must be established to mitigate the impacts of 17,500 acres of Planned Development at a mitigation ratio of 0.5:1. As of January 2003, TNBC has acquired 2,782 acres, almost one-third of the required reserve system. The balance of the Mitigation Lands may be acquired in the Natomas Basin, and up to a maximum of 20 percent of the Mitigation Lands (a maximum of 1,750 acres) may be acquired outside of the Basin as long as it meets the acquisition criteria. Therefore, a range of 4,218 to 5,968 acres must still be acquired in the Basin.

Based in part on TNBC's current success, there is no reason to believe that TNBC will not be able to continue to acquire Mitigation Lands to meet the NBCHP requirement. Nonetheless, if the required Mitigation Land cannot be acquired by TNBC in the manner described in the NBHCP (i.e., willing seller of land to TNBC or developer transfer of land in lieu of a portion of the mitigation fee), then the Land Use Agency permittees stop issuing grading permits until the required Mitigation Lands are acquired and all other applicable pre-construction requirements of the NBHCP are met. If, however, TNBC fails to acquire sufficient Mitigation Lands, the Wildlife Agencies could revoke the Land Use Agency's permits. Before the permittees would stop development and/or the Wildlife Agencies would commence permit revocation, developers and other interested parties would use whatever mechanism(s) possible to ensure that the requirements of the NBHCP are met. These mechanisms include: (1) raise the mitigation fee to improve the willingness of sellers to sell their land to TNBC; (2) require developers to buy land to transfer to TNBC in lieu of the land acquisition portion of the fees; (3) use conservation easements as an alternative to fee simple purchase of land; (4) trade Mitigation Lands to meet land acquisition requirements; and (5) other alternatives.

The 1997 NBHCP relied on the continuation of agriculture as mitigation for the planned development. The revised NBHCP does not include the continuation of agriculture in the Basin as mitigation, but the effectiveness of the NBHCP depends on some portion of the Basin remaining available as foraging habitat. Nonetheless, the NBHCP (e.g., p. I-17)

acknowledges the potential for agricultural uses to be replaced with a combination of urban and agricultural uses over the life of the 50-year permits. However, the effectiveness of the NBHCP conservation strategy in mitigating for the effects due to incidental take associated with 17,500 acres of development is based on the assumption that the NBHCP only covers 17,500 acres of Planned Development. Additional development occurring in the Natomas Basin beyond 17,500 acres and/or outside the City and Sutter County's Permit Areas, would trigger a new or amended conservation strategy as described in Master Responses 3 (Joint Vision) and 4 (Cumulative Impacts), and further described in Response to Comment G8-17.

Mitigation Lands will be located in both Sutter County and Sacramento County. As of January 2003, about one-half of the Mitigation Land is located in Sacramento County and one-half is located in Sutter County (Sacramento County – 1,469 acres [53 percent] and Sutter County – 1,313 acres [47 percent]). Also, Sutter County has agreed to remove the portion of the Swainson's Hawk Zone (within 1 mile of Sacramento River) in the Industrial/Commercial Reserve from their Permit Area and initiate a General Plan Amendment to remove that portion of the Swainson's Hawk Zone (1,015 acres) from the Industrial/Commercial Reserve. The portion in the Swainson's Hawk Zone in Sutter County is about 1,427 acres. No reserve site acquired to date by TNBC is located in that area, but a site may be located there in the future.

Response to Comment G8-3

As indicated in Response to Comment G8-2, the NBHCP does not rely on farming as part of the mitigation for take associated with the Covered Activities. Nonetheless, the effectiveness of the NBHCP Operating Conservation Program depends on limiting Planned Development to 17,500 acres within the Permit Areas as further explained in Chapter III of the NBHCP and in Response to Comment G8-17.

The commentator raises concerns about the viability of rice farming going forward: farmers can stop growing rice without any government approval, and water may become too expensive to make rice farming feasible. Rice farming in the Natomas Basin is more likely to continue to be viable under the NBHCP because: 1) TNBC is required to keep 50 percent of the Mitigation Lands in rice; 2) TNBC will become a strong stakeholder in the availability of water and the success of rice growing in the Basin; and 3) although TNBC relies on farming revenues in its finance model, it does not meet the for-profit model of an agricultural business.

The impacts on NBHCP implementation from water shortages or escalating water costs are described in the Changed Circumstances section on page VI-36 and 36 of the Draft NBHCP.

Response to Comment G8-4

The NBHCP assured funding relies on Mitigation Fees collected from Planned Development. It is the impacts of such development that create the need for mitigation in the form of the Mitigation Lands. As development occurs, TNBC collects funds for land acquisition, habitat restoration, and long-term management of the Mitigation Lands. If Planned Development does not occur, then the financial burdens placed on TNBC would be substantially reduced, consistent with the reduced obligation to acquire Mitigation Land. Moreover, the fees collected from development, supplemented by interest income, rice

revenues, hunting revenues, and other sources of income not yet identified, would support the maintenance of the Mitigation Lands. For further information, the commentor is referred to Response to Comment O1-40.

Response to Comment G8-5

For purposes of the NBHCP, the Natomas Basin is defined as the 53,537 acres located inside the toe of levees surrounding the Natomas Basin (see definition of Plan Area, page D-5 of the Draft NBHCP). For purposes of clarity, the third paragraph of Section I.A of the Draft NBHCP has been modified (see the Final NBHCP for the text change).

Response to Comment G8-6

As discussed in the referenced sections, development and urban development are used interchangeably. These terms generally refer to urban development, including Planned Development, of undeveloped land for which a discretionary approval is required. Detailed analysis of development within Sacramento County that does not require a discretionary approval was not conducted under the NBHCP because there is no reasonable basis to assume extensive urban development will occur under existing agricultural zoning. Moreover, while a single-family residence, farmworker housing, or other associated agricultural related structure may be constructed under the existing zoning, extensive development would not be permitted outside the County's Urban Services Boundary. Moreover, such development is not authorized under the NBHCP. Thus, for purposes of evaluating the impacts of take associated with Planned Development, the NBHCP and EIR/EIS have determined that the current baseline conditions (as described in Master Response No. 3 [Cumulative Impacts]) are an accurate representation of the limited development that may occur under existing zoning (also see Response to Comment O3-13).

Response to Comment G8-7

As noted in the comment, the 17,500 acres of Planned Development includes urban development in Sutter County (7,467 acres), the City (8,050 acres), and Metro Air Park (1,983 acres). The comment suggests that 17,500 acres is the limit of acreage considered by USFWS as able to be developed for the "livelihood" of the giant garter snake. The basis for the commentor's assertions are unclear. Neither the NBHCP nor EIR/EIS indicate the maximum amount of development that could exist in the Basin without detriment to the giant garter snake. The NBHCP has been prepared to address the potential for incidental take of covered species associated with 17,500 acres of Planned Development. If additional development were to be issued an incidental take permit (either by a permittee outside the respective Permit Areas or by a potential permittee), that additional development would be required to demonstrate that it will meet the state and federal findings necessary to obtain a permit.

If additional development were proposed beyond the 17,500 acres of Planned Development covered by the NBHCP, a number of mitigation options may be available to improve the giant garter snake mitigation. For example, future development could: (1) increase the mitigation ratio above 0.5 acre of mitigation land to one acre of development; (2) provide Mitigation Land with waterways suitable for giant garter snake habitat; (3) connect disconnected canals within the Basin; and (4) retain existing buffer lands in perpetuity. Thus, if Sacramento County considers future expansion of the airport, it is anticipated that

many options will be available to them to mitigate impacts of the airport expansion on the giant garter snake and other covered species.

Finally, in its letter dated November 28, 2000, the City of Sacramento invited Sacramento County to participate in the NBHCP (Appendix K of the Final EIR/EIS). Because Sacramento County declined participation at that time and did not express an interest in seeking coverage under the NBHCP for a potential future airport expansion, such expansion is not included as a Covered Activity. Also see Master Response 4 (Cumulative Impacts).

Response to Comment G8-8

In response to this comment the last sentence of the first full paragraph of page I-2 of the Draft NBHCP has been modified to clarify that the 1,983 acres refers to MAP. See the addendum to the Final NBHCP for the text changes.

Response to Comment G8-9

The commentator seeks clarification regarding the West Lakeside annexation and suggests that this annexation, if it is considered by the City in the future, would push the limit of the 17,500 acres of planned development covered by the NBHCP.

The NBHCP and Final EIR/EIS acknowledge the potential for developers to seek entitlements for the development of the West Lakeside property. Nonetheless, at this time, the location, amount, and extent of development associated with this property is unknown pending the results of the Joint Vision process as described in Master Response 3 (Joint Vision). Moreover, insufficient data are available to conduct a detailed assessment of the types of cumulative impacts to which development of the West Lakeside property could contribute. Pages I-5 and I-6 of the NBHCP state that the plan does not address incidental take authorization for future development of lands outside of the City's and Sutter County's Permit Areas. Specifically, future development of land outside of the City's Permit Area, including proposals requiring annexation to the City, will not occur, if at all, until the City and Sacramento County complete the Joint Vision planning process described in the EIS/EIR and as further explained in Master Response 3 (Joint Vision). Moreover, annexation efforts will be subject to environmental analyses prior to any approval. The NBHCP explains that the West Lakeside area located within the unincorporated Sacramento County portion of the Natomas Basin is not included in the City's Permit Area. Thus, the Applicants and the Wildlife Agencies do not consider the West Lakeside area as meeting the NBHCP's definition of "authorized development." Annexation to the City, if that ever were to occur, would not result in the automatic inclusion of the West Lakeside area in the City's Permit Area, nor would any future development approved within this unincorporated area be included in the total 17,500 acres of Planned Development covered by the NBHCP. As stated in Master Response 3 (Joint Vision), annexation and associated development would constitute a significant departure from the NBHCP's Operating Conservation Program and rezoning or zoning to urban uses. The annexation and development would trigger a reevaluation of the NBHCP and a separate HCP. It would also result in issuance of ITPs to the permittee, or potential permittee for that additional urban development, potential amendments, and/or revisions to the NBHCP and permits, or possible suspension or revocation of the City's permits. The commentator also is referred to Master Response 4 (Cumulative Impacts).

Response to Comment G8-10

Federal agencies with approval authority over federal or non-federal projects are required to consult with the USFWS through Section 7 of the ESA. Even projects in the Permit Areas that have a federal nexus must conduct a Section 7 consultation. For example, the Arena Boulevard/Interstate 5 interchange that is now under construction within the City's Permit Area had to go through a separate Section 7 consultation. The airport expansion likely will be required to undergo consultation with the USFWS. Through the Section 7 consultation process, the USFWS will define the appropriate mitigation measures for that project.

Response to Comment G8-11

The commentor is referred to the responses to comments above related to the airport expansion project's inclusion in the 17,500 acres of Planned Development. Generally, Sacramento County has options to mitigate for the impacts of the airport expansion (e.g., permanent set aside of Sacramento County buffer lands for habitat mitigation) and it is anticipated that the expansion will be subject to Section 7 consultation with the USFWS. The airport expansion project is not required to be included in the area of Planned Development because neither Sacramento County nor the Federal Aviation Administration (FAA) have elected to participate in the NBHCP.

Response to Comment G8-12

The NBHCP does not propose ITP coverage for agricultural uses within the Natomas Basin, other than agricultural activities undertaken by TNBC as the Plan Operator and permittee. Coverage of other agricultural uses could be accomplished following an amendment to the NBHCP. Such an amendment would require specific analysis of activities to be covered and would likely require implementation of measure by farmers to avoid, minimize, and mitigate take of covered species. Under the NBHCP, agricultural practices will continue subject to existing regulations.

Response to Comment G8-13

The definition appears to be explicit in describing the NBHCP Plan Area. Further, no coverage for any urban development adjacent to, or outside the Basin levees in the vicinity of the Sacramento River is provided. If the County of Sacramento wishes to include portions of the Garden Highway Special Planning Area within the NBHCP at some future date, then an amendment to the NBHCP or approval of a separate HCP would be required, and the definition of the Plan Area would be modified, as appropriate, at that time.

Response to Comment G8-14

The commentor correctly notes the error in the Figure 13 reference. This reference to Figure 13 has been corrected.

Response to Comment G8-15

The commentor notes the description of Swainson's hawk nests is confusing. Section II.C.3.d of the NBHCP has been revised to clarify the point raised in the comment (see the attachment to the Final NBHCP for specific text changes).

Response to Comment G8-16

The commentor requests a location or definition of the Swainson's Hawk Zone referred to in the fourth paragraph of Page II-18. The Swainson's Hawk Zone is defined in the NBHCP definitions. The definition has been revised in the Final NBHCP to clarify the commentor's concern. See the attachment to the Final NBHCP for specific text changes.

Response to Comment G8-17

In response to this comment, and other comments, the NBHCP has been clarified to specify that development in excess of Planned Development would require either an amendment to the NBHCP or preparation of a separate HCP. The commentor is also referred to Response to Comment I10-9. The text has been revised in the Final NBHCP to clarify the commentor's concern. See the attachment to the Final NBHCP for specific text changes.

Response to Comment G8-18

The wildlife strikes occurring at the airport have been acknowledged and included in the analysis in Section 4.11 of the Draft EIR/EIS. The wildlife strike level acceptable to the FAA and the corresponding exceedance of this level at the Sacramento International Airport has been acknowledged and included in the analysis in Section 4.11 of the Draft EIR/EIS.

The NBHCP does not memorialize habitat types, but simply describes the existing baseline conditions that were considered for the impact analysis. The derivation and use of these habitat types for establishing baseline conditions is discussed in Section 3.4.1 of the EIR/EIS. An analysis relating potential future habitat types within the zones of concern for the airport is included in Section 4.11 of the EIR/EIS, which concludes that the potential changes in habitat types in the future are not likely to result in significant impacts as a result of bird strikes.

The expense to airlines associated with bird strikes was acknowledged and considered in the analysis in Section 4.11 of the EIR/EIS. No information on costs associated with bird strikes at Sacramento International Airport was available, nor are cost-related impacts considered an environmental impact for purposes of CEQA and NEPA.

Response to Comment G8-19

The NBHCP mentions the Sacramento County airport buffer lands and notes that they will not likely be developed since they serve the purpose of buffering the airport from urban uses and the urban uses from the airport (pp. III-9 – III-11 and VII-14 of the Draft NBHCP). However, the NBHCP does not count the Sacramento County airport buffer lands toward mitigation requirements of the 17,500 acres of Planned Development. The NBHCP does not preclude Sacramento County from making land use decisions on the Sacramento County buffer lands subject to state and federal laws, nor from using those buffer lands to meet mitigation requirements for any potential airport expansion activities.

Response to Comment G8-20

Table III-5 of the Draft NBHCP summarizes currently approved or reasonably foreseeable Planned Development in the Natomas Basin. The table labels Sacramento Airport growth as "unspecified" because the proposed Master Plan guiding airport expansion is still under

development. Because the plan is still under development, it is not considered reasonably foreseeable (refer also the Master Response 4 [Cumulative Impacts]). In addition, the Applicants do not agree that calling the airport's level of future development "unspecified" indicates that any future development is somehow precluded by the NBHCP. Nothing in the NBHCP precludes Sacramento County from applying for incidental take authorization at a future date.

Response to Comment G8-21

Comment noted. The NBHCP will be revised as requested. See the attachment to the Final NBHCP for specific text changes.

Response to Comment G8-22

The commentor correctly notes that not all Sacramento County land, as described, is designated for retention as agricultural cropland. The first paragraph under Section III.C.1.a of the NBHCP has been revised in the Final NBHCP to address the comment. See the attachment to the Final NBHCP for specific text changes.

The proposed text revision would not result in the identification of new significant or substantially more severe impacts because the NBHCP analyses are based on assumptions regarding allowable land uses outside the Permit Areas, as described further in the Response to Comment O3-13. The commentor also is referred to the Response to Comment G8-6 regarding the treatment of existing land uses in Sacramento County.

Response to Comment G8-23

This sentence refers to the General Plans of the City and Sutter County. For clarification, the proposed ITPs would address Planned Development in the Permit Areas of the City and Sutter County. Other potential development (e.g., at Sacramento International Airport or elsewhere in Sacramento County) would not be authorized by the NBHCP ITPs. This is stated in the remainder of the paragraph referenced by the commentor. Regarding future development in unincorporated Sacramento County, it is the Applicants' understanding that the only development currently permitted would be for individual homes and accessory buildings located on agriculturally zoned properties. Refer to Responses to Comments O3-13 and G8-6 for additional information.

Response to Comment G8-24

The definition of out-of-basin reserves has been clarified in the Final NBHCP. See the attachment to the Final NBHCP for specific text changes.

TNBC's Permit Area in which it is authorized to purchase Mitigation Lands is defined in the Definitions section of the NBHCP, Item 41, and includes the waterside of the levees such as land on the Sacramento River. The waterside of the levees are not, however, included in the City or Sutter County Permit Areas for authorized development. Thus, the NBHCP only authorizes TNBC to acquire Mitigation Lands on the waterside of the levees.

Response to Comment G8-25

Guidance on compatibility of land uses within 5 miles of an airport, as described in the FAA Advisory Circular No. 150/200-33, was used in Section 4.11 of the EIR/EIS for purposes of the analysis of the potential for increases in bird strikes.

The annual availability of seasonal marshes from August 1 through September 30 is primarily intended for giant garter snake habitat management. It is possible that seasonal marsh creation in late summer/early fall would serve as an attractant for those migrating waterfowl that are migrating during this period (e.g., pintail). Seasonal marshes, however, are not managed for waterfowl recruitment for the purpose of rice straw decomposition. In addition, seasonal marshes will consist of very limited amounts of open water, being dedicated primarily to tule marsh and cattails, typically not ideal for large populations of waterfowl.

It is not likely that the seasonal marsh creation would cause changes in other migrating waterfowl such that they would arrive earlier. Although it is possible that some individual waterfowl become resident, the availability of seasonal marshes in late summer/early fall is not likely to cause large numbers of waterfowl to reside year-round in the Natomas Basin because specific nesting and breeding requirements would be limited in the seasonal marshes.

Although the value of the seasonal marshes is directed to giant garter snake survival, the EIR/EIS recognizes that the seasonal marshes could attract small numbers of waterfowl. It is not known what effect this could have on the potential for increased bird strikes based on location of the seasonal marshes and individual and population-wide responses of the waterfowl. The number of waterfowl in seasonal marshes, however, is expected to be fewer than for prior land uses. In most cases, for seasonal marshes, prior land use was production rice fields.

In addition, similar to the previous creation of seasonal marshes in the vicinity of the airport, TNBC would work with the airport consistent with Section IV.D.5 of the NBHCP to design the seasonal marshes such that habitat benefits for giant garter snakes could be maximized to the extent possible while potential for bird strike issues would be minimized. Consistent with Section IV.D.5 of the NBHCP, TNBC has worked closely with airport officials to observe and respect the recommendations of FAA Advisory Circular No. 150/200-33. TNBC believes that removing winter-flooded rice fields from production and replacing them with managed marsh habitat, heavily planted with dense aquatic vegetation, has a net effect of being no greater risk for large concentrations of migratory waterfowl within the 5-mile zone recommended in the FAA circular. The results of TNBC consultation with airport officials can be seen in marsh habitat constructed to date.

Response to Comment G8-26

The commentor is correct that the City and Sutter County only have jurisdiction to limit development within the portions of the Swainson's Hawk Zone that are within the City and Sutter County, and therefore do not have authority over development within the portion of the Swainson's Hawk Zone that is within the County of Sacramento. TNBC, however, may acquire Mitigation Lands within the Swainson's Hawk Zone, regardless of jurisdiction. The text in the Final NBHCP has been revised to clarify that the measure applies to the City of

Sacramento and Sutter County . See the attachment to the Final NBHCP for specific text changes.

Response to Comment G8-27

The commentor requests a definition of the Swainson's Hawk Zone. See Response to Comment G8-16 for the definition of the zone.

Response to Comment G8-28

The commentor correctly notes the need for additional language. Item 13 within Section VI.L.3.a has been revised to reflect the requested change. See the attachment to the Final NBHCP for specific text changes.

Response to Comment G8-29

The commentor asks who is responsible for updating the NBHCP if a separate HCP is completed within the Natomas Basin.

The NBHCP is intended to mitigate the impacts of Planned Development in the Natomas Basin. Once the NBHCP and associated permits are approved, there is no requirement to update the NBHCP as a result of preparation of a separate HCP in the Natomas Basin. If, however, the NBHCP is amended, new biological analysis and additional mitigation measures related to the amendment would be required, and would be the responsibility of the Applicant proposing the amendment in conjunction with the Wildlife Agencies. However, as stated on page I-6 of the Draft NBHCP, "any amendments proposed but not yet processed and approved will not affect the validity of this HCP."

Response to Comment G8-30

The decline in airport acreage by 39 acres is a result of closing the Natomas Airport in North Natomas (18 acres) and several small airfields within Sutter County's Permit Area (21 total acres). The NBHCP and EIR/EIS do not assume any changes in acreage for Sacramento International Airport. Also see Response to Comment G8-20.

Response to Comment G8-31

The commentor refers to the discussion of impacts to marsh habitat that is summarized in the Executive Summary in Table ES-2 (p. ES-7 of the Draft EIR/EIS). The analysis of impacts to marsh habitat under the Proposed Action is contained in Section 4.4.5.1.1 of the EIR/EIS. This section begins by stating that native marsh habitats are measured as ponds and seasonally wet areas, but that some of the functions of marsh habitat are also performed by rice fields and by canals and drains. Under the Proposed Action, approximately 21 acres of ponds and seasonally wet areas, 8,087 acres of rice fields, and 404 acres of canals and drains would be replaced by planned development. A quantitative estimate of impacts to jurisdictional wetlands is not made, but the EIR/EIS states that some portion of the 21-acres of ponds and seasonally wet areas could be considered jurisdictional wetlands. Impacts to jurisdictional wetlands (i.e., as much as 21 acres) could occur with Planned Development, and therefore mitigation is proposed in Section 4.4.5.4 of the EIR/EIS. Although not stated in the Draft EIR/EIS, it is assumed that rice fields and canals and drains would not be considered jurisdictional wetlands. Because of several factors including: (1) the ability for

developers to preserve jurisdictional wetlands on site; (2) the ability to satisfy wetland mitigation on TNBC reserves; and (3) the ability to purchase mitigation credits in other regional mitigation banks, mitigating for 21 acres of wetland impacts is considered a feasible mitigation requirement.

Response to Comment G8-32

Water availability is addressed in Section IV.D.4 of the NBHCP. Potential changes in water availability are discussed in Section VI.K.2.g of the NBHCP and Section 4.3 of the EIR/EIS. As a landowner, TNBC owns stock at one share per acre for its lands within the Natomas Mutual service area. Of the 2,820 acres of Mitigation Land currently owned by TNBC, 2,209 acres are within the Natomas Mutual service area (i.e., TNBC owns 2,209 shares of Natomas Mutual). As the holder of these shares, TNBC is entitled to its water deliveries. If the shareholders of Natomas Mutual elect to participate in water transfers, a sufficient water supply must nonetheless be maintained to continue to meet landowners' (including TNBC's) ongoing water needs.

This category of changed circumstance is described as "either temporary or long-term reductions in the delivery of irrigation water by Natomas Mutual," and would include the loss of water availability associated with water transfers. As discussed in Sections VI.K.2 and VI.F.1 of the NBHCP, such changed circumstances would be addressed by adaptive management, and modifications to the NBHCP (through the Adaptive Management process) could be needed as a result of significant land use changes outside of the Mitigation Lands (p. VI-22 of the Draft NBHCP).

It should be noted that shares of Natomas Mutual run with the land. Individual farmers/landowners have the ability to vote for or against actions by Natomas Mutual, including transferring water outside of the Natomas Basin. TNBC is currently the largest shareholder in Natomas Mutual.

Response to Comment G8-33

See above Response to Comment G8-32.

Response to Comment G8-34

The Applicants and the Lead Agencies recognize that the NBHCP does not control land uses in unincorporated Sacramento County. In terms of potential future actions by Sacramento County to expand Sacramento International Airport or otherwise manage its lands in the Swainson's Hawk Zone, no take authorization would be granted to Sacramento County under the Proposed Action. As stated in Responses to Comments G8-20 and G8-23, however, nothing in the NBHCP would prohibit Sacramento County from seeking take authorization as a separate action. In regard to the building of individual houses and accessory structures in unincorporated areas zoned for Agriculture, refer to Response to Comment O3-13.

Response to Comment G8-35

Noise impacts associated with Planned Development were considered in the EIR/EIS. Table C-8 (Appendix C of the EIR/EIS) contains a summary of noise impacts and mitigation

measures detailed in the environmental documents prepared for the planned development. These analyses are incorporated by reference into the EIR/EIS as described in Section 4.1.3 of the EIR/EIS.

Response to Comment G8-36

The EIR/EIS recognizes that the potential for public health and safety impacts associated with creation of habitat reserves within bird-strike zones is dependent on the location for establishment of reserves by the TNBC and takes this factor into consideration for the analysis (refer to p. 4-163 in the Draft EIR/EIS). With regard to the statement on page 4-160 referenced in the comment, the statement pertains to the preceding and subsequent discussion to this line, clarifying the habitat factors that the analysis took into account. The analysis did not take into account increased future air traffic because information provided by Sacramento International Airport did not show a correlation between increase in strikes and increase in aircraft operations.

In discussing the trends of bird strike and aircraft operations with airport environmental staff, it was indicated that the higher number of bird strikes in November through February [annually was not attributable to the typically busier winter flight schedule (Febbo, 2001). The Proposed Action is intended to provide take coverage to enable 17,500 acres of planned development to proceed and is not intended to forestall planned development in the Basin. The NBHCP's Operating Conservation Program is designed to take into account the airport's ongoing activities. In this regard, the effects analysis was based on Sacramento County's adopted master plan for the airport.

On p. 4-160, 6th paragraph, the line beginning: "Under the Proposed Action,..." has been revised. Please see the text change in Section 2.1 of this Final EIR/EIS.

The EIR/EIS does not assume that the rice fields north of the airport and bounded by the Sutter-Sacramento County line (coincident with the 2-mile strike zone) will be used as Mitigation Lands. This change in assumption does not significantly affect the analysis with regard to bird strikes because, with this clarification, the EIR/EIS assumes that the area north of the airport within the 2-mile strike zone would continue to be managed as rice fields or would be converted by Sacramento County to uses that are not attractive to waterfowl (and, at the least, are consistent with FAA requirements). Therefore, assuming that the rice fields north of the airport, within the 2-mile strike zone would be used in a manner consistent with the FAA circular, future conditions of this area will either be similar to existing conditions (i.e., continue to be managed as rice) or less attractive to waterfowl and, therefore, do not affect the potential for increase risk of bird strikes. Also see Response to Comment G8-25.

The sale of land for establishment of habitat preserves is based on the existence of a willing seller; therefore, conversion of rice fields to habitat on Sacramento County land would not take place unless Sacramento County willingly sold the land for establishment of Mitigation Lands. Please refer to Section 3.7 of the EIR/EIS for further discussion on agricultural revenue issues associated with land sales for the project.

TNBC would continue to work with the Sacramento International Airport to ensure that any habitat management practices, such as hunting in the vicinity of the airport, would be consistent with FAA requirements.

The EIR/EIS primarily focused on the 5-mile radius around the airport based on FAA Advisory Circular No. 150/5200-33. References to airport property with regard to implementation of the Wildlife Management Plan are consistent with the boundaries adopted by this plan.

Response to Comment G8-37

The NBHCP is intended to mitigate for the impacts of the Covered Activities, including provisions for adaptive management in response to a future Giant Garter Snake Recovery Plan. The NBHCP does not mitigate for other projects, nor is it intended to place an additional burden of mitigation on future projects not covered by the NBHCP. Future projects would be considered on their own merit in accordance with applicable regulations at the time they are considered.

Letter O1—ECOS/FOSH/NWF/PCL/Sierra Club

Response to Comment O1-1

Comment noted. The revised Natomas Basin Habitat Conservation Plan (NBHCP) has been prepared in accordance with the applicable statutory and regulatory requirements of the Endangered Species Act (ESA) and California Endangered Species Act (CESA) and the Environmental Impact Report/Environmental Impact Statement (EIR/EIS) analyzes the impacts of implementing the NBHCP in accordance with the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA). Judge Levi's ruling in *National Wildlife Federation, et. al. v. Secretary of the Interior Bruce Babbitt* (August 15, 2000) was carefully considered in developing the NBHCP to ensure that the deficiencies identified by the district court were addressed.

Overall, the comments in this letter suggest changes to the NBHCP and refer to them as "acceptable" changes, thus implying that the NBHCP is not acceptable. The Applicants have prepared an acceptable HCP and the Lead Agencies have analyzed in the Draft and Final EIR/EIS in accordance with CEQA and NEPA the impacts of implementing the NBHCP. For the reasons set forth below in response to the comments, the specific suggested revisions are neither feasible, nor would they clearly lessen significant environmental impacts associated with the Proposed Action. The specific comments raised in the introductory sections of this comment letter are addressed in both the Draft and Final NBHCP and the Final EIR/EIS (which incorporates the findings of the Draft EIR/EIS). Specific responses of note that are applicable to the comments raised in this letter are Responses to Comments O1-1 through O1-60, the Master Responses (Section 3.1 of the Final EIR/EIS), the other responses to comments in Section 3.2 of this Final EIR/EIS, the Biological Resources Technical Memorandum (Appendix H of the Draft NBHCP), the Addendum to the Biological Resources Technical Memorandum (Appendix K of the Final NBHCP), the Economic Analysis (Appendix A of the NBHCP), and other peer-reviewed source data for the NBHCP. Also see Response to Comment O1-7.

This comment letter was submitted to the Lead Agencies with several attachments that, because of the volume of the attachments, are reproduced as Appendix L of this Final EIR/EIS. These attachments include professional consultant qualifications; a summary list of building permits issued in Sacramento County from January 2002 to June 2002; background materials on the Joint Vision planning process; and historical documents relevant to environmental and land use planning in the Natomas Basin. These attachments are addressed throughout the responses to comments in letter O1 and in the Master Responses (see Section 3.1 of this Final EIR/EIS). The additional information in the attachments does not result in changes to the original analysis in the NBHCP or Draft EIR/EIS, and does not alter the original findings of less-than-significant impacts from implementing the Proposed Action.

Response to Comment O1-2

Comment noted. The acreage of existing development under the 1997 NBHCP and Settlement Agreement is discussed on p. III-6 of the Draft NBHCP (3,787 acres as of December 2001). As of December 2002, Urban Development Permits had been issued for

4,324.1 acres within the City of Sacramento (City) Permit Area, pursuant to the 1997 NBHCP and the Settlement Agreement (Mitigation Fees had been paid for 4,599.11 acres). The comment that 4,413 acres have been developed cannot be substantiated. To clarify the existing discussion in the NBHCP, the following information is provided on the acreage of existing development under the 1997 NBHCP and the Settlement Agreement.

Time Frame	City of Sacramento Permit Area (acres)^a	Sutter County Permit Area (acres)^a	Total
1997 (Permit Issuance)	0	0	0
1997 – December 2001	3,787	0	3,787
December 2001 – December 2002	537	0	537
Total	4,324	0	4,324

^a Acreage includes Urban Development Permits that have been issued. Does not include exempt areas that are not subject to the Mitigation Fee.

Response to Comment O1-3

The comment expresses concern regarding the 0.5:1 mitigation ratio. The 0.5:1 mitigation ratio was a fundamental component of the 1997 NBHCP, which NWF v. Babbitt upheld as adequate for the Plan Area. The revised NBHCP does not make the assumption that lands to be acquired would have at least three times the habitat value of the lands to be converted to urbanization. Also see Master Response 1 (Mitigation Ratio).

The comment refers to “undisputed scientific data” that will be discussed in subsequent comments to demonstrate that the mitigation ratio is inaccurate. Specific responses to comments and data assumptions used in the comments are contained in the responses below.

Response to Comment O1-4

The NBHCP does not ignore the lands in the Natomas Basin outside the scope of Planned Development. See Sections 1.2.1 and 2.3.1 of the EIR/EIS (regarding how the Metro Air Park (MAP) acreage is factored into the EIR/EIS analysis), and Sections 4.1.2.2 and 4.1.2.3 (for a discussion of cumulative impacts and other potential actions in the Natomas Basin). Also see Master Response 3 (Joint Vision) and Master Response 4 (Cumulative Impacts). As presented in these responses, assuming a substantial level of development in the Natomas Basin outside the Permit Areas is speculative. If it is proposed, such development would likely be under the City’s or Sutter County’s control, and the NBHCP would be reviewed and revised prior to approval of such development as necessary to ensure that the Operating Conservation Program continues to provide for viable populations of the Swainson’s hawk, giant garter snake, and other Covered Species in the Basin. Specifically with regard to connectivity, see Master Response 2 (Connectivity), Section IV.C.3.b of the NBHCP, and Responses to Comments G3-11 and O1-25. Also see the Addendum to the Biological Resources Technical Memo (Appendix K of the Final NBHCP) and Master Response 5 (Swainson’s Hawk Foraging Habitat) for a discussion of Swainson’s hawk foraging habitat outside of the area of Planned Development.

The purpose of the NBHCP, as presented on Section I.A of the Plan, is to “promote biological conservation in conjunction with economic and urban development.” One of the Covered Activities would be 17,500 acres of Planned Development (see Section I.N.1). (The other covered activities pertain to the Water Agencies and TNBC – see Section I.N.2 and I.N.3 of the NBHCP). The EIR/EIS addresses, throughout Chapter 4, direct, indirect, and cumulative impacts of the Covered Activities relevant to the approved 17,500 acres of Planned Development (also see Appendix C of the EIR/EIS). It also discusses, development in Sections 2.7.3 and 4.1.2.3, the potential for any future unknown. The specific land uses that could at some future time be developed pursuant to the Joint Vision effort have not been proposed, and no specific proposals to annex land have been identified as part of the Joint Vision effort. Also see Master Response 3 (Joint Vision) and Master Response 4 (Cumulative Impacts). The comment correctly notes that the 1997 NBHCP assumed that areas outside the Permit Areas would remain in agriculture. The revised NBHCP clarifies that areas outside of the Permit Areas over the 50-year Permit term may consist of a mix of agriculture and urban land uses. For purposes of evaluating impacts associated with issuance of take authorizations for up to 17,500 acres of Planned Development, the NBHCP, EIR/EIS, and accompanying Biological Resources Technical Memo (Appendix H of the NBHCP), and the Addendum to the Biological Resources Technical Memo (Appendix K of the Final NBHCP) compared the conditions with adoption of the NBHCP and issuance of ITPs for up to 17,500 acres with the baseline conditions. Baseline conditions reflect land uses in 1997, when the prior NBHCP was adopted, and updated conditions between 1997 and 2002 when the revised NBHCP was under preparation. Master Response 4 (Cumulative Impacts) presents a detailed discussion of the rationale and approach to the assessment of cumulative impacts. Appendix C of the EIR/EIS presents a detailed summary of the impacts associated with 17,500 acres of Planned Development (this analysis was conducted in separate environmental review documents – see Section 4.1.3 of the EIR/EIS for a discussion of the previous evaluation of Planned Development). As explained above in the Response to Comment G8-2, while the effectiveness of the NBHCP’s Operating Conservation Program depends on limiting Planned Development in the Basin to 17,500 acres, the NBHCP does not require existing landowners outside of the Permit Areas to continue farming as mitigation for the effects of take associated with the development of 17,500 acres within the Permit Areas. The commentor is referred to the Final NBHCP (Section IV.C. e., Foraging Habitat), which has been added to the NBHCP.

Response to Comment O1-5

This comment is a general introduction to the issues that the commentor will raise in the remainder of the comment letter. The specific issues are addressed in the responses, below, as applicable to specific issues. The comment also references attachments to the comment regarding consultant review of the economic analysis prepared in support of the NBHCP. These comments are addressed in Responses to Comments O1-42 through O1-60. Please refer to those responses. Also see Master Response 1 (Mitigation Ratio). For the reasons provided below, the commentor’s suggested revisions to the NBHCP would not provide for the long-term viability of wildlife in the Basin and would not address the “political and economic constraints” that the commentor states affect the Basin. As indicated in Master Response 1 (Mitigation Ratio), a mitigation ratio greater than 0.5:1 and acquisition of 28,000 acres of Mitigation Lands with recreational and civic uses are not required to mitigate the

impacts of take associated with the Covered Activities. Such revisions are considered infeasible for the reasons provided below in Response to Comment 01-7.

Response to Comment 01-6

Comment noted. A full and accurate description of the criteria for issuance of an ITP are contained in Response to Comment 01-24(c).

The comment also includes a statement that, to be responsive to the ruling in *National Wildlife Federation, et. al. v. Secretary of the Interior Bruce Babbitt* (August 15, 2000) and the applicable regulations, the NBHCP must include the changes suggested in the comment letter. All the proposed issues and revisions raised in the comment letter, however, are neither directly relevant to the court opinion nor responsive to the issues on which the court ruled (see Section 1.2.2 of the EIR/EIS and Table I-2 of the NBHCP for relevant court issues discussed in these two documents). See Response to Comments 01-7 through 01-60 for specific reasons why the NBHCP does not have to be revised.

Response to Comment 01-7

a. This comment restates that the NBHCP's proposed mitigation ratio does not provide adequate protection for the Covered Species and would create economic and biological uncertainty as development occurs in the Natomas Basin. Please see responses to subsections b., c., and d. of this comment, below, regarding the avoidance, minimization, and mitigation measures included in the NBHCP, and Master Response 1 (Mitigation Ratio) for a discussion of the adequacy of the 0.5:1 mitigation ratio.

b. Regarding the adequacy of the mitigation ratio, the comment states that that the proposed mitigation ratio should be 1:1 rather than the proposed 0.5:1. The comment elaborates that the ratio should actually be 1.7:1 because the development allowed to proceed under the 1997 NBHCP and the subsequent Settlement Agreement at a 0.5:1 ratio requires an additional mitigation allocation to compensate for the lands already developed under the proposed mitigation ratio. See Master Response 1 (Mitigation Ratio) for a discussion of the adequacy of the 0.5:1 mitigation ratio for the Covered Species in the NBHCP. For the same reasons that a 1:1 mitigation ratio was determined to be impracticable, a 1.7:1 mitigation ratio is considered infeasible. Section VII.I of the NBHCP and the Economic Analysis of the NBHCP (March 2002) provide measures and analytical support that are intended to demonstrate that the NBHCP's Operating Conservation Program meets the maximum extent practicable (MEP) finding. The commentor is also referred to Response to Comment 01-36. Also see responses to Comments 01-42 through 01-60 for the economic analysis relevant to a determination of maximum extent practicable.

c. The comment further recommends that 17,500 acres of lands be acquired as Mitigation Lands (this request is based on the requested 1:1 mitigation ratio in a. above). See response to a. above and Master Response 1 (Mitigation Ratio). Regarding the comment on easements, in the City of Sacramento it is not feasible to provide 200-foot easements along canals through urban areas because most areas are developed or under development (with the exception of the east side of Fisherman's Lake, for which a buffer is being applied pursuant to the Settlement Agreement). In Sutter County, the large canals to remain during the Permit term (see Figure 17 of the NBHCP) generally provide connectivity between

habitat areas and do not provide long-term habitat; it would not be an effective mitigation measure to provide upland habitat for giant garter snakes adjacent to these canals. In addition, new text in the Final NBHCP (Section V.A.5.a) discusses design strategies to address expanded buffer areas and modified canal cross sections if such measures, in the determination of Sutter County and the Water Agencies, are found to be feasible.

The comment also recommends maintenance of airport lands and agricultural open space. Regarding maintenance of lands managed by the airport, see Response to Comment O1-13, which discusses the scope of the NBHCP in the context of voluntary participation and the fact that Sacramento County and the airport are not participants in the NBHCP. Because Sacramento County is not participating in this NBHCP for the coverage of airport-related activities, this NBHCP does not include as mitigation the protection of the airport buffer lands. This does not, however, preclude ongoing constructive dialogue between the airport and TNBC regarding management of buffer lands.

The comment further recommends that the NBHCP include construction of parking lots, visitor centers, restrooms, interpretative trails, and other construction features on the Mitigation Lands. In response to the suggested changes to the NBHCP, the NBHCP has been developed with overall and specific biological goals and objectives for wetland and upland species and habitats that are presented in detail in Section I.C of the NBHCP. Decisions regarding specific land uses have been made at the local land use decision-making stage. The USFWS is considering the effects of incidental take of Covered Species relevant to the Planned Development and not the decision to build parking lots, visitor centers, restrooms, and other facilities on the Mitigation Lands. The NBHCP presents a Operating Conservation Program in Sections IV, V, and VI to meet the biological goals and objectives and to meet the Wildlife Agencies' requirements for issuance of take permits. In addition, the suggested changes do not meet the biological goals and objectives of the NBHCP. The measures in the NBHCP's Operating Conservation Program, in total, are designed to provide a strategy that emphasizes avoidance and mitigation measures for the Covered Species in the Natomas Basin. The NBHCP (Section I.C) currently states that the overall biological goal of implementing the NBHCP is to "Establish and manage in perpetuity a biologically sound and interconnected habitat reserve system that mitigates impacts on Covered Species resulting from Covered Activities and provides for existing, and new viable populations of Covered Species." Other specific goals and objectives for wetlands and uplands habitats are also presented in that section of the NBHCP. The suggested changes to the NBHCP (i.e., construct interpretive centers and restrooms, among other facilities) would not meet the overall and specific biological goals and objectives of the NBHCP that have been developed to maximize benefits for the Covered Species. These suggestions present alternate desires on the part of the commentor and do not demonstrate an inadequacy in either the NBHCP or the EIR/EIS.

d. The comment includes a table that compares land uses in 1997 to what is proposed in the NBHCP and adds a column of acreage for varying land uses that differ from the NBHCP. In essence, the table portrays the reserve acreage under a 1:1 mitigation ratio rather than a 0.5:1 mitigation ratio. There are several inaccuracies in the table. For example, it states that the total urban development that would be covered by the NBHCP is "Unknown," but both the NBHCP and the EIR/EIS disclose that the total Planned Developed considered in the NBHCP is 17,500 acres (see Section III-A of the NBHCP and Section 2.3.1 of the EIR/EIS).

The table also adds a land use classification for “land available for future development” and notes that the NBHCP would allow the remainder of land in the Basin to be developed. As discussed in the EIR/EIS (Section 2) and Master Response 4 (Cumulative Impacts), however, the NBHCP is seeking approval of ITPs for the Covered Activity of 17,500 acres of Planned Development. The NBHCP does not assume that the remainder of the Basin will be developed, and it addresses only 17,500 acres of development.

To provide a quantitative basis for the analysis in the NBHCP and the EIR/EIS a GIS Database on Land Use and Habitats was developed to classify and identify habitat types and land uses in the Natomas Basin. The methodology and the approach to analysis are presented and applied in both the Biological Resources Technical Memo and its Addendum (Appendix H in the Draft NBHCP and Appendix K in the Final NBHCP) and in the Draft EIR/EIS (see Sections 3.4 of the EIR/EIS for a presentation of the methodology for analysis and see Section 4.4. for a detailed assessment of impacts to biological resources based on that GIS database). The suggested changes in the comment are not cited or sourced.

The comment also restates the request to apply a 1:1 ratio and to require the Permittees to manage lands for which they are not seeking coverage and that are under separate management (airport lands). See the response to b. above.

The comment also suggests that privately owned agricultural lands in the Natomas Basin should be subject to centralized management. The comment recommends that TNBC should be the overall manager of privately owned agricultural lands in the Natomas Basin and that profits from these privately owned agricultural operations should be used to acquire Mitigation Lands. The commentor’s suggestion is not considered feasible for the following reasons. It is not within the jurisdictional authority of either the Wildlife Agencies or the Applicants to unilaterally alter the management of private land ownership or to redirect profits from private agricultural operations to a non-profit organization. Many of the agricultural operations in the Basin depend on agriculture for income and employment opportunities. Thus, to suggest that these operations can transfer any revenues to the purchase of Mitigation Lands is not realistic and would deprive existing businesses of their earnings. Moreover, agricultural lands outside of the reserves do not constitute mitigation under the NBHCP. Thus, it is unreasonable to impose a mitigation burden on landowners and businesses that are not permittees. The Mitigation Fee (Section VI.B) is based on acres developed within the Permit Areas. That is, developers seeking incidental take authorization for Planned Development must pay a Mitigation Fee for the purchase of Mitigation Lands prior to obtaining an Urban Development Permit to offset the impacts of incidental take. The Mitigation Fee provides greater assurances that Mitigation Lands will be acquired than does the suggestion to redirect profits from agricultural operations that are not permittees.

In response to the suggestion to use grants and profits from centrally managed (yet privately held) agricultural lands to fund acquisition, the proposed funding based on development fees is more reliable than competitive and uncertain grant funding sources to acquire reserve lands.

Response to Comment O1-8

a. As noted in Response to Comment O1-7, the NBHCP does not consider lands outside the 17,500 acres of Planned Development as likely to be developed. The NBHCP discusses foreseeable urban development in Section III.C.1. In addition, the EIR/EIS discusses future unknown development in sections 2.7.3 and 4.1.2. Also see Master Responses 3 (Joint Vision) and 4 (Cumulative Impacts). These sections (particularly Master Responses 3 and 4) discuss the potential at some future time for development, in addition to Planned Development, to occur but that such development is speculative at this time. The EIR/EIS and the NBHCP discuss the process and approvals that would be necessary if such future proposal were made. Section I.2 of the NBHCP has been updated to further clarify the required processes and approvals. See specific text changes in the NBHCP.

b. The 17,500 acres of Planned Development include the development that occurred since 1997 and the development that would occur consistent with the NBHCP. For the reasons set forth above in the Response to Comment O1-7, it is infeasible to acquire the remaining agricultural lands in the Basin under this NBHCP. The 17,500 acres of Planned Development include planned parks and open space. As noted above, trail facilities, interpretative centers, and parking areas on reserve sites are not proposed in the NBHCP because they are contrary to the NBHCP's biological goals and objectives. The 17,500 acres of Planned Development include the infrastructure necessary for the development that would be located within the Permit Areas. The commentor is referred to Response to Comment O1-27 regarding detention basins and wastewater treatment facilities. Regarding the comment on the acreage for Swainson's hawk, please see the Biological Resources Technical Memo (Appendix H of the NBHCP) and the Addendum to the Biological Resources Technical Memo (Appendix K of the Final NBHCP) for the analysis of the effects of implementing the NBHCP on Swainson's hawk foraging habitat. Also see Master Response 5 (Swainson's Hawk Foraging Habitat) and the individual responses to comments in Comment Letter O2. Please refer to Comment Letter I5 for responses relevant to canals and drainage ditches. Please note that the Operating Conservation Plan of the NBHCP has been prepared in consideration of the needs of all 22 Covered Species and that the avoidance, minimization, and mitigation measures are designed to meet the needs of these species. Implementing what is suggested in the comment would result in a management plan that does not balance the needs of all the Covered Species. Also see Master Response 2 (Connectivity).

Response to Comment O1-9

a. The comment states that the NBHCP should identify specific "target" acquisition areas to ensure connectivity and states that not doing so results in land speculation. Implementing the requested approach, however, would result in land speculation and inflated land costs. This alternative would be inconsistent with the NBHCP's objectives to promote opportunities for Covered Species to expand in the Basin, implement a flexible conservation program, and increase the opportunity for reproductive success.

This suggested approach and requested change to the NBHCP have already been evaluated in the EIR/EIS as Alternative 3, Reserve Zone Alternative. Alternative 3 is defined as specific identified reserve zones that would be prioritized for acquisition (see Section 2.6.3 of the EIR/EIS). Under this alternative, five overlapping zones distributed throughout the Basin were identified to support the needs of giant garter snake and Swainson's hawk. This

alternative would result in impacts comparable to those of the Proposed Action because the criteria for acquiring reserve lands (Section IV.C.2 of the NBHCP) in combination with the overall biological goals and objectives of implementing a reserve system (Section I.C of the NBHCP) would effectively result in prioritization of target purchase areas. Impacts associated with this alternative, however, would include inflated land prices resulting from land speculation [as occurred under the terms of the Settlement Agreement, in which the focus on specific parcels (e.g., Fisherman's Lake) resulted in inflated land acquisition costs]. The Economic Analysis of the NBHCP, dated March 2002 (Appendix A of the NBHCP) concluded that the requirement to purchase Mitigation Land in specified areas would result in increased land acquisition costs, as evidenced by the most recent TNBC land acquisition costs of \$11,000 per acre under the Settlement Agreement. On the basis of prior experience, increasing the land costs on an ongoing basis was determined to adversely affect the financial feasibility of development projects (see Appendix A, p. 37.). Additionally, the Draft EIR/EIS considered but rejected a fixed reserve alternative because it was determined to be infeasible based on land speculation that would limit TNBC's ability to acquire reserve sites (for example, see Draft EIR/EIS, Section 2.7.7).

The NBHCP does, however, prioritize the need for land acquisition that meets the specific acquisition criteria (Sections IV.C.2, IV.C.3, and IV.C.4 of the NBHCP) and includes priority acquisition for lands of high habitat value.

b. The comment also suggests designating preserve areas and identifies areas for development (including a map of proposed acquisition areas). As discussed throughout this comment letter and in the NBHCP and EIR/EIS, the area of development is the 17,500 acres of Planned Development in the City and Sutter County. Regarding drawing a line around targeted areas, see the response to a. above and the resulting speculation and inflation of land costs that would occur (as demonstrated by the specific target lands included in the Settlement Agreement). In addition, the land to be acquired for reserves is subject to market conditions, availability, and the willingness of owners to sell. Given these factors, the NBHCP includes specific high-priority areas and an expedited acquisition process (Sections IV.C.2, IV.C.3, and IV.C.4 of the NBHCP). Even if the areas requested in the comment were drawn on a map, there is no requirement for the owners to sell. TNBC has the authority to prioritize the suggested areas for purchase; it cannot, however, identify those lands and be ensured that owners would be willing to sell or that redlining of possible acquisition areas would not contribute to inflated land costs.

The referenced map also includes areas under the control of land use agencies (Sacramento County) and land managers (airport) that have elected not to participate in the NBHCP (see Section 1.2.1 of the EIR/EIS). Thus, the suggested requirement of 1,600 acres in the northeastern corner of Sacramento County may be infeasible. In any event, because Sacramento County is not participating in this NBHCP, no take permit will be issued to Sacramento County based upon the NBHCP. If these agencies choose to participate in the NBHCP or prepare a separate HCP at some future unknown date, they will be subject to the provisions of Section I.B.5 of the NBHCP, which states that if coverage for activities is sought under the NBHCP, an amendment to the NBHCP (in accordance with Section VI.L.3 of the NBHCP) would be required. The amendment process shall be in accordance with all legal requirements including, but not limited to ESA, CESA, CEQA, and NEPA, and any

applicable state and federal regulations. Specific responses to the features on the attached figure are provided below:

- The figure also highlights specific areas that the commentor suggests be covered by a separate HCP (MAP HCP, see Section 1.2.1 of the EIR/EIS).
- In response to the “connectivity corridor” labeled on the figure, please refer to Response to Comment G3-11 and Master Response 2 (Connectivity) that address the NBHCP’s goals and objectives and priority measures for ensuring connectivity. Also see Figure 17 of the NBHCP, which identifies key drainage canals to be maintained for the duration of the Permit term. See Response to Comment O1-7 regarding connectivity and Fisherman’s Lake. Also see the Final NBHCP for new text on connectivity.
- In response to priority areas identified for Swainson’s hawk, the NBHCP includes a Swainson’s Hawk Zone (see the responses to Comment Letter O2, the Addendum to the Biological Resources Technical Memo [Appendix K of the Final NBHCP], and Master Response 5 [Swainson’s Hawk Foraging Habitat]). If Sutter County approves the South Sutter County Specific Plan, the Wildlife Agencies will assess the viability of any Mitigation Lands in proximity to that development.
- Regarding the area identified for development in Sutter County, these highlighted areas on the attached figure are included in the development for which Sutter County is seeking take coverage. The figure also identified “second stage” areas in which permits could be issued. It is not clear what the comment intends by “second stage” permit. If that term pertains to the “shifting” areas of development requested in other sections of this comment letter, see Response to Comment O1-11.
- Regarding the request to exclude floodplain area, these areas for which Sutter County is seeking take coverage and improvements are addressed under the South Sutter County Specific Plan and its associated EIR. These two documents (and others prepared for Sutter County’s Authorized Development) are discussed in detail in Section 4.1.3 of the EIR/EIS and in Response to Comments O3-19.

c. In response to the comment on the staging of the acquisition of Mitigation Lands, see Response to Comment O1-10 and Sections IV.C.2 through IV.C.4 of the NBHCP, which discuss in detail the criteria for acquisition. In addition, many of the biological goals and objectives of the NBHCP focus on ensuring interconnected habitat in the Mitigation Lands and connectivity between reserves to minimize habitat fragmentation and species isolation (Section I.C of the NBHCP).

The measures in the NBHCP that address these goals include preparation of site-specific management plans, use of buffers, acquisition of the 2,500-acre habitat block, and the 400-acre minimum block size (Section IV.C.1 of the NBHCP); all of these measures are designed to provide high-quality habitat, as requested in the comment.

In reference to the suggestion that future Mitigation Lands be in the County of Sacramento, this outcome is contingent on the willingness to sell by landowners with lands that meet TNBC’s acquisition criteria, as discussed above.

Response to Comment O1-10

a. The 1997 NBHCP specifically discussed habitat in the context of the wildlife addressed in the Natomas Basin. The source of the data used in the 1997 NBHCP was the USFWS Habitat Evaluation Procedure analysis (USFWS, 1991). The revised NBHCP updated the presentation of habitat allocation using a GIS Habitat and Land Use Database that delineated further the land use and habitats in the Natomas Basin. The GIS developed for the revised NBHCP is the foundation of the quantitative analysis of the Operating Conservation Program of the NBHCP and was also used to conduct independent analysis of the impacts of those measures. The GIS is supported by a variety of source data and field verification (see the Biological Resources Technical Memo in Appendix H of the NBHCP, the Addendum to the Biological Resources Technical Memo in Appendix K of the Final NBHCP, and Sections 3.4 and 4.4 of the EIR/EIS). In response to the comments on conservation strategy; upland, marsh, and rice proportions; land management regimes and connectivity; and water supply, see the remainder of responses to this Comment Letter.

In addition, several comments request mitigation measures for impacts to Covered Species that are in addition to the 17,500 acres of Planned Development. The NBHCP covers 17,500 acres of Planned Development; it does not cover speculative development outside the Permit Areas [see NBHCP Chapter III and Master Response 4 (Cumulative Impacts)]. In addition, the avoidance, minimization, and mitigation measures have been developed to mitigate potential impacts to Covered Species to the maximum extent practicable, as demonstrated in Appendix H of the NBHCP, the Addendum to the Biological Resources Technical Memorandum (Appendix K of the Final NBHCP), and in Section 4.4 of the EIR/EIS. Third, many of the measures proposed in this comment (and other comments in this comment letter) are inconsistent with the biological goals and objectives of the NBHCP (see Section I.C of the NBHCP and Section 1.4 of the EIR/EIS for a summary of these goals and objectives). The specific issues raised in the remainder of the comment are addressed in the responses below and in other responses to comments raised in this letter (for example, see Responses to Comments O1-7 and O1-9).

b. As noted in Section 2.3.1 of the EIR/EIS and in a. above, the City and Sutter County are requesting coverage under the NBHCP for impacts to Covered Species associated with 17,500 acres of development under their jurisdictional control. The 28,000 acres referenced in the comment are in Sacramento County. Sacramento County is not an Applicant, and the comment is requesting actions that are not within the jurisdiction of the City and Sutter County. As discussed in Section I.B.3 of the NBHCP and in Responses to Comments G8-7, O1-12, and O1-13, neither the Lead Agencies nor the Applicants can compel an entity to participate in the NBHCP process. The specific measures the comment recommends for Sacramento County are, therefore, not part of the Covered Activities, nor are such measures included as mitigation in the NBHCP. If Sacramento County decides to prepare its own HCP or requests to join the NBHCP, mechanisms are provided in the NBHCP to require an updated biological impact and mitigation analysis and an economic analysis related to the such activities as part of either a separate HCP or an amendment to the NBHCP.

The comment also requests that 10,500 acres of land be acquired as Swainson's hawk preserve lands west of the I-5/S.R. 99 corridor and that at least half the acreage be in alfalfa or other row crop. The comment further requests that the management practices on these specific lands should change on the basis of "positive biological findings" or on new

“evidence on forage values.” As discussed in the Addendum to the Biological Resources Technical Memo (Appendix K of the Final NBHCP) and Master Response 5 (Swainson’s Hawk Foraging Habitat), the NBHCP is expected to adequately mitigate for potential impacts of the Covered Activities (e.g., urban development) on the loss of foraging habitat. It is important to note that the NBHCP’s primary overall goal (see Section I.C of the NBHCP) is to “create a system of reserves, with both wetland and upland components, that would support viable populations of the giant garter snake, Swainson’s hawk and other Covered Species.” Although the NBHCP is primarily focused on the giant garter snake and the Swainson’s hawk, the NBHCP recognizes that the needs of the other Covered Species overlap substantively with these species, and the NBHCP Operating Conservation Program has been developed to accommodate all the Covered Species (see Section I.C of the NBHCP). It is important to note that maximizing habitat creation for a single species would not meet the goals and objectives established for all species in the NBHCP.

The comment further makes suggestions on the following issues (the responses to which immediately follow the issue):

14,000 acres should be provided in rice production, marsh, and canals managed for giant garter snake and wetland species. See Response to Comment Letter I5 and Section 4.4 of the EIR/EIS. Also see Response to Comment O1-7. In addition, new text in the Final NBHCP (Section V.A.5.a) discusses design strategies to address expanded buffer areas and modified canal cross sections if such measures, in the determination of Sutter County and the Water Agencies, are found to be feasible.

Minimum preserve size. Regarding the request for a minimum reserve size of 1,000 acres, see Sections IV.C.2 through IV.C.4 of the NBHCP, which discuss in detail the criteria for acquisition. In addition, many of the biological goals and objectives of the NBHCP focus on ensuring interconnected habitat in the Mitigation Lands and connectivity between reserves to minimize habitat fragmentation and species isolation (Section I.C of the NBHCP). The measures in the NBHCP that address these goals include preparation of site-specific management plans, use of buffers, acquisition of the 2,500-acre habitat block, and the 400-acre minimum block size (Section IV.C.1 of the NBHCP); all of these measures are designed to provide high-quality habitat, as requested in the comment. Also see Responses to Comments O1-8, O1-10, O1-28, and O1-59. The NBHCP states that reserves must be a minimum of 400 acres.

Fallowed lands and cover crops. The issue of foraging values (both under existing conditions and under implementation of the NBHCP) is discussed in detail in the Addendum to the Biological Resources Technical Memo (Appendix K of the Final NBHCP) and in Master Response 5 (Swainson’s Hawk Foraging Habitat). Also see the responses to Comment Letter O2.

Changing the cover crops and connectivity between preserve areas. Regarding connectivity, one of the biological goals of the NBHCP (Section I.C) is to ensure connectivity between the Mitigation Lands. The NBHCP also notes that the primary way in which connectivity is achieved is the system of channels maintained and operated by RD 1000 and Natomas Mutual. The Water Agencies have noted that existing channels would generally be eliminated only as a result of urban development and that current operation of the canals is anticipated to be maintained in accordance with existing operations. In addition, the Water

Agencies have identified the primary canals that are most likely to remain under existing operation during the Permit term (see NBHCP, Figure 17). With regard to basin-wide connectivity, RD 1000 has identified the key drainage channels that provide core components of the drainage system within the Basin, and these key channels would be retained regardless of urban development. Even if the Water Agencies do not apply for an ITP under the NBHCP, the connectivity among reserves using canals and drains is expected to be sufficient to support the persistence of giant garter snakes. As noted in Master Response 2 (Connectivity) and in the Final NBHCP, closure of canals and ditches under the operating authority of the Water Agencies is not a Covered Activity. The Final NBHCP also states that even if a key canal were to be closed, the Water Agency would be required to comply with the ESA and mitigate impacts under Section 10 of the ESA (i.e., amending the NBHCP or preparing a separate HCP). Also see Master Response 2 (Connectivity) for a discussion of how the NBHCP Operating Conservation Program adequately addresses connectivity among irrigation channels and drainage canals. Also see Master Response 2 (Connectivity) and Section V.A.5.a of the Final NBHCP for new text on connectivity.

800-foot buffer around Fisherman's Lake. Also suggested is an 800-foot buffer for Fisherman's Lake. This is an issue that was raised and is being addressed separately from the NBHCP as one of the terms of the Settlement Agreement. Notwithstanding the ultimate status of the NBHCP, a separate ongoing mediated process will address the 800-foot buffer (see Response to Comment I2-5). Also see Section IV.C.1.c of the NBHCP for a discussion of buffers (buffers are a feature of the Mitigation Lands and are not subject to urban development).

City's take permit in the Swainson's Hawk Zone. The comment requests that the City not receive a take permit for 180 acres in the Swainson's Hawk Zone. The analysis conducted in the EIR/EIS considers the 17,500 acres of previously evaluated and approved Planned Development (see 2.7.4 of the EIR/EIS regarding the elimination of development "cap" as an alternative) and includes the development of 252 acres in the Swainson's Hawk Zone. The findings contained in the Biological Resources Technical Memo (see Appendix H of the NBHCP) and in the EIR/EIS (see Section 4.3) demonstrate that the NBHCP results in less than significant impacts to biological and other resources. Also see Appendix C and Section 4.1 of the EIR/EIS for a discussion of the Planned Development (which includes the impacts of development of 252 acres by the City in the proposed Swainson's Hawk Zone). Appendix C summarizes the extensive prior analysis of impacts related to development in this area as part of the adoption of the City's General Plan and the relevant community plans adopted for the City's Permit Area.

Sutter County's take permit. Regarding the request for conditional issuance of the ITP to Sutter County, the County is requesting coverage for Planned Development with appropriate infrastructure. The NBHCP has been developed to mitigate for the effects of take of the Covered Species associated with the Covered Activities. The request for take coverage does not extend to discharge activities regulated by water quality certification or wastewater discharge requirements (Section I.O, "Activities Not Covered by the NBHCP"). The physical construction of wastewater treatment facilities located within Sutter County's Permit Area, however, have been included within the Planned Development area. Wastewater disposal and other related activities occurring outside of Sutter County's Permit Area would not be included as Covered Activities. As a result, there is no basis for

requesting conditional issuance on an activity that is not covered by the ITP. Also see Response to Comment O1-27 for additional discussion of Sutter County infrastructure.

c. The comment requests that 14,000 acres be maintained in rice production, marsh, and canals for the giant garter snake. As discussed in Section 4.4 of the EIR/EIS and the Biological Resources Technical Memo (Appendix H of the Draft NBHCP), the proposed measures for the giant garter snake have been developed to mitigate impacts to giant garter snakes to a less-than-significant level. The NBHCP discusses and provides mitigation measures for the impacts of Planned Development on the giant garter snake. The EIR/EIS analyzes the impact to giant garter snakes of implementing those mitigation measures in the context of Planned Development. As discussed in the EIR/EIS (Section 4.4.5.2.7), implementation of the Proposed Action is anticipated to result in a loss of 404 acres of habitat for giant garter snakes. Despite this acreage loss, the Proposed Action would encourage the persistence of giant garter snakes for several reasons. First, the actual loss of habitat is expected to be less than is indicated solely by acreage loss (see Section 4.4.5.2.7, page 4-57 of the Draft EIR/EIS). Second, the managed marsh and the rice lands created under the NBHCP's habitat reserve system would have a greater habitat value for giant garter snakes than does the habitat affected by Planned Development. Third, the habitat reserves would provide habitat that would contribute to a stable population of giant garter snakes over the long term. Also see the responses to Comment Letter I5 for additional responses relevant to giant garter snakes. Also see Responses to Comments O1-42 through O1-60 for discussion of the economic considerations in developing appropriate mitigation measures.

Also see b. above regarding the primary overall goal of the NBHCP, which is to recognize that the needs of the other Covered Species overlap substantively with the giant garter snake and the Swainson's hawk and that the NBHCP Operating Conservation Program has been developed to accommodate all the Covered Species (see Section I.C of the NBHCP). The Operating Conservation Program in the NBHCP has been developed to mitigate adequately for the take associated with Covered Activities while also achieving a primary objective of creating a system of reserves with both wetland and upland components that would support viable populations of the giant garter snake, Swainson's hawk, and other Covered Species.

The comment also requests a minimum size of 1,000 acres for Mitigation Lands. See the response in b. above regarding this comment. Regarding priority acquisitions, the NBHCP already includes such provisions (Sections IV.C.2 - IV.C.4 of the NBHCP). Also see Responses to Comments O1-8, O1-10, O1-28, and O1-59.

The comment also requests encouragement of marsh habitat and management compatible with airport needs. Chapter IV of the NBHCP includes a section on the management of reserves including marsh reserves for compatibility with the airport (See NBHCP, Section IV.D.5). As discussed in the EIR/EIS (Sections 3.11 and 4.11), Sacramento International Airport and TNBC are engaged in ongoing discussions to coordinate the implementation of the NBHCP with future master planning efforts that may be conducted by the airport (see also Responses to Comments G8-25 and G8-36). There is no reason to presume that this constructive dialogue would be discontinued. In addition, neither the airport or Sacramento County has expressed interest in participating in the NBHCP, and if the airport were to request coverage for take (either under a separate HCP or as party to the NBHCP),

additional environmental review and a review of the effects on biological resources within the Basin would be required (Section 2.7.3 of the EIR/EIS).

The comment also requests that conversion of rice lands to marsh lands be limited to edge areas and require a TNBC finding that such conversion is necessary. Section VI.H.2 describes the specific process for conversion of rice lands to managed marsh to best support the needs of the Covered Species. Conversion of such lands is dependent on written justification of the USFWS rather than TNBC's Board because the USFWS is the agency responsible for the implementation of the ESA. Also see the Addendum to the Biological Resources Technical Memo (Appendix K of the Final NBHCP).

Response to Comment 01-11

a. Contrary to the statement that the ITP issued for the NBHCP would be a "one permit covers all approach," the Applicants have requested separate take authorizations for each Applicant's respective Permit Area. The NBHCP addresses the incidental take of Covered Species associated with a well-defined amount of Planned Development within each Applicant's respective Permit Area. This amount of Planned Development is based upon the Applicants' adopted general plans, community plans, and/or specific plans that specify the amount of development that may proceed within the 50-year term of the ITPs. In addition, Metro Air Park has a separate ITP issued pursuant to an HCP that is consistent with the NBHCP's conservation strategy. Because the NBHCP is based upon the projections of reasonably foreseeable development within the Permit Areas, the proposed allocation of take authorizations is not arbitrary. The commentor is referred to the evaluation of land use development within the Basin as described in detail in Chapter III of the NBHCP and Section 3.6 of the EIR/EIS. In addition, the Planned Development has been extensively evaluated both in the EIR/EIS and in numerous planning and environmental review documents. The EIR/EIS discusses the review of the Planned Development throughout the document and specific detailed discussions and analyses are in Chapters 1 and 2, Sections 4.1 and in Appendix C. Regarding the comment on other potential development in the basin, see Master Response 3 (Joint Vision) and Master Response 4 (Cumulative Impacts). Regarding the comment on the 17,500 acres of Planned Development, this level of development is discussed in detail in Section 2.3.1 of the EIR/EIS and Chapters I and III of the NBHCP. The commentor is referred to Master Response 4 (Cumulative Impacts) for a discussion of the status of other activities that the commentor suggests have been or may be undertaken in the future by the Sacramento Area Flood Control Agency (SAFCA), Sacramento International Airport, Natomas Mutual, Caltrans, and Sacramento County Public Works. Other foreseeable actions are discussed in Section 4.1.2 and evaluated throughout the separate resource sections of the EIR/EIS. These other potential development actions also would be required to comply with the ESA. During any future review of such projects under Section 7 and/or Section 10 of the ESA, the USFWS will evaluate the effects of the action and the conservation strategy proposed on the species addressed in the NBHCP to ensure any such projects contribute to the continued viability of the species in the Natomas Basin.

b. The commentors suggest issuance of alternative "staged" permits covering fewer acres of development but do not offer any evidence that such staged permits are necessary or appropriate to address impacts to the Covered Species. The take coverage for 17,500 acres of

Planned Development in the Natomas Basin under the NBHCP reflects the urban development needs of the City and Sutter County and the impacts of such take are expected to be minimized and mitigated by the proposed NBHCP. The Applicants and the Lead Agencies do not agree that a staged permit system is preferable or necessary.

The second paragraph of this comment also suggests a process whereby acreage could “shift” among jurisdictions. In response, the Planned Development represents the foreseeable development in the Natomas [see Master Responses 3 (Joint Vision)] and 4 (Cumulative Impacts). The NBHCP evaluates the effects of take associated with development within the City’s and Sutter County’s Permit Areas.

Shifting development areas is not feasible because both the NBHCP and the EIR/EIS are required to describe accurately the Covered Activities at a level of detail that provides the approving agencies and the general public with an understanding of the activities for which the Applicants are seeking incidental take coverage. In addition, the Planned Development represents the foreseeable development in the Natomas Basin, as discussed in Section 4.1.2 of the EIR/EIS and in Master Response 4 (Cumulative Impacts). That level of development has been extensively described and analyzed in previous planning and environmental review documents and is the proposed Covered Activity for which the City and Sutter County are requesting incidental take coverage. The comment also does not specify where the “shift” areas would be, and no land use plans have been submitted to land use agencies for consideration and approval.

Regarding the specific acreage suggestions for the shifting development in the City, these are not feasible given the specificity required for discussions of proposed Covered Activities (see preceding paragraph). In addition, some of the acreage proposed to be eligible for shifting is already clearly defined as part of the Planned Development. The 8,050 acres proposed in the comment as one of the areas to be shifted is the existing development that is currently included in the NBHCP (see Section I.N of the NBHCP and Section 2.2 of the EIR/EIS). The entire 8,050 acres proposed for incidental take authorizations comprise lands within the North and South Natomas Community Plan areas. We are unclear as to the basis for the commentor’s assertion that the 8,050 acres should cover the entire North Natomas Community Plan area.

Regarding Sutter County acreage, the comment recommends a reduction in developable land of 4,467 acres (presumably suggesting 3,000 acres of development versus the 7,467 acres in the Sutter County Specific Plan) but provides no rationale for the reduction. With respect to Sutter County, the County is requesting incidental take authorization for 7,467 acres of its 10,000-acre Industrial/Commercial Reserve area. Also, as noted above, the 3,500 acres of development are specified in the Sutter County Specific Plan and evaluated in the Sutter County EIR for that specific plan (see Sections 2.2, 3.1, 3.3, 4.1.3, 4.1.4, and 4.3 of the EIR/EIS for discussion of the Sutter County lands and references to relevant planning documents addressing impacts of that Covered Activity). Although 3,500 acres of the 7,467-acre development potential have undergone preparation of a specific plan, it is envisioned that during the 50-year term of Sutter County’s ITP an additional 3,967 acres of Planned Development could seek incidental take authorization. Thus, limiting development to 3,000 acres is inconsistent with Sutter County’s adopted land use plans. In addition, Sutter County’s determination of the acreage to include in the Permit Area has taken into consideration the protection of important habitat. Specifically, Sutter County’s Planned

Development of 7,467 acres does not include the 1-mile Swainson's Hawk Zone lands directly adjacent to the Sacramento River (1,015 acres). That land is currently designated for Industrial/Commercial use and, as part of the implementation of the NBHCP, Sutter County proposes to initiate a General Plan Amendment to redesignate those lands as Agricultural and remove those lands from development. In the absence of the NBHCP, the 1,015 acres in that proposed buffer zone would not be afforded this protection.

Similarly, MAP is subject to adopted land use plans authorizing development of 1,983 acres. Thus, the basis upon which the commentor relies to limit development to 1,683 acres is unclear. As discussed in the NBHCP EIR/EIS, the MAP acreage is included in the evaluation of the NBHCP because the MAP's offsite improvements fall partially within the City's Permit area and partially within Sacramento County. These offsite improvements are authorized under the MAP ITP but are included in the NBHCP to provide comprehensive application of conservation measures in the Natomas Basin and a conservative assessment of impacts in the EIR/EIS. Because a separate HCP and EIS were prepared for MAP, the approved acreage of Planned Development cannot be revised in the context of the NBHCP, nor is such a revision within the land use authority of either the City or Sutter County. As noted in Section 1.2.1, the ITP and Record of Decision (ROD) for the MAP project were issued in February 2002. The pending litigation on that project does not affect the analysis conducted for the NBHCP because the NBHCP includes an independent analysis of the impacts of the MAP acreage in the context of the entire Natomas Basin.

The comment also suggests that:

- projects that are subject to a separate Section 7 consultation (presumably other than those covered by the NBHCP) be required to conform to the mitigation measures in the NBHCP,
- the TNBC review and approve those requirements and integrate those projects into the reserve system operated by the TNBC, and
- there be a "cap" on development of 17,500 acres.

The NBHCP states that private or public actions that are Covered Activities under the NBHCP may also be subject to separate Section 7 review if those actions are authorized, carried out, or funded by federal agencies. Incidental take for Covered Activities carried out by the Applicants or third-party developers acting under the authority of a City or Sutter County Urban Development Permit will be granted under the Permits and will be subject to the take avoidance, minimization, and mitigation measures provided under the NBHCP. Incidental take coverage for the federal action agency will be granted through the incidental take statement issued with the USFWS' Section 7 biological opinion (see NBHCP, Chapter I.O). Regarding conditioning unidentified "projects" on mitigation measures in the NBHCP, the request for this condition is outside the scope of the NBHCP and the EIR/EIS to require conditions on unidentified possible future projects. It is, therefore, also outside the scope of these processes to require inclusion of unknown unidentified projects into the Mitigation Lands. Regarding a request for a cap on development, see Response to Comment O1-10 and other responses included in this comment. Also see Master Response 4 (Cumulative Impacts) regarding the suggestion to put a cap on development.

Response to Comment 01-12

a. The decision of the Applicants to participate in implementation of the NBHCP is voluntary, and neither the Lead Agencies nor the Applicants can compel other parties to participate. The City requested Sacramento County to participate (see Appendix K of the Final EIR/EIS) and also offered the water agencies indemnification from potential litigation on the NBHCP. Neither the County of Sacramento nor the Water Agencies have chosen to participate in the revised NBHCP at this time. See the discussion of involvement by SAFCA (a division of the County of Sacramento) in c. below as well as in Master Response 4 (Cumulative Impacts) and Response to Comment G2-3.

b. The history of both the Water Agencies' and Sacramento County's participation in the NBHCP is discussed in Section 1.2.1 of the EIR/EIS. If either of these entities choose to participate in the NBHCP or prepare separate HCPs at some future unknown date, the NBHCP includes procedures for that participation. Depending upon the nature of the Water Agencies' and/or Sacramento County's activities proposed for incidental take coverage, such participation may be subject to additional environmental review. Regarding the water agencies' role in maintaining connectivity of the canals, this issue is discussed in the responses to Comment Letter I5 and Master Response 2 (Connectivity). Also, as shown in Figure 17 of the NBHCP, the key canals that facilitate connectivity would be maintained for at least the term of the Permit. In addition to the water agencies' role in maintaining drainage canals, the NBHCP identifies connectivity as a priority goal and includes additional measures relevant to acquisition criteria on this issue. The history of the Water Agencies' participation in the NBHCP is discussed in Section 1.2.1 of the EIR/EIS. Regarding SAFCA, see Master Response 4 (Cumulative Impacts) and Response to Comment G2-3.

c. The Water Agencies and SAFCA are not solely responsible for maintaining the viability of agriculture and habitat within the Basin. The NBHCP's Operating Conservation Program contains conservation measures to assure the viability of habitat through the system of reserves contemplated in the NBHCP. Although the retention of agriculture in the Basin is not a mitigation requirement of the NBHCP, the NBHCP does include adaptive management measures intended to respond to changes in foraging habitat and canal connectivity that could occur within the Basin during the 50-year life of the Permits. Neither the City, Sutter County, TNBC, nor the developers of Planned Development should be required to compensate the Water Agencies for canal management that the Water Agencies undertake to provide flood control and irrigation throughout the Basin. Master Response 2 (Connectivity) describes the process for the acquisition of canals and canal easements to maintain canal connectivity in the future.

d. See Response to Comment G8-32 regarding water transfers. Limitations on water availability to lands outside the Mitigation Lands would be subject to the Adaptive Management provisions in the NBHCP (see Section VI.F), which allow amendment to the NBHCP for significant land use changes. Limitations on water availability to the Mitigation Lands itself is an unforeseen circumstance for the reasons presented in Section VI.K.2.g of the NBHCP and Section 4.3 of the EIR/EIS. The roles and responsibilities of the NBHCP TAC are established in Section IV.B.1 of the NBHCP. The TAC is an advisory committee and has no legal authority to approve or disapprove actions by other agencies.

e. As discussed above, whether the water agencies choose to seek a permit at this time, the NBHCP and the EIR/EIS have addressed and analyzed the connectivity of the canals. The Lead Agencies do not agree that formal memoranda of understanding (MOUs) are the only mechanism to facilitate the objectives of the NBHCP. In addition, requiring conditional approval on activities and projects not covered by this NBHCP is a separate issue that can be raised by the commentors in other review processes if other projects proceed in the future.

Response to Comment O1-13

The Lead Agencies cannot compel participation in the voluntary development of an HCP (see Response to Comment O1-12).

The commentor suggests that Sacramento County has approved development without consideration of species mitigation. The commentor is referred to Master Response 4 (Cumulative Impacts) and Response to Comment O3-13 regarding the Sacramento County Zoning Code and the non-discretionary approval of new residences and accessory structures. It is important to note that building permits have been issued for permitted uses in agricultural zones consistent with the No Action Alternative, and such permits will continue to be issued for by-right land uses. In addition to residences and accessory uses, permitted uses in agricultural areas outside the Permit Areas include farming, commercial stables, and produce stands. Intensive agricultural developments such as agricultural repair shops, hog farms, and food processing facilities are allowed subject to issuance of a Conditional Use Permit. Although the NBHCP would not restrict the construction of residences and accessory buildings on parcels zoned for agriculture, individuals undertaking any such actions would be subject to the prohibitions against take articulated in the ESA and CESA. No take authorization would be granted to individuals outside the Permit Areas.

It is also important to note that not all lands outside the Permit Areas are now or were historically in agriculture. The GIS Land Use and Habitat Database shows Rural Residential areas scattered throughout the Natomas Basin, most of which are 1 to 5 acres in size. In addition, the Urban land use class is applied to larger farm compounds and agricultural businesses (e.g., silos and rice dryers) as well as to some developed areas along El Centro Road. Two areas along El Centro Road warrant further mention. First, there is a Highway Travel Commercial area (TC Zone) located at the intersection of El Centro Road and West El Camino Avenue (at the I-80/El Camino interchange). Most highway-commercial businesses (e.g., motels, restaurants) can be constructed without discretionary action by Sacramento County. This area is designated as Urban in the GIS database, and is, therefore, part of the baseline condition. Also, a small Agricultural-Residential area is located adjacent to the east side of El Centro Road west of the West Drain. This area is designated as Agricultural-Residential with minimum lot sizes of 1, 2, and 5 acres and has more use restrictions than an agricultural zone. This area is also designated as Urban in the GIS database. As discussed in the paragraph above, all development is subject to the prohibitions against take articulated in the ESA and CESA, and no take authorization would be granted to individuals outside the Permit Areas.

With the exception of the Panhandle annexation area, no areas outside of designated Permit Areas are zoned for extensive development or are considered Planned Development.

As noted above, neither the Lead Agencies nor the Applicants can compel another party, including Sacramento County, to participate (also see Response to Comment O1-12). The NBHCP presents a mitigation strategy that meets the overall goals and specific objectives identified in Section I.C of the NBHCP. The lack of participation by Sacramento County does not prevent the Applicants from preparing an HCP that provides adequate mitigation for covered activities and that meets ITP issuance criteria.

Impacts to Swainson's hawk resulting from actions by Sacramento County or the airport are properly investigated by the CDFG. In addition, the U.S. Army Corps of Engineers is currently investigating the airport's fill of wetland areas without appropriate permits, and the USFWS is investigating the potential take of giant garter snake in connection with the fill activities." As stated in a. above, all development in the county that would result in take of a federally listed species without appropriate authorization is subject to civil or criminal penalties under the ESA. As mentioned in the comment, there is currently a legal challenge to the USFWS's issuance of an ITP to the Metro Air Park Property Owners' Association. This legal challenge, however, does not enable the USFWS to compel the County of Sacramento to become a party to the NBHCP.

Response to Comment O1-14

As discussed in the NBHCP (Section IV.B), TNBC's Board would be composed of representatives of the Permittees who would be appointed by the Permittees after they receive ITPs. The comment requests a revision to the appointment process (i.e., Board members would be appointed by parties not participating in the NBHCP) that would preclude any staff of the appointing bodies from serving on the Board. Given that TNBC implements the NBHCP on behalf of the Permittees, it is unreasonable to request that no Permittees be eligible to sit on the Board. The comment also requests that parties that have chosen not to participate in the NBHCP (e.g., Sacramento County) be afforded the privilege of appointing Board members. It is not reasonable either to: (1) bestow the privilege of appointing members to TNBC's Board or (2) assign oversight authority of the Permittees' plan (i.e., the NBHCP) to nonparticipating entities, which is what would occur if the comment were implemented. Because Sacramento County has decided not to participate in the NBHCP for areas outside of MAP, the nature and/or basis for Sacramento County's participation on the TNBC Board is uncertain.

Response to Comment O1-15

The payment of the Mitigation Fee for Authorized Development is required prior to issuance of an Urban Development Permit as discussed in Chapter VI of the NBHCP. The Mitigation Fee as proposed is a one time, up-front fee that is paid prior to commencement of grading. The terms and conditions of the payment will be included in the Urban Development Permit. This fee provides funding for the acquisition of Mitigation Lands. To further ensure adequate funding, the Mitigation Fee includes a Supplemental Endowment component that will be collected prior to issuance of the Urban Development Permit "in an amount sufficient to fully fund the operation and maintenance, adaptive management, monitoring, and changed circumstances obligations for Mitigation Lands in perpetuity, even after Authorized Development is fully built-out." (Section VI.B.1 of the NBHCP) These conditions of funding are designed to ensure adequacy of funds for purchase of lands for

creation of habitat reserves that meet the acquisition criteria of the NBHCP (Sections IV.C.2.c, IV.C.3.b, and IV.C.4.b) and are adequate.

In addition, the NBHCP includes provisions to accommodate the comment request to acquire lands in advance of development. Section VI.C includes the specific objective of acquiring lands in advance of development and presents the specific provisions relevant to that goal, including the 200-acre cushion of Mitigation Lands (Section VI.C.1), the 400-acre managed marsh requirement (Section VI.C.2), and the conditions for continued conversion of marsh lands subsequent to the conversion of the initial 400 acres of managed marsh (Section VI.C.3). The terms of the Urban Development Permit and the advance purchase conditions of the NBHCP accomplish what is requested in the comment for assurances of funding. The “back-up” mechanism requested (e.g., bonds) would be contingent on voter approval and, therefore, less of an assurance than the existing mechanisms in the NBHCP (also see Response to Comment O1-40).

Response to Comment O1-16

Although the EIR/EIS evaluated several alternatives to the Proposed Action, only one environmentally superior alternative, Alternative 2, Habitat-based Mitigation, was identified. This alternative was, however, determined to be infeasible as demonstrated in the Economic Analysis contained in Appendix A of the NBHCP. Contrary to the commentor’s assertions, the NBHCP addresses the net effects on fees of larger mitigation ratios as demonstrated in the Economic Analysis (see Figures 5-12 of the Economic Analysis [Appendix A of the NBHCP]). The comment references an attachment to the comment letter. Responses to those comments are in O1-42 through O1-60. Also see Master Response 1 (Mitigation Ratio).

Response to Comment O1-17

This comment generally reiterates comments raised previously in this comment letter or elsewhere in this or other comment letters. Many of the comments summarized in this comment are not feasible or present an alternate approach that does not clearly lessen environmental effects. Where detailed responses are provided to the points raised in this comment, the location where responses have already been provided is referenced. Otherwise, the General Response provided in this table provides the complete response.

Suggested change to NBHCP Comment	General Response	Detailed Response Reference (if applicable)
28,000 acres of available land for purchase	This comment is based on the assumption that the proposed mitigation ratio is not adequate. While 28,000 acres of land may remain in the Basin, not all of this land is required as mitigation, nor is it available for purchase at a cost that can be supported under the NBHCP. Percent improvement in reserves does not factor in findings of EIR/EIS analysis of impacts of NBHCP.	Responses to Comments O1-7, O1-10, G8-32, O1-42 through O1-60, Master Response 1 (Mitigation Ratio), Master Response 2 (Connectivity), Master Response 3 (Joint Vision), Master Response 4 (Cumulative Impacts), and Master Response 5 (Swainson’s Hawk Foraging Habitat).

Suggested change to NBHCP Comment	General Response	Detailed Response Reference (if applicable)
Identify and manage large tracts of reserve areas	Results in land speculation and inflated land prices. Already evaluated and dismissed as an alternative. Does not take into account the lower habitat value of existing lands versus the higher quality of managed reserves that meet the biological needs of Covered Species. Does not consider the management needs for all 22 Covered Species.	Responses to Comments O1-7, O1-10
Acquire lands before grading	As stated in Response to Comment O1-15, the NBHCP requires the payment of Mitigation Fees prior to issuance of an Urban Development Permit and a 200-acre mitigation cushion to assure Mitigation Lands are acquired as described in Section VI.C of the NBHCP. Inflated land prices would offset any benefits associated with eliminating the Supplementary Endowment.	Responses to Comments O1-10, O1-42 through O1-60
Land speculation and use of grants for acquisition	Redlining target areas will result in land speculation/increased prices. Although the NBHCP relies on the Mitigation Fee program to provide funding for mitigation, the NBHCP does not preclude the use of grants or other awards to fund activities other than the mitigation obligations set forth in the NBHCP. Grants are considered to be a less reliable source of funds and are subject to funding vagaries of issuing entities.	Response to Comment O1-15
TNBC management of private lands	Not feasible. TNBC is an implementer of the NBHCP, not a land management agency. The suggested revision is neither feasible nor would it clearly lessen the environmental impacts of the Proposed Action. Neither TNBC nor land use agencies can mandate central management of private lands.	Response to Comment O1-7
Water supply	The commentor's alternative does not guarantee the availability of a permanent water supply source for habitat purposes. This alternative would not be feasible because TNBC cannot mandate central management of private lands.	Response to Comment O1-7
Conservation easement	The NBHCP would allow TNBC to secure Mitigation Lands by acquiring fee title or a conservation easement. Nonetheless, securing conservation easements on all potential Mitigation Lands may not meet biological goals and objectives of NBHCP because of the competing needs between agricultural uses and habitat enhancement. The NBHCP provides for Mitigation Land and implementation of related management activities that meet the biological goals in perpetuity.	Response to Comment G3-11

Suggested change to NBHCP Comment	General Response	Detailed Response Reference (if applicable)
Local government revenues from TNBC control of private lands	Contrary to the commentor's suggestion, there is no evidence that the City, Sutter County, or TNBC would receive higher revenues from Mitigation Lands maintained in agricultural uses, or that conflicts would not arise in land management. Moreover, this alternative is not feasible because neither TNBC nor the Land Use Agencies can mandate central planning and management of private lands.	Response to Comment O1-10
Reduce development and costs to local government are lower	The commentor's assertion that the net costs to local governments of lands in open space would be less than if the same lands were developed is unsupported. It is unclear whether reference is made to the Mitigation Lands required under the NBHCP or the remaining lands outside of the system of reserves. Does not meet Applicants' proposed definition of Covered Activities. The City and Sutter County have prepared the NBHCP to address the potential for take of Covered Species associated with the Planned Development of 17,500 acres. The NBHCP does not contemplate the development of more than 17,500 acres of land within the Basin; thus, the development costs to which the commentor alludes are unclear.	Response to Comment O1-10
Developers pay for administrative costs of acquisition	The commentor's suggestion that the developers would pay for the administrative costs, which would result in lower Mitigation Fees per acre is unclear. The NBHCP already requires the developers to pay for the administrative costs and Mitigation Land acquisition costs prior to issuance of an Urban Development Permit.	Responses to comments 01-42 through O1-60
Larger reserve areas	While the cost per acre may be lower for managing and monitoring Mitigation Lands because of economies of scale, larger reserve sites will require more areas subject to management and monitoring. Moreover, to meet the NBHCP biological goals and objectives, enhancement and restoration activities would be required, which also would increase the mitigation costs associated with larger reserves. As demonstrated in the NBHCP and the Tech Memo, the NBHCP adequately mitigates for the impacts of take associated with the Covered Activities. The larger reserves request is based on the assumption that a 1:1 mitigation ratio is necessary to meet ITP issuance criteria. For the reasons set forth in Master Response 1 (Mitigation Ratio), the increased ratio is not warranted. The comment also states that public intrusion would be limited, but the commentor's suggestions for facilities construction contradicts this assertion.	See Appendix H of the NBHCP; Master Response 1

Suggested change to NBHCP Comment	General Response	Detailed Response Reference (if applicable)
Economies of scale of agricultural operation from centralized management of private land	The commentor's suggested alternative is not feasible because neither TNBC nor land use agencies can mandate central planning and management of private lands.	Response to Comment O1-10
Future undefined development allowable under NBHCP	The basis for allowing over 6,000 acres of future undefined development is unclear. The NBHCP covers issuance of ITPs to 17,500 acres of Planned Development.	Response to Comment O1-7; Master Response 4 (Cumulative Impacts)
Water agencies' participation	The NBHCP includes avoidance, minimization, and mitigation measures for the Water Agencies should they elect to participate in the NBHCP. However, the NBHCP is designed to provide mechanisms to ensure that the Mitigation Lands will continue to function in the event connectivity is compromised. Neither the Applicants nor the Wildlife Agencies can compel participation or permit application. Existing measures and retaining of key canals are identified in NBHCP.	Master Response 2 (Connectivity); Responses to Comment G3-11, I3-2, and I13-40
Edge effects	The NBHCP includes measures to minimize the potential for edge effects and incompatible land uses by including requirements for minimum reserve sizes, buffers, and setbacks.	Response to Comments O3-19
Connectivity	The NBHCP includes measures to maintain connectivity between reserves as indicated above.	Master Response 2 (Connectivity); Response to Comment G3-11
Fragmentation avoided by compelling non-permit applicants to participate	The NBHCP addresses 17,500 acres of Planned Development in the Basin. The NBHCP also includes provisions allowing for amendments to the NBHCP in the event that future development was proposed beyond 17,500 acres or outside the Permit Areas. The technical analyses in support of the NBHCP were conducted to demonstrate that the Operating Conservation Program would be effective in mitigating for the effects of take resulting from 17,500 acres of development. The commentor has not provided any information indicating that this alternative would clearly lessen impacts, nor has information been provided supporting take authorization for development beyond 17,500 acres in the Basin. Moreover, neither the Land Use Agencies nor the Wildlife Agencies can compel non-participants to join an HCP.	see Appendix H of the NBHCP; Master Response 1
Proposed process for acquiring reserves minimizes potential for mitigation failure	The process recommended by the commentor would not clearly lessen impacts, nor is such a proposal feasible for the reasons discussed above. The Applicants will commit to the implementation of feasible mitigation measures. For the reasons discussed above, it is infeasible for TNBC or the Land Use Agencies to institute wholesale central management of private lands.	See Responses to Comments O1-7 through O1-15

Response to Comment 01-18

The Lead Agencies and the Applicants acknowledge the importance of the Natomas Basin to the giant garter snake. The comment references the 1994 Biological Opinion (BO) for a SAFCA flood control improvement project (Local Area Project), and the quotes from that BO relevant to future urban development are an acknowledgment that future urban development and associated activities in the Natomas Basin could affect the giant garter snake population. It is important to note that the cites in the comment are from documents prepared in 1994 and are based on 1992 sources – see below. Subsequent to the 1994 BO, the Planned Development underwent local land use planning processes, including development of specific plans and environmental analyses. The relevant planning documents are discussed in Chapters 3 and 4 of the EIR/EIS. In response to the 1994 BO and concerns from the Wildlife Agencies in general, the City and Sutter County initiated preparation of the NBHCP and are requesting incidental take coverage for potential take associated with the Planned Development.

Regarding the quote from the 1994 BO prepared for the Revised Natomas Area Flood Control Improvement project (March 11, 1994), the correct quote from that BO is “Absent measures to address the prospect of future basin-wide losses of existing giant garter snake habitat, this flood control project and future urban development could extirpate the giant garter snake from the American Basin.” (In the BO, this quote is originally sourced to a 1992 CDFG document.)

See references to giant garter snake use of the Natomas Basin in Section II.C.2.d of the Draft NBHCP and on pp. 3-39 and 4-57 of the Draft EIR/EIS. Extensive technical analyses were conducted on the effects of implementing the NBHCP to demonstrate that issuance of the ITPs would not appreciably reduce the likelihood of survival and recovery of the giant garter snake. As further discussed in the Biological Resources Technical Memo (Appendix H of the NBHCP), the Proposed Action will not result in significant impacts to the giant garter snake because the loss of existing habitat will be gradual, particularly with respect to agricultural lands, and much of the Basin will continue to be used for agriculture over the life of the Permit, both within and outside the Mitigation Lands. Second, the quality of habitat and range of habitat values provided by the Mitigation Lands will exceed the quality of habitat and range of habitat values provided by agricultural lands that may be lost to Planned Development (NBHCP, Section VII.I.1, and Appendix H to the NBHCP, Section 5).

The comment misquotes the Draft NBHCP (see referenced text quoted from pp. VII-7 - VII-8). The Draft NBHCP does not state that “without measures to avoid, minimize, and mitigate impacts of development, the City and Sutter County’s development would adversely affect the continued existence of the Giant Garter Snake in the Natomas Basin.” The Draft NBHCP states that “[a]bsent the take avoidance, minimization and mitigation measures of the NBHCP, this loss of habitat could potentially represent a substantial impact on the local (American Basin) and statewide population of the snake.” Based on the analysis, the NBHCP concludes (on p. VII-11) that with the inclusion of all of the NBHCP conservation and implementation measures (summarized as the Operating Conservation Program), take of giant garter snakes would be minimized and mitigated to the maximum extent practicable in accordance with the ESA and will be minimized and fully mitigated in accordance with CESA.

Response to Comment 01-19

The Lead Agencies and the Applicants acknowledge the importance of the Natomas Basin to the Swainson's hawk consistent with the quoted text from CDFG's consultation letter. The primary concern raised by CDFG in its 1990 consultation letter was the loss of habitat (and subsequent impacts to giant garter snake and Swainson's hawk) from urban development in the Natomas Basin that would occur subsequent to the flood control actions identified in the American River Watershed Investigation. It is important to note that correspondence from the Wildlife Agencies, such as CDFG's 1990 consultation letter and the 1994 BO (see Response to Comment 01-18), were important precursors for the NBHCP effort that is currently under way. The Wildlife Agencies have been and continue to be participants in the development of the NBHCP. See references to Swainson's hawk use of the Natomas Basin in Section II.C.3.d of the Draft NBHCP and on pp. 3-44 - 3-46 of the Draft EIR/EIS. Although Swainson's hawk is not a federally listed species, in accordance with the No Surprises Rule, the USFWS treats the hawk as if it is listed. Therefore, the USFWS is evaluating whether the Proposed Action would appreciably reduce the likelihood of the survival and recovery of this species. As further discussed in the Addendum to the Biological Resources Technical Memo, the applicants believe that the Proposed Action will not appreciably reduce the likelihood of the survival and recovery of the Swainson's hawk because the loss of existing habitat will be gradual, particularly with respect to agricultural lands, and much of the Basin will continue to be used for agriculture over the life of the Permit, both within and outside of the Mitigation Lands. Second, the quality of habitat and range of habitat values provided by the Mitigation Lands will exceed the quality of habitat and range of habitat values provided by agricultural lands that may be lost to Planned Development (NBHCP, Section VII.I.1, Appendix K of the NBHCP, Section 5, and Master Response 5 [Swainson's Hawk Foraging Habitat]).

The comment inaccurately quotes the Draft NBHCP (see referenced text quoted from page VII-14). The Draft NBHCP currently contains the measures to avoid, minimize, and mitigate impacts to Swainson's hawk. The NBHCP states that Authorized Development in the City of Sacramento will result in the loss of foraging habitat and could disturb or eliminate active nest sites because of construction activities and that "[a]bsent the avoidance, minimization, or mitigation measures of the NBHCP, this loss of habitat would potentially represent a substantial impact on the Swainson's hawk in the City's Permit Area that might adversely affect the continued existence of the species in the Basin." The NBHCP goes on to conclude (on p. VII-15) that with the inclusion of all of the NBHCP conservation and implementation measures (summarized as the Operating Conservation Program), take of Swainson's hawks will be minimized and mitigated to the maximum extent practicable in accordance with the ESA and will be minimized and fully mitigated in accordance with CESA.

Response to Comment 01-20

The Applicants believe that the NBHCP and its analysis in the EIR/EIS, the Economic Analysis, the Biological Resources Technical Memo (Appendix H of the NBHCP), and the Addendum to the Biological Resources Technical Memo (Appendix K of the Final NBHCP) support a determination that the 0.5:1 mitigation ratio, in conjunction with the avoidance, minimization, and conservation measures included in the NBHCP, will mitigate and minimize the impacts to the Covered Species to the maximum extent practicable in accordance with the ESA. Similarly, the Applicants believe the analyses in the referenced

documents demonstrate that the NBHCP's Operating Conservation Program will fully minimize and mitigate the impacts associated with incidental take in accordance with CESA. Further, as the technical analyses determine, the NBHCP's Operating Conservation Program will not result in significant impacts to the Covered Species.

As noted above, the NBHCP is based on substantial scientific evidence including field studies, GIS habitat and land use mapping, the mapping and analysis of the most recently available species occurrence data, and other biological and economic analyses. The objective of this substantial analysis was to ensure that the Applicants had adequate knowledge and information to develop mitigation and conservation measures that would not appreciably reduce the likelihood of the survival of the Covered Species (which is one of the primary criteria for USFWS review and approval of the ITP). The NBHCP includes multiple approaches, with avoidance as the first priority as represented by the substantial species-specific avoidance, minimization, and mitigation requirements included in Chapter V of the NBHCP. In addition, the Mitigation Lands to be created by the NBHCP are designed to provide enhanced habitat quality for the Covered Species (see especially Appendix K of the Final NBHCP, which addresses the quality of foraging habitat for Swainson's hawk). Finally, the NBHCP includes a monitoring and adaptive management program to assess the effectiveness of the conservation program and to provide information necessary to make habitat or management adaptations. The NBHCP adaptive management section specifically sets forth policies for adaptations or improvements to mitigation reserve lands in the event new scientific information or species recovery plans become available. Section VI.H of the NBHCP includes sections on adaptive management to respond to both the Swainson's hawk recovery plan and/or giant garter snake recovery plan if such plans are promulgated by the Wildlife Agencies.

The NBHCP's assumptions are supported by independent biological opinion, as demonstrated in the response to this and other comment letters in the Draft and Final EIR/EIS and in the Draft and Final NBHCP. The commentor states that the 0.5:1 mitigation ratio is not justified by the NBHCP or the EIS/EIR. Substantial biological analysis and habitat assessments were conducted to develop the associated avoidance, minimization, and mitigation strategies included in the NBHCP as further evaluated in the analysis noted in a. above. In addition, the Economic Analysis (Appendix A of the Draft NBHCP) and Responses to Comments O1-42 through O1-60 discuss the analysis of the NBHCP's measures and the appropriateness of the mitigation ratio. Further information on the development of the mitigation ratio is included in Master Response 1 (Mitigation Ratio) and in Response to Comment O1-21. Also see Response to Comment O1-4.

Response to Comment O1-21

a. The comment quotes Comment Letter G2 and raises questions about why the mitigation ratio for the NBHCP differs from what is proposed for other HCPs. Comment G2-6 is quoted only partially in the comment. The full text is:

It is also our experience that habitat conservation plans usually provide for a mitigation ratio of 1 acre of mitigation for every acre of land lost or equivalent compensation in the form of additional conservation measures or mitigation fees.

The italicized portion of the sentence is critical to understanding the full range of avoidance, minimization, and mitigation measures included in the NBHCP.

b. The commentor correctly notes that habitation conservation plans (HCPs) may have different mitigation ratios and varying levels of mitigation requirements. The USFWS's HCP Handbook states that "Mitigation programs under HCPs and section 10 permits are as varied as the projects they address. Consequently, [the] handbook does not establish specific "rules" for developing mitigation programs that would limit the creative potential inherent in any good HCP effort." (*Habitat Conservation Planning and Incidental Take Permit Processing Handbook*. November 4, 1996. U.S. Department of the Interior, Fish and Wildlife Service; U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, p. 3-19). The Handbook also states that mitigation programs should be 1. based on sound biological rationale, 2. practicable, and 3. commensurate with the impacts they address. Mitigation actions may include avoidance, minimization, rectifying the impact, reducing or eliminating the impact, or compensating for the impact. Often more than one strategy is incorporated into an HCP. See Master Response 1 (Mitigation Ratio) for a discussion of other HCPs and how applying a single mitigation ratio is not reasonable, given the unique conditions of each HCP.

Based on the HCP guidance, mitigation ratios and corresponding mitigation fees may vary for individual HCPs on the basis of varied considerations, including the number and type of species covered by the HCP, the types of habitat impacted, and the level of development seeking incidental take authorization. Similarly, the degree to which avoidance and minimization measures, as well as other strategies, are used in combination with any compensatory requirements also can affect the required levels of compensatory mitigation.

The NBHCP includes substantial conservation measures in addition to the creation of habitat reserves (see Chapters IV, V, and VI of the NBHCP). For example, the NBHCP includes preservation of the Swainson's Hawk Zone that, with approval of the NBHCP and issuance of the ITP, will limit development of a 1,015-acre area in the Sutter County Industrial/Commercial Reserve for the express purpose of avoiding areas of active Swainson's hawk nest sites. This conservation measure is in addition to the requirement to set aside 0.5 acres of Mitigation Land for each acre of development. Similarly, the NBHCP includes a comprehensive list of avoidance, minimization, and mitigation measures that are applied, as appropriate, to all Planned Development. Thus, in addition to payment of the Mitigation Fee, a developer must also mitigate for the specific resources on his/her site. If, for example, vernal pools were present, additional avoidance and mitigation measures would be required, including additional fees for purchase of mitigation credits through USFWS-approved mitigation banks.

Although it is useful to review the approaches of other HCPs, it is not necessarily appropriate to apply alternate approaches to the NBHCP specifically or to any other HCP that might be prepared in other areas and for other covered activities. Individual HCPs must also consider measures and approaches that are appropriate to the unique habitat and biology of each area (see the quote from the HCP Handbook in a. above).

The commentor cites several HCPs and compares them to the NBHCP. Although the mitigation approaches differ among the HCPs cited by the commentor, in each case the USFWS determined that the conservation strategy for each adopted HCP provided take

minimization and mitigation measures sufficient to meet the permit issuance criteria under Section 10(a) of the ESA. The ways in which these HCPs differ from the NBHCP are addressed in detail in Master Response 1 (Mitigation Ratio).

c. Proponents of the Brookfield/Northern Territories, Inc. (NTI) project have attempted unsuccessfully to obtain approval for development outside of the City's Sphere of Influence (SOI) and Sacramento County Urban Services Boundary. To obtain development entitlements, landowners within this area must first await the results of the planning, technical analyses, and environmental review undertaken as part of a future Joint Vision process. As the NBHCP and EIR/EIS acknowledge, any development within the Natomas Basin outside of the City or Sutter County's Permit Areas or beyond the 17,500 acres of Planned Development would constitute a departure from the NBHCP's Operating Conservation Program and would require a new effects analysis, a new conservation strategy, and applications for incidental take authorizations for that additional development (see e.g., Draft NBHCP, pp. I-5 - I-6; Draft EIR/EIS, pp. 4-7 - 4-8). As part of this process, avoidance, minimization, and mitigation requirements will be identified. If it is determined that the NTI property can be developed in the future, the City, Sacramento County, and the Wildlife Agencies will evaluate whether or not a 1:1 mitigation ratio is adequate to mitigate impacts associated with the development of the Brookfield/NTI property.

Similarly, if other development were authorized through a future Joint Vision planning effort (see Master Response 3 [Joint Vision]), this development would be required to undergo extensive analyses and environmental review to determine whether a 1:1 mitigation ratio would be adequate for the development. It is also important to note that preliminary discussions regarding a 1:1 ratio include all open space (parks, detention basins, and other open space areas), and, as such, the actual amount of mitigation is unknown pending extensive biological analyses comparable to the analyses included in the NBHCP.

Response to Comment 01-22

a. The NBHCP is the product of a decade-long effort to address effects on federal and state-listed threatened and endangered species in the Basin. Overall, this comment references several letters from USFWS and CDFG dating back to 1994 regarding comments on a then-initial planning effort for habitat conservation (also see Responses to Comment 01-18 and 01-19). It is important to note that in the intervening years, extensive analysis and discussions have occurred with the Wildlife Agencies regarding the specific proposed mitigation measures in the NBHCP. The commentor's reference to letters written more than 9 years ago does not necessarily reflect the specific elements of the NBHCP, nor does it accurately reflect and incorporate the discussions, review, and analysis that have occurred both for the NBHCP and the EIR/EIS. It is important to note that substantial additional information has been developed subsequent to the drafting of the 1994 joint USFWS/CDFG letter. The NBHCP addresses the protective measures identified in the comment. Specific examples of information that is included in the revised NBHCP include, for example, more specific habitat acquisition criteria (Chapter IV of the NBHCP), prioritization of the Fisherman's Lake area (Section V.A.2 of the NBHCP), and restrictions on take of species (Chapter V of the NBHCP) including the designation of the Swainson's Hawk Zone.

Extensive new analyses have been conducted (see Response to Comment 01-7 and Master Responses 1 [Mitigation Ratio], 2 [Connectivity], 3 [Joint Vision], and 4 [Cumulative

Impacts]) relevant to the 0.5:1 mitigation ratio. As discussed throughout the EIR/EIS (Chapters 2, 3, and 4), substantial new analysis was completed that is intended to support a finding that the 0.5:1 mitigation ratio, in conjunction with other NBHCP avoidance, minimization, and mitigation measures, is effective in ensuring that issuance of incidental take authorization will not result in jeopardy to the Covered Species, and that the ratio meets the maximum extent practicable threshold criterion. As discussed in Responses to Comments O1-1, O1-3, O1-4, O1-7, O1-10, O1-11, O1-17, and other responses in this Final EIR/EIS, extensive analysis was conducted by environmental, biological, and economic experts on the mitigation measures of the NBHCP. CH2M HILL completed a GIS Habitat and Land Use Assessment Database to define impacts to Covered Species (see Figure 10 in the NBHCP) that was used to complete an impact analysis based on the amount of each type of habitat converted to Planned Development in the Permit Areas. The impact analysis, attached as the Biological Resources Technical Memo, Appendix H to the NBHCP, is incorporated in Chapter VII of the HCP that defines the Take Levels/ Impacts of the Plan. An Addendum to that memo that focused on Swainson's hawk foraging habitat was also prepared (Appendix K of the Final NBHCP), and Master Response 5 (Swainson's Hawk Foraging Habitat) provided additional foraging habitat information. The discussion of how the NBHCP Operating Conservation Program is expected to meet the maximum extent practicable criterion is described from a financial perspective in the Economic Analysis, attached as Appendix A of the NBHCP.

The commentor is also referred to Master Response 1 (Mitigation Ratio) for a detailed discussion of the rationale for the 0.5:1 mitigation ratio. Also see the Biological Resources Technical Memo (Appendix H of the NBHCP), the Addendum to the Biological Resources Technical Memo (Appendix K of the Final NBHCP) and Master Response 5 (Swainson's Hawk Foraging Habitat). Also see Responses to Comments O2-2 and O2-3.

b. The comment also states that in a 1994 correspondence, the Wildlife Agencies conditioned the 0.5:1 mitigation ratio on the assumption that doubling or tripling of habitat values on half the land base can be achieved only through restoration and management of natural wetland habitat. The comment also references other elements of that letter regarding connectivity, canal bank management, water agency participation, and 250-meter buffers. It is important to note that almost 10 years have passed between the date that the 1994 BO was issued and the current time, and that substantial additional information has been developed and discussions have occurred between the Applicants and the Wildlife Agencies regarding the conservation program. The revised NBHCP incorporates this subsequent analysis. Regarding Water Agency participation, see Responses to Comments G3-11, O1-17, I3-1, I3-2, and I13-40. The commentor is also referred to Master Response 1 (Mitigation Ratio).

c. The comment further cites the 1994 letter from USFWS and CDFG regarding specific issues such as priority areas for habitat acquisition and areas in which take would not be allowed. As discussed in a. and b. above, substantial additional information has been developed subsequent to the drafting of the 1994 BO.

d. The NBHCP includes all the measures that made the 0.5:1 mitigation ratio acceptable to the Wildlife Agencies. In addition, extensive coordination has been ongoing with the Wildlife Agencies in the interim since the 1997 NBHCP was prepared, and additional measures from the Wildlife Agencies have been included. Many of the avoidance, minimization, and mitigation measures from the 1997 NBHCP are in the revised NBHCP,

plus additional measures as discussed in a. above. Also see Master Response 1 (Mitigation Ratio) and the Biological Resources Technical Memorandum and Addendum (Appendix H of the Draft NBHCP and Appendix K of the Final NBHCP) for the analysis of the effectiveness of the Operating Conservation Program. Also see Master Response 2 (Connectivity) and Section 2.2 of the Final EIR/EIS, and the Final NBHCP for clarifications to conservation measures for canals and drains. Relevant to the Water Agency participation, see Responses to Comments G3-11 and I3-1. See Section IV.C.1.c of the NBHCP for a discussion of buffers (buffers are a feature of the Mitigation Lands and are not subject to urban development). By contrast, setbacks, which are defined in Section IV.C.2.a of the NBHCP, are designed to minimize conflicts between Mitigation Lands and adjacent lands developed or designated for development. Note that the setback zone does not affect the ability of each of the Land Use Agencies to approve development within the setback zone and adjacent to the boundaries of the Mitigation Lands.

Response to Comment 01-23

The 1997 NBHCP did not make the assumption that the total amount of urban development during the next 50 years would be 17,500 acres (In addition to the response below, also see Response to Comment G8-7.

On page III-4, the 1997 NBHCP states:

Local governments guide land use through their general plans. While the general plans of the Natomas Basin land use agencies are subject to amendment over the next 50 year term of the NBHCP and permits, they offer a reasonable basis for predicting the extent and location of future development. The following land use discussion of land use planning is not a limitation of the NBHCP or its associated permits; the permits will apply to all potential urban development in the Natomas Basin.

On page III-5 of the 1997 NBHCP, Table III-2 defines “Foreseeable Urban Development” with a total ranging from 9,300 to 21,300 acres. Also, on page III-9, the 1997 NBHCP states:

Because of the potentially limited land area available for mitigation, and uncertainty in the extent and timing of build-out throughout the Basin, the NBHCP estimates total development in the Basin at approximately 17,500 acres and evaluates mitigation and funding needs within the Basin based on this figure. Growth beyond 17,500 acres could occur under the NBHCP, but would rely on the Permittees’ ability to partially mitigate outside the Natomas Basin.

Nowhere in the 1997 NBHCP is there a limit placed on the number of acres allowed to develop under the NBHCP or associated permits. That limitation was added to the revised NBHCP. Under the revised NBHCP, any development beyond 17,500 acres or outside the Permit Areas must amend the NBHCP or prepare a separate HCP. The 1997 NBHCP did not require any such amendment.

The comment also states that the 1997 NBHCP assumes that much of the Basin would remain in rice production. The 1997 NBHCP assumed that rice land existing in 1997 that was not expected to be converted to Planned Development would remain in rice production. The

analysis of the 1997 NBHCP was conducted (and permits issued) based on that assumption of continuation of agriculture. In the proposed NBHCP, the Applicants recognized that rice land could not be assumed to continue in rice production. For example, the City of Sacramento could not control the land uses outside of its jurisdiction in Sacramento County. Thus, although the Operating Conservation Program does not include the continuation of agriculture in the Basin as mitigation, the effectiveness of the NBHCP depends upon the availability of some portion of the Basin as foraging habitat remaining in the Basin. To demonstrate that the NBHCP would avoid, minimize, and mitigate the impacts of incidental take of Covered Species from Planned Development, the NBHCP and the EIR/EIS evaluated the habitat types potentially converted to Planned Development. The quality of Swainson's hawk foraging habitat was further addressed in the Addendum to the Biological Resources Technical Memo (Appendix K of the Final NBHCP). This does not mean, however, that the NBHCP assumes that all other lands in the basin would remain in agriculture. See Response to Comment O1-4 regarding baseline assumptions in the revised NBHCP and the EIR/EIS.

The NBHCP does not anticipate that there will be development in the Basin beyond the 17,500 acres of Planned Development. The NBHCP does not anticipate considerably more development and the City is not proposing development that greatly exceeds the 17,500 acres. The revised NBHCP addresses incidental take associated with 17,500 acres of Planned Development within the Natomas Basin. The NBHCP states on page I-18 that the Operating Conservation Program authorizes incidental take associated with 17,500 acres of Planned Development within the Basin. During the 50-year term of the Permits, development activities could result in a total of approximately 23,105 acres of urban development, including 5,605 acres of existing development (which does not depend on the NBHCP for incidental take coverage) and 17,500 acres of additional Planned Development.

Neither the City, Sacramento County, nor Sutter County has adopted land use plans authorizing substantial development in the Natomas Basin beyond 17,500 acres. To demonstrate this and in furtherance of the NBHCP Settlement Agreement, the City adopted Resolution 2001-518 (Appendix H) restricting its ability to approve any such development until both the City and Sacramento County adopt a comprehensive annexation program. Thus, the NBHCP conservation program is proposed to address only the effects of incidental take of Covered Species attributable to 17,500 acres of Planned Development. As stated in the Draft NBHCP on page I-5,

The effectiveness of the NBHCP's Operating Conservation Program (OCP) to adequately minimize and mitigate the effects of take of the Covered Species due to Authorized Development depends on the City and Sutter County limiting total development within their respective Permit Areas to a combined total of 15,517 acres. In addition, the OCP and the NBHCP's effects analysis account for a combined total of 17,500 acres of Planned Development occurring in the Natomas Basin (i.e., 15,517 acres within the City and Sutter County's Permit Areas and 1,983 acres of MAP development in Sacramento County). Because the NBHCP's OCP is based upon the City limiting total development to 8,050 acres within the City's identified Permit Area, approval by the City of future urban development beyond the 8,050 acres or outside of its Permit Area would constitute a significant departure from the Plan's OCP

and would trigger a reevaluation of the Plan, potential amendments and/or revisions to the Plan and Permits, and possible suspension or revocation of the City's Permits in the event the City were to violate such limitations without completing such reevaluation, amendment or revision..."

Based on extensive biological resources analyses, the NBHCP's Operating Conservation Program has been determined to result in less-than-significant impacts to Covered Species as described in the EIR/EIS.

It is acknowledged that, notwithstanding the restrictions on growth outside of the 17,500 acres, landowners have attempted unsuccessfully to seek approval for development projects outside of the SOI and Sacramento County Urban Services Boundary. As further explained in Master Responses 3 (Joint Vision) and 4 (Cumulative Impacts), the NBHCP and EIR/EIS acknowledge the potential that landowners may continue to seek development approvals and that the City and Sacramento County will not consider such development requests until such time as the City and Sacramento County initiate and complete the Joint Vision planning process and adopt a comprehensive annexation program. Because the necessary planning and environmental analyses have not been conducted to determine the location and extent of any additional development in the Basin outside of the Permit Areas and the City has not approved such development, the NBHCP and EIR/EIS state that development efforts beyond the 17,500 acres of Planned Development and outside of the Permit Areas are not considered "authorized development." Thus, any such additional development cannot rely on the NBHCP and ITPs for incidental take authorization. In addition, the NBHCP provides that approval of any such additional development would trigger a reevaluation and require a separate HCP or an amendment or revision of the NBHCP.

The commentor is referred to Master Response 3 (Joint Vision) for an accurate description of this future planning effort. Pending future analyses and environmental review, the City and Sacramento County may proceed with a Joint Vision planning process to determine whether to consider adjustments in the location of the SOI within the Natomas Basin. At the time the Draft NBHCP and EIR/EIS were released for public review, the City and Sacramento County had not initiated Joint Vision planning and technical studies, nor were there any applications seeking revisions to the SOI pursuant to the Joint Vision process. In addition, as stated on pages 4-8 and 4-9 in the Draft EIR/EIS and further described in Master Responses 3 (Joint Vision) and 4 (Cumulative Impacts), although specific annexations or development projects have been proposed in what may become a future Joint Vision SOI area, the City may not approve these development proposals until such time as the Joint Vision planning effort is completed. If further planning efforts, biological resource evaluations, and technical analyses support the establishment of a Joint Vision SOI, potential urban development could be considered within a 10,000-acre area generally within the eastern side of the Sacramento County portion of the Natomas Basin. No information, however, has been provided regarding the location and extent, if any, of such development. Consequently, it is speculative to conclude that the Joint Vision will result in the development of 10,000 additional acres within the Natomas Basin.

Although the City and County could consider a potential SOI area of up to 10,000 acres, further planning, future analyses, and environmental review must be conducted before the existing SOI may be modified and before specific development proposals may be

considered. In addition, it is anticipated that many of these studies likely will demonstrate that a considerable portion of this area cannot be developed because of existing site constraints associated with the 100-year floodplain, preservation of habitat areas important to the viability of giant garter snake populations, and other environmental effects. If any development is proposed beyond 17,500 acres, that development will require additional studies and a mitigation strategy different from the NBHCP to allow for viable populations of Covered Species in the Basin to persist. Because the City and Sacramento County have not commenced any planning efforts outside of the 17,500 acres of Planned Development, further studies would be required before the amount of development could be defined, and any development considered would need to maintain viable populations of Covered Species within the Basin, it is unknown whether and the extent to which any additional development in the Natomas Basin could occur. For these reasons, development beyond 17,500 acres is considered speculative.

Response to Comment 01-24

a. The extensive biological analysis in the EIR/EIS was conducted to assess the impacts associated with the NBHCP, including analysis of impacts to Covered Species as a result of creating Mitigation Lands. The GIS analysis conducted in support of the EIR/EIS (see Sections 3.4.1 and 4.4.1 of the EIR/EIS and Appendix H of the NBHCP) identifies 18 land use/habitat categories (See Table 3-1) that were populated by acreage according to the presence of these land uses/habitats in the Natomas Basin. As noted in Section 3.4.1, prior to urban and agricultural development in the Natomas Basin, much of the Basin comprised seasonal and permanent marshes as a result of seasonal flooding. Currently there is very little native marsh present in the Basin, and what little there is occurs as scattered patches. The GIS was used in the analysis to update the 1997 baseline used in the 1997 NBHCP and to project future land-use scenarios corresponding to build-out conditions of Planned Development (i.e., 17,500 acres). The analysis in the EIR/EIS is not, however, solely focused on acreage changes. In addition to the GIS that provides the baseline of existing conditions and allows a comparison to acreage changes from Planned Development, the analysis also considers the type and quality of habitat that would be provided in the Mitigation Lands. The changes in habitat presented in the tables in Section 4.4.1 of the EIR/EIS are indicative only of acreage changes, not of quality or quantity of lost or replacement habitat. Additional clarification of the habitat types relevant to Swainson's hawk foraging habitat are discussed in the Addendum to the Biological Resources Technical Memo (Appendix K of the Final NBHCP) and in Master Response 5 (Swainson's Hawk Foraging Habitat).

Regarding the basis for the mitigation ratio in the NBHCP, several factors were considered in arriving at that ratio. These include USFWS Section 10(a) permit issuance criteria and the guidance in the USFWS's HCP Handbook requirements (which includes measures of avoidance and mitigation, as well as mitigation ratio). In addition, the NBHCP analysis in support of the mitigation ratio considered the:

- Type, quality, and extent of habitat impacted in the Basin,
- Type of species using the habitat in the Basin,
- Range of avoidance, minimization, and mitigation measures available to avoid or lessen impacts,

- Potential for enhancement of Mitigation Lands, and
- Economic feasibility of mitigation options available to minimize and mitigate to the maximum extent practicable for impacts related to incidental take associated with the Planned Development.

These and other criteria for the NBHCP mitigation ratio are discussed in greater detail in Master Response 1 (Mitigation Ratio).

b. The NBHCP provides information supportive of the conclusion that each acre to be developed should have relatively equal habitat value. A GIS assessment and field-verification effort were conducted to assess habitat impacts in the Permit Areas. Figure 8 of the NBHCP maps the “native habitat” remaining in the Basin, which is extremely limited and in many cases located outside the Permit Areas. The majority of land in the Permit Areas is currently disturbed through agricultural practices or rural residential development. Given this, and the substantial habitat assessment, all development within the Permit Areas is required to participate in the mitigation program. In the event an individual site has special habitat characteristics or species use, additional avoidance, minimization, and mitigation measures (Chapter V of the NBHCP) are assigned to the development. The commentor is also referred to the information contained in the Addendum to the Biological Resources Technical Memo regarding the assessment of values for Swainson’s hawk foraging habitat currently provided in the Basin (Appendix K of the Final NBHCP), and also to Master Response 5 (Swainson’s Hawk Foraging Habitat).

c. To approve the NBHCP and issue the Section 10(a) Permits, the USFWS must find that, (1) the proposed taking will be incidental to otherwise lawful activities; (2) to the maximum extent practicable, each Permittee has minimized and mitigated for the impacts of incidental take; (3) adequate funding is provided for the conservation plan, and the Plan specifies procedures to deal with unforeseen circumstances; (4) the taking will not appreciably reduce the likelihood of survival and recovery of the species in the wild; (5) any additional measures required by the USFWS as necessary or appropriate for purposes of the plan will be met; and (6) any other assurances required by the USFWS to ensure the plan is implemented are provided (50 C.F.R. §§ 17.22(b)(2)), 17.32(b)(2)). These determinations will be made based on the effectiveness of the Operating Conservation Program, including the Mitigation Lands, in avoiding, minimizing, and mitigating for the effects on Covered Species and habitat types resulting from the Covered Activities.

While the USFWS is encouraged to apply consistent mitigation measures for the same species covered by separate HCPs, mitigation standards may vary for HCP efforts where such “differences are based on biological or other good reasons and are clearly explained” (see Handbook, p. 3-23). Consistent with this guidance, the Biological Resources Technical Memo, Chapter VII of the NBHCP, and the EIS/EIR have been prepared to demonstrate that the Operating Conservation Program, including the 0.5:1 mitigation ratio, minimizes and mitigates the impacts to Covered Species to the maximum extent practicable in accordance with the ESA, and fully mitigates and minimizes impacts in accordance with CESA.

A key difference between the NBHCP approach and other HCPs for the same covered species is that the NBHCP mitigation requirements apply to all Planned Development within the Permit areas regardless of habitat quality. In this regard, the NBHCP mitigation

ratio will be applied to mitigate even for the loss of lands with marginal or limited habitat value. This is different from the approach used in many other HCPs in which the mitigation requirements apply only to those projects resulting in the actual loss of covered species or their associated habitats and where the number of covered species associated with the habitat types that will be lost would be substantively greater. For further information on other HCPs, refer to Master Response 1 (Mitigation Ratio).

The NBHCP also explains that the 0.5:1 ratio mitigates to the maximum extent practicable the impacts of incidental take because TNBC Mitigation Lands will be of greater habitat value than the existing agricultural land converted to urban development; most of the land to be developed is either of limited value as habitat or serves as habitat to a limited number of Covered Species; opportunities for restoration and species reintroduction will be provided; and numerous migratory bird species would have increased opportunities to use the Basin. Additionally, the Mitigation Lands will be actively monitored and adaptively managed in perpetuity to minimize the numbers of Covered Species and habitat quality to achieve the Plan's biological goals and objectives. Finally, the Mitigation Lands will be consolidated into large, biologically viable units with connectivity between individual reserve units (see Draft NBHCP, p. IV-6). For example, Covered Activities would result in the loss of 21 acres of wet areas and ponds and 404 acres of canals. Because of the combined effect of the managed marsh requirement, connectivity between reserves, and the 0.5:1 mitigation ratio as applied to all Planned Development in the Permit Area, these impacts will be compensated by the provision of 2,187.5 acres of managed marsh habitat, which is equivalent to more than a 100 percent increase in marsh habitat for giant garter snake and other wetland-dependent Covered Species.

Finally, the NBHCP Operating Conservation Program consists of more than just the 0.5:1 mitigation ratio; it includes avoidance of impacts both within and outside the Permit Areas, extensive restoration and enhancement activities, adaptive management, and species survey and monitoring requirements. Thus, the NBHCP's Operating Conservation Program is consistent with the conservation strategies employed by other HCPs that include some of the same Covered Species. The commentor also is referred to the Master Response 1 (Mitigation Ratio).

d. The commentor states that the Natomas Basin supports critical populations of giant garter snakes and Swainson's hawks. Although the term "critical populations" is not clearly understood (the Natomas Basin is not officially designated critical habitat for either species), the Applicants agree that the Natomas Basin is very important to both species as evidenced by the cited reports.

e. The commentor notes that degradation to habitat has occurred as a result of both development authorized under the 1997 NBHCP and various activities that are not necessarily authorized or controlled by the Applicants or the Wildlife Agencies. Normal agricultural practices such as crop rotations affect habitat within the Natomas Basin. The comment that Water Agency vegetation removal has intensified is neither supported nor quantified by the commentor.

f. The commentor states that TNBC rice farming practices are conventional and do not offer management techniques uniquely supportive of the species. Pages IV-21 through IV-22 of the Draft NBHCP include information on the management of rice reserves to support the

giant garter snake. In addition, a Site Specific Management Plan is prepared for each rice reserve to maximize support of the species. TNBC further employs the following best management practices to support the species:

- Selection of informed, first-rate rice farming contractors. Using its discretion as a private, non-profit corporation, TNBC selects top-quality, conservation-minded farmers. Reserve rice growers work in partnership with TNBC to fulfill the goals of the NBHCP. They also make recommendations periodically to TNBC on how to best accomplish mutual goals. They work with TNBC to make the most of the interface between rice farming and managed marsh as several rice farms discharge prey-rich (for giant garter snakes) rice tailwater directly onto the Mitigation Lands. All are motivated to accomplish biological goals in support of the NBHCP since the incentives are based on conformance with the TNBC lease requirements rather than incentives associated with conventional rice production.
- Grower participation in mortality avoidance and reporting. An unpublished study in the mid-1990s by the California Rice Industry Association determined that the largest mortality of giant garter snakes in the Sacramento Valley's rice production region was from human interaction. Most specifically, it was snake death from being run over by motor vehicles and field hands seeing a snake and killing it with a shovel. TNBC's farming contractors know this and work to cooperate and be sensitive to snake issues, and this is accomplished through the farmer/contractor selection process (see #1 above) as well as continuing communication and education of the farmer/contractor. Additionally, growers are requested to report to TNBC any dead giant garter snakes they may find in their normal course of farming. This will help TNBC with its information base regarding the giant garter snake.
- Lease elements and provisions; adaptability. TNBC leases with rice farming contractors are an excellent tool for achieving compliance with practices friendly to the giant garter snake. The leases include several provisions that make rice farming throughout the Mitigation Lands more sensitive to giant garter snake safety. These include requirements regarding rodent control, vegetation management, and farm chemical safety, for example. Most importantly, as more is learned and giant garter snake habitat defined, future leases can be adapted to accommodate new information and thus influence rice farmer activity in the most beneficial manner.
- TNBC giant garter snake monitoring and identification of sensitive locations. Through TNBC's annual monitoring of giant garter snake populations in the Natomas Basin, it now has an excellent understanding of the location of these populations. Knowing this, TNBC has visited the sites with rice farming contractors and others related to the rice farming enterprises (e.g., Reclamation District personnel) and highlights those areas as sensitive, key localities around which to be careful and to report any unusual activity to TNBC.
- Fallowing for sustainability and prey diversity. TNBC has adopted as a management practice the fallowing of certain portions of its rice fields. California rice is one crop where back-to-back crops are planted, and much of the industry plants rice on the same ground every year. TNBC has placed into its Finance Model a 10-percent fallowing factor on its rice fields. (TNBC is careful not to fallow in such a manner that any water

conveyance structure important to the giant garter snake or other Covered Species is dried up.) Not only does this fallowing regime provide relief from excessive herbicide treatment needs, it also is helpful in controlling plant disease and the need for application of fungicides. Generally, this fallowing strategy helps make the 50-percent Mitigation Land allocated to rice more sustainable over the long term. Moreover, reduction of a monoculture effect can also be helpful in creating diversity that is expected to benefit the giant garter snake in terms of prey base and health. Most farming operations do not have the economic flexibility to be able to fallow in this manner. TNBC does because its goal is species mitigation rather than maximizing economic return on investment.

- Day-to-day operations and land management refinements. TNBC's management, in its daily operations with rice farming contractors, consults with these farmers on a regular basis. Periodically, questions surface regarding agronomic practices. TNBC management always recommends the most favorable biological solutions to problems, consistent with the farming contractor's ability to farm in an economic manner. Conventional operators, by contrast, would most likely resolve whatever issue surfaces in the most expeditious manner possible. TNBC's practice in this regard even extends to ancillary farming contractors. For example, TNBC's management meets with the aerial applicators serving the Natomas Basin and provides education as to sensitive preserves and even uses aerial photos to designate precise locations of all TNBC preserves.
- Controlled access and conflicting activity separation. One of the components of the NBHCP is to control human access to the Mitigation Lands because part of the theory of the NBHCP is that as habitat is lost to Planned Development, the displaced Covered Species can take refuge on the Mitigation Lands. To allow urbanization activity on these refuge areas would be to defeat one of the principles of the NBHCP. TNBC controls access to its rice fields like no other rice farm landowner in the Natomas Basin. Signage, fencing, gating, patrolling, and neighbor communications are all a part of this function. This helps with the reduction of potential for giant garter snakes being driven over by vehicles and unknowledgeable people feeling compelled to kill snakes.
- Integrated Pest Management. TNBC recommends to its farmers and uses as a reference the University of California Regents' publication, *Integrated Pest Management for Rice, Second Edition* handbook. Integrated Pest Management attempts to use the smallest number of chemicals and disruptive practices necessary to farm economically. The Integrated Pest Management rice farming principles and protocols are fortified by the research and direction of some of the world's leading rice scientists, many of whom are affiliated with the University of California and the International Rice Research Institute. In sum, adhering to these practices and principles minimizes disruption, improves water quality, and creates a more sustainable rice farming environment.

Regarding the use of "Warrior" pesticide, Warrior® is the most commonly used insecticide in California rice, designated to address infestation problems by the most destructive insect pest facing California rice growers, the rice water weevil, (*Lissohoptrus oryzophilis* Kuschel). Non-chemical treatment options for growers mainly consist of the complete removal of all levee vegetation. TNBC management seeks to leave as much non-crop vegetation available as is reasonably practical around rice fields for the benefit of the

Covered Species. Thus, under the existing ITP, TNBC allows careful use of insecticide rather than vegetation elimination and the greater impacts to the species created by vegetation removal. This is particularly true of a product (Warrior®) that is not applied on 100 percent of the crop and not applied every year. In addition, use restrictions on the product are tightly controlled. Warrior® is not permitted to be used near open-water, non-rice paddy areas. Growers typically use this product when they experience economic loss or the expectation of economic loss due to the rice water weevil. Given its price, growers would be very unlikely to use it indiscriminately. Finally, all leases TNBC extends to rice farmers contain the following phrase or a phrase that is very similar:

Tenant shall apply all fertilizers, pesticides and other sprays and chemicals (collectively, “Substances”) necessary for crop production on the Premises strictly in accordance with applicable laws, statutes, ordinances and regulations of all federal, state, county and city bodies having jurisdiction in such matters, and the manufacturer’s directions for the safe and effective use of such Substances. If Landlord becomes aware that any Substance available for use on rice or any other crop grown on the Premises is harmful to the giant garter snake or the Swainson’s Hawk, then Landlord shall have the right to prohibit the use of such identified Substance on the Premises.

TNBC staff have met with the product’s manufacturer and registrant for extended product use safety discussions. TNBC has also had multiple discussions with key staff of the California Department of Pesticide Regulations and periodically reads annual pesticide use reports published by the department to be alert to potential conflicts with the NBHCP’s rice field guidelines. Nonetheless, mindful of this product’s ability to do harm, TNBC staff advises that it would not hesitate to withdraw the product’s availability to TNBC-contracted farmers. The EIR/EIS reviews the potential water quality impacts of the use of pesticides on Mitigation Lands (page 4-21 of the Draft EIR/EIS) and concludes that TNBC’s practices would not present any new or significant water quality impacts compared to ongoing management practices. Regardless, the use of pesticides by TNBC is not a Covered Activity.

g. The commentor states that the commitment to 25 percent of the Mitigation Lands to managed marsh is not based on scientific evidence to support the giant garter snake’s use of managed marsh. The commentor is referred to Section II.C.2 of the NBHCP for a detailed description of the habitat needs and requirements of the giant garter snake. Additional supporting information can be found in the Biological Resources Technical Memo included as Appendix H of the NBHCP. Both these reports and their conclusions regarding the habitat needs of the giant garter snake are based on substantial biological information and consultation (see bibliography for both the NBHCP and the Biological Resources Technical Memo). This extensive information regarding the giant garter snake habitat is summarized on pages II-11 - 12 of the Draft NBHCP.

Based on this research, the Applicants determined that a mix of managed marsh and rice lands could best support the habitat needs of the giant garter snake. As noted above, native marsh is nearly non-existent in the Natomas Basin. Planned Development in the Permit Areas would affect 21 acres of wet areas (ponds and other marshy or wet areas). In turn, the NBHCP would create 2,187.5 acres of new marsh lands managed to support the Covered Species with an emphasis on the needs of the giant garter snake.

h. The commentor is concerned that rice reserves and managed marsh will benefit only the giant garter snake and will not provide comparable benefits to the Swainson's hawk. The biological analysis conducted for the NBHCP found that the Swainson's hawk uses a variety of habitat including the edges of rice fields and fallow rice fields (see pages II-15 - II-18 of the Draft NBHCP and the Addendum to the Biological Resources Technical Memo—Appendix K of the Final NBHCP). As such, the NBHCP requires TNBC to fallow 10 percent of the rice reserves annually to provide for additional foraging areas for the Swainson's hawk and other birds of prey. Additional information on policies for management of rice reserves to support the hawk are included on pages V-18 - V-20 of the NBHCP.

Regarding the marshlands, as noted in the Response to Comment O1-7(g), managed marsh must include upland edges for the giant garter snake and a variety of other species. Page VI-17 of the Draft NBHCP, therefore, describes the required upland edges for managed marsh (approximately 20 to 30 percent of managed marsh area) to provide basking, cover, and hibernacula for giant garter snakes and foraging and nesting areas for species such as the Swainson's hawk. Additionally, upland edges of marsh and rice fields attract a variety of smaller rodents and support a prey base for the hawk, thus demonstrating that the needs of the giant garter snake and those of the Swainson's hawk are not in conflict or competition.

Response to Comment O1-25

The following response addresses issues of connectivity related to the giant garter snake. Additional discussion on this issue is provided within Master Response 2 (Connectivity), Response to Comment G3-11, and Comment Letter I5.

The Draft NBHCP is designed to provide a system of Mitigation Lands with adequate connectivity between reserves. The NBHCP evaluates the impacts of take associated with the loss of canals within the Permit Areas and identifies mitigation required to offset the impacts of take. The commentor notes that some channels have been or will be lost as Planned Development occurs within the Permit Areas of the City and Sutter County. This is a correct statement, and the EIR/EIS has considered the loss of canals within the Permit Areas. The success of the NBHCP relies not upon the canals located within areas of Planned Development, but rather upon canals located outside of the Planned Development areas and adjacent to existing and future Mitigation Lands; the exceptions to this are the major drainage canals identified on Figure 17 of the NBHCP and noted as "most likely to remain."

The commentor states that the primary drainage canals located within the City's Permit Area have been "severely degraded" and that they are "no longer functional connectivity habitat." This statement is not supported by evidence and suggests a misunderstanding of the concept of connectivity. These canals continue to provide for the migration of giant garter snake within the Basin. They do not provide a combination of wetland and upland habitats that support the complete life cycle of the giant garter snake, and the NBHCP does not rely upon these canals for such habitat.

The commentor further discusses the impacts associated with the MAP project. While MAP is considered in the analysis of Planned Development within the Basin, it is not a Covered Activity in the NBHCP. As such, comments related to the specific design and impacts of MAP are not addressed under the NBHCP of the associated EIR/EIS. The NBHCP and EIR/EIS do consider the MAP project with respect to overall Basin connectivity and

conclude that adequate connectivity will be maintained at build-out of Planned Development, including development of MAP.

The commentor states that the configuration of the South Sutter County Specific Plan would destroy wildlife connectivity within the Basin. As noted above and within Master Response 2 (Connectivity), the major drainage canals will continue to provide for migration of the giant garter snake within the Basin, and minor drainage and irrigation channels anticipated to remain would provide further opportunities for connectivity within the Basin. The commentor states that an intended 1,400-acre wastewater disposal area, in conjunction with Planned Development, would result in a complete barrier to wildlife migration. The land discharge of treated wastewater is an alternative under consideration by Sutter County through the South Sutter County Specific Plan process. The wastewater disposal area would not be a barrier to wildlife migration because, if this alternative were to proceed, a total of 500 acres of land would be required for surface application of tertiary treated wastewater. Beyond the error noted in the comment regarding acres required for surface application, there is no evidence offered that such use of tertiary treated wastewater for agricultural purposes would have any detrimental affect on wildlife. The tertiary treatment of wastewater results in water quality levels determined to be appropriate for use within public parks where human exposure will occur. For the reasons described above and discussed further in Master Response 2 (Connectivity), it is not anticipated that impacts associated with biological connectivity would substantially reduce the long-term viability of giant garter snake within the Basin.

The commentor states that the NBHCP lacks provisions to ensure connectivity. In response to this concern, additional provisions have been included within the NBHCP to support Basin connectivity (see Master Response 2 [Connectivity]).

The commentor questions the position that the NBHCP promotes compact growth because of the size of the Permit Area in Sutter County and the Joint Vision proposal under consideration by the City and the County of Sacramento. The Sutter County Permit Area includes 7,467 acres of Planned Development within an overall Sutter County portion of the Basin that totals 16,882 acres. Not only does this leave 9,415 acres of Sutter County with no incidental take coverage, it also provides no coverage to the 1,015-acre portion of the Industrial/Commercial Reserve located within the Swainson's Hawk Zone. These areas are not anticipated to be developed within the 50-year term of the ITPs. With regard to the Joint Vision planning effort, the Draft NBHCP does not provide take coverage for any development that may be proposed in the future by the County of Sacramento or by the City beyond the 8,050 acres included within the City's Permit Area.

The NBHCP considers aquatic connectivity, and Master Response 2 (Connectivity) addresses this issue in detail. The configuration of Planned Development has been evaluated, and it has been determined that adequate connectivity will likely be provided through the existing drainage and water delivery channels that will remain in the Basin. If it is determined that additional measures are required to protect key connectivity corridors, then such measures will be identified and implemented through the adaptive management provisions of the NBHCP.

The NBHCP does include general guidelines for canal management for the Water Agencies in the event that the Water Agencies choose to seek coverage under the NBHCP for take

related to mechanical activities. However, the management practices outlined in the NBHCP do not differ substantially from historic practices employed by the Water Agencies. Under the historic practices of the Water Agencies, the giant garter snake has persisted. Implementation of the NBHCP will not substantially affect the Water Agencies' canal activities in areas outside of the City and Sutter County Permit Areas. Based upon the analysis contained within the EIR/EIS, the success of the NBHCP Operating Conservation Plan does not rely upon the Water Agencies' participation in the NBHCP. Rather, the Plan's success relies upon a combination of Mitigation Land that will be managed and enhanced by TNBC, monitoring requirements to track the success of Covered Species, adaptive management provisions of the Plan, and the avoidance and minimization measures applied to Covered Activities undertaken by TNBC and proponents of Planned Development.

Through the analysis in the EIR/EIS (supported by the Economic Analysis and the biological analyses), it has been demonstrated that a mitigation ratio of 1:1 is not feasible [see Master Response 1 (Mitigation Ratio)]. The biological analysis conducted within the EIR/EIS has determined that the 0.5:1 mitigation ratio, in conjunction with the other avoidance, minimization, and mitigation measures contained in the NBHCP, would result in less than significant impacts. There is no basis to support a higher mitigation ratio, and there is no evidence that such a higher ratio would improve connectivity within the Basin.

Response to Comment O1-26

As noted, the Water Agencies are not currently seeking to participate in the NBHCP as currently drafted. The lack of participation by the Water Agencies does not, however, undermine the biological viability of the NBHCP. Given the long history of the Water Agencies' management of channels within the Natomas Basin, it is evident that the Basin population of giant garter snakes has adapted to some extent to the Water Agencies' canal maintenance practices. While the NBHCP does provide canal management guidelines for the Water Agencies, these guidelines are not dramatically different from current practices of the Water Agencies. Additionally, the Water Agencies may be at risk from enforcement actions under the ESA and CESA by the USFWS and CDFG, respectively, if their canal management practices result in take of listed species. Thus, it is in the best interest of the Water Agencies to incorporate measures similar to the NBHCP canal guidelines within their regular operations, regardless of their formal status under the NBHCP.

Response to Comment O1-27

The comment states that potential take will not be prevented because of wastewater contamination in Sutter County and states that the ITP for Sutter County should be conditioned on the completion of public wastewater infrastructure. Although the commentor is correct that the South Sutter County Specific Plan may include, as an option, a conceptual wastewater treatment and disposal system for the South Sutter County Specific Plan area (as described in the Infrastructure Master Plan referenced in the comment), there is no evidence that this conceptual system would result in unregulated contamination. Specifically, the unfounded conclusion of contamination does not consider the following extensive safeguards, detailed design, and environmental review processes that would apply if Sutter County decided to select a wastewater disposal option:

- Waste discharge to land is regulated by the Central Valley Regional Water Quality Control Board and the Department of Health Services. Extensive regulatory review will be required prior to the development of Sutter County's land disposal system, including subsequent environmental documentation.
- Characterization of the effluent stream will be required. Wastewater constituents from a commercial/industrial area will change as the site develops and as businesses change from time to time.
- Specific requirements will be imposed for the discharge area, including: (1) site containment to limit the possibility of release of wastewater beyond the discharge area, probably through the use of berms around the discharge area; (2) a specific crop management plan (e.g., farming rice, corn, Sudan grass, or other crops) to be reviewed by the Regional Board to ensure that nutrients and other wastewater constituents are used by crops and do not percolate to groundwater; (3) disposal requirements for crops that might contain high levels of metals and other pollutants; (4) storage requirements for wastewater generated during the non-irrigation season (the Infrastructure Master Plan references a planned 100-acre detention pond); and 5) extensive monitoring.

As the commentor correctly notes, the conceptual wastewater disposal area, if approved, would be outside the Permit areas covered by the NBHCP. The facilities, however, would not eliminate wetland and upland habitat values. The Covered Activities under the NBHCP would generally include all infrastructure components (e.g., pipelines and the treatment facility) within the Specific Plan area and in other areas within Sutter County's Permit Area. Related activities outside of the Permit Area, including the construction and operation of a land treatment system and the construction of an outfall facility to the Sacramento River) are not Covered Activities in the NBHCP. The USFWS has determined that it is acceptable to allow continued action on Sutter County's application because the proposed land discharge system is speculative and will be subject to extensive revision following review by the Regional Board and Department of Health Services. In addition, a thorough study of potential effects on giant garter snakes and other receptors is infeasible at this time because it is not possible to characterize the effluent from unknown future industries in the Specific Plan area. Nonetheless, compliance with adopted water quality standards and RWQCB requirements would ensure that a disposal option would not result in significant effects. In addition, if a wastewater disposal option were to be implemented that included tertiary treatment, then this may result in additional foraging habitat opportunities for certain Covered Species, including the Swainson's hawk. In addition, the NBHCP does not include surface disposal of treated wastewater as a Covered Activity, and such disposal methods, if pursued in the future, would be subject to full review under CEQA and would require authorization by the Regional Water Quality Control Board. To assume this method of wastewater disposal will occur is premature and speculative at this time.

Response to Comment 01-28

Extensive analyses based on peer-reviewed scientific studies and field verification have been conducted in order to demonstrate that the NBHCP does not jeopardize the continued viability of Covered Species. The NBHCP requires TNBC to acquire Mitigation Lands that would ensure preservation of high-value habitat areas with known populations of Covered Species and/or restoration of habitat. While Mitigation Land acquisitions may occur outside

the Permit Areas, including lands within Sutter County and Sacramento County, Mitigation Land acquisitions are restricted within the Permit Areas to minimize the potential impacts on the system of reserves resulting from incompatible land uses. Such reserve acquisitions within the Permit Areas of the City and Sutter County may occur only with the approval of the affected Land Use Agency and the Wildlife Agencies.

The commentor correctly notes that Figures 12 and 13 show giant garter snake and Swainson's hawk (respectively) records. Figure 13 shows, however, active nesting sites for the Swainson's hawk, the majority of which are concentrated along the Sacramento River or within 1 mile of the river. The active nest sites are concentrated along the Sacramento River regardless of the jurisdictional location (Sutter County, Sacramento County, or City of Sacramento). The majority of nest sites are in Sacramento County and also along the river in part because the Sacramento County portion of the Natomas Basin has a substantially greater area of frontage along the Sacramento River. For this reason, the NBHCP designates a Swainson's Hawk Zone for limited development in order to preserve established nesting areas. Further, the Draft NBHCP includes substantial policy guidance regarding acquisition of upland reserves within the Swainson's Hawk Zone. Specifically, pages V-18 to V-19 of the Draft NBHCP state:

- (1) TNBC, in conjunction with the Land Use Agencies, will monitor proposed development in the Swainson's Hawk Zone, where the majority of known Swainson's hawk nest sites are currently located and, hence, much of the Swainson's hawk nesting and foraging in the Basin occurs. Based on existing general plans and the City's and Sutter County's NBHCP Permit Areas, development in this zone is expected to be limited over the life of the Plan. However, if the NBHCP is amended and such development does occur, Mitigation Lands established for such development shall, likewise, be located within the Swainson's Hawk Zone. *In addition, TNBC shall set as a top priority the acquisition of upland reserve sites in the Swainson's Hawk Zone (via easement or land purchase).* [Emphasis added] Further, any reserve lands established in the Swainson's Hawk Zone shall, to the maximum extent possible, be managed to benefit all upland-associated Covered Species, though any management in this zone must be fully consistent with Swainson's hawk biology and needs.

In addition, the upland acquisition criteria on pages IV-25 and 26 of the Draft NBHCP state:

Generally, priority for acquiring upland habitat is as follows (in descending priority order): (1) sites located within the Swainson's Hawk Zone; (2) sites that, in the judgment of TNBC and the Technical Advisory Committee, would provide specific, important benefits to other upland-associated Covered Species (e.g., tricolored blackbird nesting colonies); (3) sites supporting Swainson's hawk nests or foraging habitat outside the Swainson's Hawk Zone; (4) sites that would provide a good potential for enhancement of upland habitat values; and (5) any other site that would result in a benefit to any upland Covered Species.

For these reasons, the Applicants disagree that the NBHCP mitigation program does not seek to concentrate reserves where species use is known and concentrated. Prior to the Settlement Agreement, TNBC land purchases reflected willing sellers with land that either

currently supported the species or could be enhanced to support the Covered Species. The commentor states that the TNBC did not acquire lands in Sacramento County (prior to the Settlement Agreement) because the TNBC did not request the City to raise the Mitigation Fee. This is not true. In fact, TNBC has acquired significant acreage in Sacramento County prior to the Settlement Agreement, and, in addition, the history of the Mitigation Fee shows steady increases reflective of mitigation costs, including land costs. Table VI-3 of the NBHCP (Draft NBHCP page VI-7) shows the history of the City of Sacramento Mitigation Fee.

The Executive Director of TNBC serves under a Board of Directors. Together the Executive Director and the Board are tasked with securing mitigation sites that reflect multiple acquisition criteria to meet the requirements of the Operating Conservation Program. Among these requirements is that TNBC acquire one 2,500-acre parcel that is contiguous. It makes sense to assemble this large contiguous area early, consistent with a practical and reasonable long-term land acquisition strategy. Because the Sacramento County portion of the Basin is more urbanized, because of the significant presence of the Sacramento International Airport there, and because of the presence of I-5 and S.R. 99, acquiring 2,500 acres of contiguous Mitigation Land in Sacramento County would be far more difficult and may ultimately be impractical.

It is also true that there are larger tracts of land available in Sutter County than in the Sacramento County portion of the Natomas Basin. TNBC sees larger-tract acquisitions as an opportunity to derive more benefits from each purchase. Very few large tracts of privately held land remain in the Sacramento County portion of the Basin.

The commentor states that TNBC “will likely resume the past practices of buying mostly lower-cost properties in Sutter County.” TNBC is in fact assembling contiguous blocks in three key areas: (1) North Basin preserve area (five tracts totaling 1,051 acres), which lies in the northwest portion of the Basin; (2) Central Basin preserve area, (five tracts totaling 1,231 acres) of which 99 percent of which lies within the Sacramento County portion of the Natomas Basin and the South Basin preserves, also called the Fisherman’s Lake preserves, which consists of four tracts totaling 258 acres. As TNBC moves toward consolidating these three major preserve areas, of which two out of three lie in Sacramento County, it only makes sense that TNBC will continue the effort to consolidate them as described above.

Response to Comment 01-29

The commentor is concerned that acquisition of Mitigation Lands outside of the Basin may jeopardize the survival of Covered Species such as the Swainson’s hawk and giant garter snake. The commentor is correct that the NBHCP allows up to 20 percent of the Mitigation Lands to be acquired in Area B, which is located to the immediate north of the Basin. The ability of TNBC’s Board to approve acquisitions in this area is, however, subject to substantial conditions, including the requirement that the Mitigation Lands provide habitat for one or more of the Covered Species. Foremost is the requirement that land acquisitions in Area B must first be “approved in writing by USFWS and CDFG based on available scientific information that a reserve of adequate size, viability, and habitat value can be established in this area and can support a population of giant garter snakes, Swainson’s hawk and other Covered Species” (p. IV-12 of the Draft NBHCP). Thus, the NBHCP’s extensive technical analysis was conducted to demonstrate that such acquisitions would not

jeopardize the survival of the Covered Species because such acquisitions can occur only if there is evidence that the land will support the Covered Species

Response to Comment O1-30

The NBHCP does not rely on existing agriculture remaining in the Natomas Basin as mitigation, but the effectiveness of the NBHCP depends upon the availability of some portion of the Basin as foraging habitat. See Responses to Comments O1-13(a) and O3-13. As the commentor notes, changes (particularly related to agricultural practices) do occur outside the Permit Areas and the Mitigation Lands. The Applicants do not control these areas because these areas are not within the Applicants' land use jurisdictions, and other parties have decided not to participate in the NBHCP. The NBHCP does, however, include an adaptive management section (p. VI-22) that suggests that adaptive management may be necessary if there are "significant land use changes outside the TNBC reserve system." The commentor also is referred to the Addendum to the Biological Resources Technical Memorandum. Also see the NBHCP text revisions in the Final NBHCP, which includes a new Section IV.C. entitled, "Foraging Habitat," which discusses the NBHCP's measures to respond to the possibility that, over the 50-year term of the Permits, future changes in foraging habitat could occur outside the Mitigation Lands.

Response to Comment O1-31

The NBHCP conservation program does not rely upon the assumption that Sacramento County will voluntarily retain existing agricultural zoning in the Swainson's Hawk Zone. Nonetheless, the effectiveness of the NBHCP conservation program in mitigating for impacts of take associated with loss of foraging habitat depends, in part, on the assumption that foraging habitat will remain outside the Permit Areas. Also see the Addendum to the Biological Resources Technical Memorandum (Appendix K of the Final NBHCP), Master Response 5 (Swainson's Hawk Foraging Habitat), and the NBHCP text revision cited in Response to Comment O1-30. With regard to ministerial projects in unincorporated Sacramento County and the potential for the undeveloped lands to become agricultural-estate lots, see Master Response 4 (Cumulative Impacts) and Response to Comment O3-13. With regard to the long-term disposition of the Swainson's Hawk Zone, see Response to Comment I4-6.

Response to Comment O1-32

The commentor is referred to Response to Comment O3-15 and Master Response 2 (Connectivity) regarding water supply.

Response to Comment O1-33

The NBHCP does not assume expansion of the SOI area under the City/County Joint Vision planning effort. The NBHCP and its associated Permits will authorize incidental take associated with the Planned Development of 17,500 acres (8,050 acres for the City in the North and South Natomas Community Plan areas, 7,467 acres for Sutter County, and 1,983 acres for Metro Air Park). The Applicants consider the NBHCP's Operating Conservation Program to be effective in mitigating for the impacts of take associated with development of 17,500 acres. The Applicants do not, however, assume that the Operating Conservation Program would be effective in mitigating for the impacts of incidental take for any

development, if it were to occur, beyond the 17,500 acres. If any of the Land Use Agencies consider approving development beyond their allocation, including any development beyond the existing SOI area, the agency must amend the NBHCP or create a separate HCP to obtain coverage for incidental take associated with such additional development. Before such an amendment or new HCP could be approved, associated amended or new ITPs could be issued, and development could be approved, a significant biological evaluation must be completed to prove that the Operating Conservation Program proposed to mitigate the impacts of said increased development is adequate to meet ESA and CESA findings. The commentor is also referred to Master Response 3 (Joint Vision) and Master Response 4 (Cumulative Impacts).

The Joint Vision is also studying the provision of a permanent open space area along the east side of the Sacramento River in Sacramento County coinciding with the Swainson's hawk mitigation zone. The commentor states three impacts were not addressed in the NBHCP and EIR/EIS. Responses to each of these comments are as follows:

1. The commentor is referred to Master Response 3 (Joint Vision) and Master Response 4 (Cumulative Impacts). There are no proposals anticipated that would result in the development of 27,500 acres in the Basin. The Joint Vision is in the early stages of developing a regional growth approach to help curb the pressures on the Natomas Basin for continued development. At the time the Draft EIR/EIS was released, this planning and analysis effort was not under way. Since that time, the City and Sacramento County have initiated planning and studies to determine the extent, location, and amount of development that could proceed if the existing SOI was expanded. However, at this time, insufficient information is available to determine the nature of such development. Consequently, it would be inappropriate to evaluate all of the 10,000 acres suggested by the commentor because certain conditions may limit the ability to develop within this area. For example, a one-mile "community separator" may be considered along the Sacramento / Sutter County line on the Sacramento County side, which would eliminate areas that could be considered for development. Similarly, a large portion of the 10,000 acres is in a floodplain and would need to be removed from the floodplain at great expense before it could be developed or else it would not be developed. If development were to proceed, in order to comply with ESA, adequate mitigation area must be set aside to provide protection for the giant garter snake, a known inhabitant of the waterways outside the Permit Areas.
2. An amended or new HCP would need to be approved and amended or new ITP would need to be issued if any development were to be considered outside of the Permit Areas. If the development would result in jeopardy to the giant garter snake, USFWS would not issue a permit.
3. Landowners outside of the Permit Areas are aware of the limitations of developing the property (i.e., floodplain issues and mitigation for the giant garter snake). They have also witnessed the substantial increase in acquisition costs of Mitigation Land to implement the NBHCP to date and know the value of anticipating the need for habitat land in their business plans. They will likely provide Mitigation Land onsite or buy land suitable for transfer to TNBC early in the process. They have also experienced the delays in North Natomas development as a result of the unavailability of Mitigation Land.

Response to Comment O1-34

Foreseeable development is evaluated in the NBHCP and the EIR/EIS. See Master Response 3 (Joint Vision) and Master Response 4 (Cumulative Impacts). With regard to the comment about small-scale projects in unincorporated Sacramento County, see Response to Comment O3-13.

Response to Comment O1-35

The NBHCP and supporting biological and economic analyses have been developed to demonstrate that the Applicants would minimize and mitigate to the maximum extent practicable the impacts of incidental take. The commentor is referred to the Response to Comment O1-42. The comment lists several of the alternatives evaluated in the EIR/EIS and states that the burden is on the Applicants to demonstrate that the alternatives are not practicable. As discussed in the NBHCP EIR/EIS (Section 2.8):

Both CEQA and NEPA require the identification of an environmentally preferable ([Council on Environmental Quality NEPA Guidelines, Section 1505.2(b)) or superior (CEQA Guidelines, Section 15126(e)(2)) alternative.

Alternative 2, Habitat-Based Mitigation, was identified as the environmentally preferable/superior alternative because it would provide the greatest mitigation (17,763 acres of habitat reserves). It is important to note, however, that identification of an environmentally preferable alternative is not the sole basis on which the Lead Agencies either can or should select a project alternative. It is also important to note that the proposed project (as defined in the NBHCP) has been developed to meet the requirements to mitigate to the maximum extent practicable and that selection of an alternative other than the environmentally preferable alternative does not compromise such a determination for the proposed NBHCP [See Master Response 1 (Mitigation Ratio) for additional discussion of the effectiveness of the NBHCP at demonstrating how the assessment of “maximum extent practicable” is applied].

The Council on Environmental Quality (CEQ) recognizes that the environmentally preferable alternative may differ from the preferred alternative (NEPA’s Forty Most Asked Questions, Question 6(a)). As noted in Question 4(a) of NEPA’s Forty Most Asked Questions,

The “agency’s preferred alternative” is the alternative which the agency believes would fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors. The concept of the “agency’s preferred alternative” is different from the “environmentally preferable alternative,” although in some cases one alternative may be both.

As noted above in the context of CEQA and NEPA consideration of alternatives and in Response to Comment O2-12, Lead Agencies evaluate numerous factors in selecting a preferred alternative, including the need to meet the maximum extent practicable criterion. This criterion requires thoughtful evaluation of biological, legal, and economic considerations. The EIR/EIS focuses on the biological considerations and a separate economic analysis (see Appendices A and H of the NBHCP) focused on the economic aspect

of the maximum extent practicable analysis. This comment letter contains specific attached letters that include comments on the economic analysis of the NBHCP, including the economic feasibility of the various alternatives evaluated in the EIR/EIS. See Responses to Comments O1-42 through O1-60 for the specific rationale for selecting the most feasible alternative that considers all the varied decision elements on which the Lead Agencies based their selection of the preferred alternative.

Response to Comment O1-36

For several reasons, the general discussion in the preliminary staff report on the mitigation ratio in the Joint Vision in Natomas is a preliminary conceptual document. First, the Joint Vision process is a planning effort in its early stages that requires extensive analyses and biological assessments in order to determine the amount, location, and extent of development, should it occur within the Basin. Secondly, because the amount, location, and extent of development have not been determined, impacts and mitigation requirements have not been defined. Additionally, there has been no indication that substantial portions of any open space preserved under the Joint Vision would be preserved as wildlife habitat reserves or managed sanctuary areas for wildlife. Moreover, the economic feasibility of development and the provision of open space have not been determined.

The costs of management for TNBC reserves would not be the same as the management costs of other open space. Management costs for open space vary widely depending on its uses. The management costs of a detention basin, for example, or a flood way corridor may be less than those for a golf course or a managed marsh. Regarding potential economies of scale, please see Response to Comment O1-59.

Regarding mitigation in advance, the NBHCP does require that the overall mitigation program maintain an advance of at least 200 acres for the precise reasons outlined in the comment. The advance mitigation criteria are described on page VI-8 and 9 of the Draft NBHCP.

The commentor cites third-quarter 2002 median home sales figures from the Gregory Group as justification for a higher habitat Mitigation Fee. The Economic Analysis (Appendix A of the NBHCP) regarding cost burden (Response to Comments O1-42 through O1-54) uses the fourth quarter 2002 sales figures for new homes in the Natomas Basin, which are more recent data. Regardless of quarterly changes in housing costs, the economic model is set up to reflect changes in land value which affect both the costs of new land for development as well as the costs for acquisition of reserve lands. Additionally, the cost burden related to the Mitigation Fee must take into account not only the fee level that the single-family-home market can bear, but also the burden that new commercial and industrial developments can bear. Thus, the comparison included in the letter of comment is not comparable nor does it provide a rationale for the commentor's conclusion that Mitigation Fees should be higher.

Response to Comment O1-37

This comment references attachments to the comment letter. Please see Responses to Comments O1-42 through O1-60.

Response to Comment O1-38

The basis for a determination of the less-than-significant finding in the EIR/EIS relevant to the issues raised in this comment and throughout the comment letter are addressed in Master Response 1 (Mitigation Ratio), Master Response 2 (Connectivity), and Master Response 4 (Cumulative Impacts). Please also see the Responses to Comments O1-1 through O1-60.

Response to Comment O1-39

The comment states that the proposed Mitigation Fee in the Draft NBHCP is inadequate because it assumes land prices of \$6,000 per acre as opposed to the estimated costs of Mitigation Lands between May of 2001 and September 2002 that ranged from \$7,500 to \$11,000 per acre.

It is important to note that in May of 2001, the City entered into an Agreement to Settle Litigation (or the "Settlement Agreement") that allowed for development of 1,668 acres in the Natomas Basin while the revised NBHCP was being drafted and the EIR/EIS was being prepared. The Settlement Agreement expired in October of 2002.

In June of 2001, the City adopted a revised Mitigation Fee of \$10,021 per acre of development that funds the additional costs expected as a result of the Settlement Agreement. This fee amount included a base fee amount of \$5,993 per acre, which assumed a base land acquisition cost of \$4,750 per acre, as well as a land acquisition premium of \$4,028. The combined fee provided for \$11,000 in land acquisition costs and an additional \$2,895 for transaction and contingency costs related to land acquisition.

It was anticipated that the cost of land in the Natomas Basin would be greater under the time frame of the Settlement Agreement (May 2001 to October 2002), and this was indeed the case, as noted by the commentor. Under the Settlement Agreement, the highest cost was \$11,000 per acre, and the last three land acquisition costs have ranged between \$7,500 and \$8,300 an acre. No land acquisitions have occurred since the expiration of the Settlement Agreement.

One of the primary reasons that land costs increased under the Settlement Agreement was that TNBC was directed to purchase land in specific areas, thereby sharply reducing the amount of land available for acquisition. With demand for land unaltered and supply restricted, land prices did indeed increase.

It was also anticipated, however, that after the Settlement Agreement expired and TNBC once again had the full range of options for acquiring land in the Natomas Basin and outside the Basin if the land met specified criteria, land prices would be restored to their pre-settlement levels. Therefore, NBHCP Economic Analysis did not apply the premium for land acquisition. Nonetheless, TNBC increased the cost for land acquisition in July of 2002 from \$6,000 per acre, including transaction costs and contingency (May 29, 2001), to \$7,525 per acre, including transaction costs and contingency. This increase was based on recent land acquisition costs and TNBC's best estimate of land costs in 2003. According to John Roberts, TNBC's Executive Director, the average (mean) cost of all acquisitions is \$5,985 per acre.

In addition, TNBC is currently 745.86 acres in surplus of its mitigation requirements. A large surplus of acres will alleviate pricing pressure on land acquisitions over the near term because it is possible that TNBC can use this surplus of land to improve its position regarding the timing of future acquisitions. When TNBC must resume land acquisition efforts, it can do so with more liberal time constraints (i.e., because of the availability of surplus Mitigation Lands, TNBC will not be compelled to acquire land in a relatively short period of time, which creates a buyer disadvantage and a seller advantage). Because TNBC has one of the largest influences on land prices for non-urbanized land in the Natomas Basin, this will have a softening impact on land prices and thus minimize the need to increase fees.

The fee calculated based on the Draft NBHCP (October 2002) for land acquisition was \$7,550, including transaction costs and contingency, and provides for an additional \$50 per acre to cover pre-acquisition survey costs.

If for some reason the upward pressure on land costs does not subside with the expiration of the Settlement Agreement, the Mitigation Fee will be adjusted accordingly, as has been the case every year since 1997. However, because of its inventory of surplus Mitigation Land, TNBC will likely know what land acquisition cost should be collected in the next year's fee amount.

Regarding the commentor's opinion that the Mitigation Lands will be only in Sutter County, please note that the TNBC to date has substantial holdings in Sacramento County (more than half of all reserve lands). See also Response to Comment O3-19.

Response to Comment O1-40

The funding mechanism for the NBHCP is adequate. The primary funding mechanism of the NBHCP (i.e., the Mitigation Fees paid by developers in the Natomas Basin), is adequate because there is a commitment to participate in the Plan.

North Natomas developers, who are landowners, have indeed committed to participate in the NBHCP through the Development Agreement process. The Development Agreements require that these landowners pay the existing Mitigation Fee at the time grading permits are pulled. If development ceases in the Natomas Basin, then future acquisitions of Mitigation Land would be unnecessary (except to provide mitigation for development that has occurred up until that point in time). Existing ongoing operations and maintenance of the Plan will be funded through NBHCP farming revenues and hunting revenues on existing properties and will be subsidized by the Endowment Fund, as is currently projected during the later years of the Plan. The Lead Agencies and the Applicants believe that funding is critical to the NBHCP. In accordance with USFWS's Section 10(a) Permit issuance criteria, the NBHCP's funding mechanisms have been developed to ensure that they adequately fund the NBHCP, as demonstrated by the extensive cash flow modeling contained in Appendix A of the NBHCP. The cash flow model used to calculate the Mitigation Fee includes a series of conservative assumptions and contingencies that are intended to ensure that TNBC will be operational and meet the objectives of the NBHCP through the life of the Permit period and beyond (in perpetuity). These assumptions and contingencies include:

- **Land Acquisitions:** The cash flow model includes conservative assumptions regarding

the location, size, and condition of the property acquired as Mitigation Lands. For example, although the NBHCP allows up to 20 percent of land acquisitions to be out of basin, to account for potentially higher costs from in-basin acquisitions, the cash flow model assumes that 100 percent of land acquisitions would occur in-basin.

- **Supplemental Fee for Land Acquisition:** In 2001, a supplemental fee was added to fund an advance purchase of 200 acres of habitat preserves.
- **Restoration and Enhancement (R&E) Contingency:** To account for potential increased R&E costs, the R&E fund fee includes a contingency of 15 percent above the projected R&E costs.
- **Administration Contingency:** A 15-percent contingency is included in the administration budget. Additionally, administrative costs are assumed on an annual basis, even after all land acquisitions are completed, to account for ongoing maintenance and stewardship beyond the Permit period.
- **Operations and Maintenance (O&M) Endowment Interest Earnings:** A conservative estimate of a nominal 3 percent interest rate is assumed. The cash flow model also assumes that when the O&M Endowment interest earnings are drawn down to supplement administration and O&M of the Plan, the principal accrued will generate 1.2 times the draw-down amount, and the fee is set accordingly. This ensures that Endowment Fund will continue to increase in value in perpetuity in order to fund ongoing O&M costs.
- **Allocation for Changed Circumstances:** As required by the NBHCP, the Supplemental Endowment fee was increased to provide for Changed Circumstances based on the potential costs that could arise in the event one of the NBHCP's enumerated Changed Circumstances were to occur.
- **Interaction of Funds:** Although the fee is based on the sum of several cost components, the portion of the fee funding TNBC's annual costs may be used for any of TNBC's annual activities given the priorities established by the NBHCP. Only the O&M Endowment Fund fee component is to be used entirely and exclusively for its respective purpose.

The commentor also suggests that the funding is inadequate essentially because one cannot predict the future. Because of economic influences outside the influence of the Lead Agencies and the Applicants, it is not reasonable or feasible to know with complete certainty the actual land costs, mitigation monitoring costs, O&M costs, and revenues every year for the next 50 years. There is no way to predict the future. Costs could increase or decrease depending on economic and market-driven changes, new advances in R&E techniques, and other factors. Nevertheless, even without the ability to know with certainty what the actual future land or management costs will be, the economic and cash flow model (funding plan) provides an accurate means (based on accepted economic modeling practices) for estimating costs and revenues and ensuring that there is adequate funding for the life of the Plan and beyond. To ensure that the cost projections remain accurate over the life of the NBHCP and beyond, the strategy of the NBHCP to date and into the future will be to revisit the fees on

an annual basis to confirm that the cost and revenue assumptions are adequate to fund the NBHCP. If not, these fees will be adjusted so that the NBHCP is adequately funded. If for some reason costs spike in the time frame between updates and a shortfall results, it is intended that the temporary shortfall will be covered by the contingencies and conservative assumptions outlined above. The interaction of funds also allows temporary shortfalls to be covered through interfund borrowing. As a result, the NBHCP is not in fact “dependent on continual infusion of new developable land to provide funding for mitigation necessitated by previous development” as alleged in the comment.

It should also be noted that the cash flow modeling and fee calculation is an exercise that has been and will continue to become more accurate as TNBC gains more experience in the construction and management of Mitigation Lands. As a result, with each passing year, there is increasing certainty built into the annual updates of the Mitigation Fee calculation.

The absence of a cap on the Mitigation Fee addresses the danger of a funding shortfall. As long as fees are reviewed annually and adjusted if needed by the Permittees, the risks are minimized during the Permit term and beyond (1) of a funding shortfall, and (2) that the last developer seeking a grading permit will be the last one left paying the shortfall. The conservative assumptions and contingencies will mitigate against annual shortfalls in the event that costs spike over a 12 month period. Comment O1-52 states that the “economic analysis of the NBHCP demonstrates a fairly strong position on adequate funding, short of a public or private guarantee.” The Economic Analysis contained in Appendix A of the NBHCP demonstrates that, given the conservative approach and the contingencies built into the fee calculations, the funding for the NBHCP is adequately ensured through the life of the NBHCP and beyond. As explained above, funding shortfalls are not anticipated under the NBHCP. Additionally, in the unlikely event that the City or Sutter County fail to adequately fund their mitigation requirements, Section 7.6 of the Implementation Agreement provides that the City or Sutter County’s ITP may be suspended or revoked in the event of a material violation of the Section 10(a) Permit or Section 2081 Permit. Notwithstanding the suspension or revocation of a Permit, the City and Sutter County remain liable to carry out all their responsibilities under the Permits and the Implementation Agreement arising from Planned Development approved or carried out by the City or Sutter County between the effective date of the agreement and the date of suspension or revocation.

Planned Development approved prior to the Permit suspension or revocation may proceed, provided that it complies with the Permit, so long as the City or Sutter County and the Urban Development Permittee continue to fulfill their obligations under the Permit [IA, § 7.6.4]. Once a Permit has been revoked or suspended, the City and Sutter County shall not have the authority to approve or carry out any actions that would violate the ESA or CESA in the absence of the Permit. Moreover, the City and Sutter County remain fully liable to carry out all of their responsibilities, including the Mitigation Requirement [IA, § 7.6.5]. Thus, while it is an accurate statement that the Land Use Agency permittees who pay the Mitigation Fee and satisfy the mitigation requirements are in effect not subject to the payment of additional fees necessary to address any deficiencies as provided for in Section 7.4 of the Implementation Agreement, the City and Sutter County remain liable for the mitigation requirements.

The NBHCP evaluates the mitigation requirements and corresponding Mitigation Fee needed for Planned Development with each Permit Area to ensure that adequate funding

assurances are provided, regardless of whether one Permittee participates or both Permittees participate. It is accurate that if one Land Use Agency permittee has satisfied all of its obligations under the NBHCP, Implementation Agreement, and its Permits while the other Land Use Agency permittee has not, the Land Use Agency permittee in compliance with the NBHCP will not also be subject to the Permit revocation or suspension. The reason for the Land Use Agency permittee to retain its Permits is to ensure that this permittee can continue to implement the NBHCP.

Because the NBHCP is fully funded under the existing funding program and a 200-acre cushion for Mitigation Land acquisition is provided to ensure that the last developer will not fall subject to a funding shortfall for land acquisition, no public or private guarantee is proposed.

The commentor suggests that an assessment district could be created as a mechanism for ensuring back-up funding. However, an assessment district is not considered a feasible mechanism for back-up funding because special assessments that may be imposed by an assessment district are subject to voter approval pursuant to Proposition 218. Moreover, Proposition 218 imposes certain limitations on a local municipality's ability to impose fees, assessments and charges. Specifically, Proposition 218 provides that assessments shall not be imposed on any parcel that exceeds reasonable cost of the proportional special benefit conferred on that parcel. This limitation could restrict the City or Sutter County's ability to collect the Mitigation Fees as assessments. In addition, special assessments could not be collected without a special vote, and an assessment district likely would be vulnerable to landowner protest proceedings.

Response to Comment 01-41

California Fish and Game Code Section 3503.5 prohibits the take of birds-of-prey or the taking of the nest or eggs of such birds except as otherwise provided by the Fish and Game Code. The NBHCP and EIS/EIR indicate that no fully protected species designated by the Fish and Game Code are included as Covered Species. The white-tailed kite is not included as a Covered Species because it is a fully protected species under the Fish and Game Code (see Draft NBHCP, p. II-44 and Draft EIS/EIR, pp. 3-49 - 3-50). Take of this species is not authorized under the NBHCP or accompanying ITPs. The commentor is referred to Response to Comment G2-12 regarding the determination of the species covered by the NBHCP. The Applicants are not proposing to seek either from USFWS or CDFG incidental take authorizations for the white-tailed kite or any other state-listed fully protected species.

The Draft EIS/EIR describes the presence, significance, and characteristics of the white-tailed kite on pages 3-24 and 3-49 - 3-50. Further, the Draft EIS/EIR evaluates the potentially significant impacts to the white-tailed kite on pages 4-90 and 4-95. Measures that must be implemented to avoid the taking of white-tailed kites are described in the Draft EIS/EIR on page 4-95.

Response to Comment 01-42

The MEP funding requirement addresses biology, legal, and economic considerations. The Economic Analysis of the NBHCP focuses on the economic considerations of the MEP analysis. For a complete discussion of the factors considered in the MEP analysis, the

commentor should consult the extensive biological impact analyses contained in the Biological Resources Technical Memo (including the Addendum prepared for the Final NBHCP) and Draft EIR/EIS, as well as the discussion of the biological, legal, and economic considerations provided on pages VII-65 - VII-69 in Chapter VII of the NBHCP.

The comment suggests that the NBHCP should require a greater mitigation ratio or requirements. First, under the ESA, the findings regarding effects on biological resources primarily determine the applicable mitigation ratio or requirements for the NBHCP. Upon assessment and determination of the biological requirements for the Covered Species, the USFWS evaluates whether the mitigation requirements are the maximum that can be practically implemented by the applicant (HCP Handbook, p. 7-3).

Second, in determining whether the proposed program is the maximum that can be reasonably required by the applicant, the USFWS must explain why the level of mitigation and the Mitigation Fee amounts selected are appropriate for the project. As part of this analysis, the USFWS weighs the costs and benefits of implementing additional mitigation, the amount of mitigation provided by other applicants in similar situations, and the abilities of the particular applicants under the NBHCP (HCP Handbook, p. 7-3). For example, if mitigation costs exceed the benefit to be derived from the mitigation, the MEP standard has been met. Although this analysis may determine that greater mitigation requirements are impracticable, the analysis may not necessarily conclude that the mitigation requirements and associated Mitigation Fee must necessarily push a development project into the area of infeasibility. While there are no precise guidelines for conducting such an analysis, the Applicants used two methodologies to test the feasibility of a range of Mitigation Fees based on alternative scenarios. Consistent with the HCP Handbook Guidelines, the Applicants: (1) compared the proposed Mitigation Fee to HCP fees in nearby or comparable jurisdictions, and (2) conducted a total cost burden analysis.

The fee comparison showed that the alternative Mitigation Fees analyzed were higher than those in other nearby or comparable jurisdictions. The commentor also is referred to Master Response 1 (Mitigation Ratio).

The total cost burden analysis found that the increase in the Mitigation Fee did not substantively change the cost burdens for residential and non-residential development in the North Natomas and South Sutter County. It also found, however, that the cost burdens for development projects in this area are high relative to those of other jurisdictions. This is particularly true for non-residential development where certain land uses such as light industrial may not be feasible.

The Economic Analysis also demonstrates that over time the Mitigation Fee is likely to escalate as the supply of available land in the Natomas Basin shrinks. Higher land acquisition costs will require higher fees. Although home prices may continue to increase and as a result be able to absorb the higher fees, it is unlikely that the market values of non-residential development will keep a similar pace because of less demand (relative to residential development) and slower absorption (in North Natomas, the residential development is projected to be fully absorbed in 15 years versus the 30-40 year absorption timeline for non-residential development). If the market values do not keep pace and the habitat or other fees continue to increase, thereby worsening the infrastructure cost burden, it is likely that the feasibility of non-residential development projects will be adversely

affected. All proposed land uses need to be financially viable for the creation of a balanced community. This escalation in land acquisition costs would only be exacerbated with a higher mitigation ratio.

Although developers may be able to absorb the habitat Mitigation Fee levels given current market conditions, the Mitigation Fee program must be designed such that fee levels can be sustained over time, recognizing that the fees will increase with escalating costs as a result of land appreciation and other factors.

It should also be pointed out that community facility parcels, public parcels, and park parcels also pay the Mitigation Fee because the fee is paid at the grading permit stage. Developers pay the fee on their for-profit parcels as well as the parcels to be dedicated to public uses. Therefore, the actual burden on developable parcels is likely understated in the Economic Analysis, resulting in a conservative analysis.

Response to Comment O1-43

The commentor questions whether the comparison to habitat Mitigation Fees in other comparable jurisdictions provides an indication of impracticability as the fee is much greater in the NBHCP than in other comparable jurisdictions.

The USFWS's HCP Handbook specifies that the MEP findings require consideration of two factors: adequacy of the minimization and mitigation program, and whether it is the maximum that can be practicably implemented by the applicant. To the extent that the adequacy of the mitigation is a close call, the HCP Handbook specifies that there be a basis to conclude that the proposed program is the maximum that can be reasonably be required by that applicant. As part of this analysis, the USFWS may weigh the costs of implementing additional mitigation, the amount of mitigation provided by other applicants in similar situations, and the abilities of that particular applicant (HCP Handbook at page 7-3). See Master Response 1 (Mitigation Ratio).

Consistent with the HCP Handbook's guidance, the Economic Analysis considered the costs associated with implementing additional mitigation under the Increased Mitigation and Habitat-Based Mitigation Alternatives as well as the Reduced Development Alternative. To measure these costs, the Economic Analysis uses a standard cost-burden approach as further described below.

This analysis also considered the costs associated with the amount of mitigation provided by other applicants in similar situations based upon USFWS standard mitigation requirements for effects on key Covered Species. To supplement this analysis, the Applicants also evaluated the costs associated with other adopted HCPs to determine the costs that have been applied to applicants in similar situations involving regional-scale habitat conservation efforts. The Applicants believe that these analyses demonstrate that, from an economic perspective, the NBHCP minimizes and mitigates the effects of incidental take to the maximum extent practicable. Thus, the Applicants do not agree with the commentor's statement that "not much is demonstrated by comparing apples and oranges except that they are different," which implies that because no two habitat conservation plans are the same, a comparison of the fees associated with these plans is invalid.

In fact, fee comparisons provide a useful tool for gauging the feasibility of a project's infrastructure development costs relative to other nearby or comparable development projects. Comparisons may be useful for all types of development-related infrastructure fees, including sewer fees, water fees, transportation fees, park fees, etc. Each community fee program differs in the types of improvements funded by the fees, the level of up-front developer contributions, the actual financing plan for the facilities (e.g., costs charged to existing development versus new development), etc. Inevitably, each fee comparison is a comparison of "apples and oranges" because each fee is designed for the needs of the particular community. Notwithstanding this "apples and oranges" issue, fee comparisons can provide useful information for understanding how applicants subject to the fee could be affected by the imposition of the fee.

For the communities chosen as a basis of comparison, the goal was to include competing or comparable jurisdictions. The areas covered by the proposed South Sacramento and Yolo County HCPs are both near the Natomas Basin and could compete for potential development. The City of Bakersfield, Coalinga, and San Joaquin County HCPs were included because they are in the Central Valley, the demographic area with which the Sacramento area is in closer alignment, as compared to communities in the Bay Area or Southern California, which have far different cost structures for land and infrastructure.

Response to Comment O1-44

The commentor questions the use of the Total Cost Burden analysis because this analysis does not take into consideration the full measure of developer mechanisms to balance cost and revenues in developing projects and suggests that if the fees required to be paid by the developer exceed the developer's internal cost-benefit analysis for a project, the developers might try to offset these costs through other means, such as negotiating lower land costs.

The commentor suggests using the "residual land value methodology" to evaluate feasibility of development projects. After comparing expected costs and revenues, if the residual value of the land "is below what the landowner paid for the land or what the market value of the land is in agricultural or an alternative use, development would be determined to be infeasible and not expected to move forward." This assertion is not in alignment with the professional experience of the preparers of the Economic Analysis during the past 20 years; this experience and expertise indicate that this type of analysis is most useful when a *specific* development project is analyzed, with specific timing on absorption, project development costs including all onsite and backbone infrastructure, information on developer equity and priority of returns, as well as a number of other factors. The more detailed the analysis, the more accurate a tool it is for predicting residual land value.

It is for precisely this reason that the Economic Analysis chose not to employ a residual land value analysis. Development in the Natomas Basin has been pursued by a multitude of developers. Each developer has its own internal and confidential assumptions on costs of development and expected revenue. Consultant experience also indicates that it is unlikely that developers would be willing to share their revenue expectations and equity arrangements as well as other information because of aggressive competition in the industry. For these reasons, it would have been impossible to estimate information for each specific development project and particularly for future development projects through the

life of the NBHCP and still arrive at accurate assumptions applicable to anticipated development projects.

The one aspect of developing a residential or non-residential project that is comparable among all development projects in the Natomas Basin is the development impact fee or infrastructure bond paid by new development projects. In addition, these costs can be compared with costs paid by developers in other nearby and competing jurisdictions to give an indication of whether or not the subject jurisdiction or project is comparable in terms of the total cost burden to develop a residential or commercial project, which in the case of residential projects typically makes up 15 to 20 percent of the selling price of the land use product (i.e., a house).

Response to Comment O1-45

The commentor suggests that because housing prices in the Sacramento area have risen considerably since 1998 (note that between 1990 and 1998 housing prices remained fairly stagnant as shown in Figure 1, page 12), “there is room in the feasibility equation for higher mitigation requirements and costs.”

In response, it is important to consider the history of the Mitigation Fee, which has increased from \$2,240 in 1997 to the current fee of \$7,934 (excluding the Settlement Premium). The fee calculated based on the Draft NBHCP is estimated at \$10,027 per acre. Assuming the revised fee estimate is adopted in 2003, the Mitigation Fee will have increased by approximately 28.4 percent per year, or a total increase of 348 percent between 1997 and 2003. In contrast, home prices have risen by approximately 110 percent between 1997 (assuming \$155,000 average new home price) and 2003 (assuming \$325,000 average new home price), or approximately 13 percent per year. Thus, the revised Mitigation Fee based on the Draft NBHCP does show that the higher home values can support the higher fee in comparison to those 6 years ago.

The commentor also does not consider the non-residential market values in comparison to fees. The Economic Analysis showed that the infrastructure cost burdens were much greater on non-residential development, particularly warehouse and light industrial land uses. The values associated with these land uses in the Natomas Basin have not experienced the same level of market appreciation over the last five years as has residential development. As mentioned above, all proposed land uses need to be financially viable in order to create an economically balanced community in the Natomas Basin and to support a determination that funding for the NBHCP is ensured.

Response to Comment O1-46

The commentor suggests that the Mitigation Fee is a small component of the overall infrastructure and that as a result the development community could easily absorb Scenario 5 (75 percent marsh), which resulted in a fee of \$10,582, the highest of the fees in all five Scenarios in the Economic Analysis.

The revised fee based on the Draft NBHCP, which reflects a 0.5:1 mitigation ratio and 25 percent managed marsh, is calculated at \$10,027 (which is in the range of Scenarios 4 and 5 of the Economic Analysis of the NBHCP). The higher fee for the Draft NBHCP is mainly a result of increased habitat and species monitoring requirements, provision for changed

circumstances, and increased estimates of annual administration expenditures. Therefore, it should be understood that requiring a 1:1 mitigation ratio or a 75 percent marsh requirement would raise the fee significantly beyond the \$10,027 that is currently estimated.

The commentor suggests that the Mitigation Fee is only a very small component of the overall backbone infrastructure costs and is therefore insignificant. In one paragraph, The commentor states that “the proposed and alternative fees represent three to six percent of the total cost burden for residential development” and for non-residential development “the fees range from two to 15 percent of the total cost burden.” In the very next paragraph, the commentor states that the habitat fees “are responsible for less than one percentage point of the total cost burden for residential development.” It is unclear on what grounds the commentor is making this statement.

The table attached to this comment response summarizes the \$10,027 (the fee calculated based on the Draft NBHCP) as a percent of the backbone infrastructure cost and as a percent of the sales price of a new home and also shows the total cost burden as a percent of the sales price of a new home in North Natomas.

Comparison of Total Backbone Cost

NBHCP Service Areas	Assumed Density/FAR	Habitat Mitigation Fees ^a	Average Sales Price ^b	Average Backbone Cost ^c	Habitat Fee as a % of		
					Backbone Infrastructure Cost	Habitat Fee as a % of Sales Price	Total Burden as a % of Sales Price
Residential—North Natomas		<i>per unit</i>					
Single Family—1,800 ft ²	7 units/acre	\$1,432	\$291,000	\$35,252	4.1%	0.5%	12.1%
Single Family—2,400 ft ²	5 units/acre	\$2,005	\$324,000	\$40,103	5.0%	0.6%	12.4%
Non-Residential—North Natomas		<i>per sqft</i>					
Retail	0.25	\$0.92	\$120	\$23.91	3.8%	0.8%	19.9%
Light Industrial	0.40	\$0.58	\$25 to \$60	\$9.43	6.1%	2.3% to 1.0%	37.7% to 15.7%
Non-Residential—South Sutter		<i>per sqft</i>					
Retail							<i>[Retail Not Planned in South Sutter]</i>
Light Industrial	0.40	\$0.58	\$25 to \$60	\$4.15	13.9%	2.3% to 1.0%	16.6% to 6.9%

^a Based on a proposed fee of \$10,027 per acre from the revised draft Natomas Basin HCP dated October 11, 2002.

^b Residential prices based on data from The Gregory Group New-Home database for Fourth Quarter 2002, non-residential prices based on information from commercial real estate brokers for Natomas, South Sutter County, and surrounding areas.

^c Total backbone costs include city/county-wide fees, including mitigation fees, school mitigation fees and project specific fees/bonds.

For residential development in North Natomas, the proposed fee would represent approximately 4 to 5 percent of the backbone infrastructure cost. Similarly, park development impact fees (at \$1,900 per single-family unit), which are crucial to providing developed parks in the North Natomas area, represent 4.7 to 5 percent of backbone infrastructure costs. Although individually these fee components represent 5 percent or less of the total backbone infrastructure cost, it does not mean they are insignificant. The NBHCP fee for light industrial development in South Sutter County is significantly higher than 5 percent, at 14 percent. Therefore, it is unclear on what grounds that commentor is

basing the assertion that the habitat Mitigation Fees are an insignificant component of the total backbone infrastructure cost. Habitat fees are as significant as park fees, and, arguably, as any other fee component included in the infrastructure cost burden.

The proposed Mitigation Fee for residential development does represent approximately half a percentage point of the total estimated sales price of a home in North Natomas and perhaps this is what the commentor intended to point out. But this is not the relevant point as the infrastructure cost burden is currently estimated at 12 percent of the sales price of the home, and 0.6 percent of 12 percent represents 5 percent of the infrastructure cost burden. The infrastructure cost burden for residential units as a percent of home sales price is less today than it was when the Economic Analysis was completed in March because home values have risen in the North Natomas Basin over the last 9 months. The infrastructure cost burdens for non-residential development, however, remain high (as shown in the attached table).

The comment suggests that the infrastructure cost burden test is not satisfactory in supporting a finding that the Mitigation Fee is at the maximum extent practicable. It states that all this analysis shows is that the overall backbone infrastructure costs are relatively high for these newly developing areas given current market conditions etc. and that a significant increase in the habitat mitigation component of the fee would not change these conclusions.

It is an accurate assessment that an increase in the habitat fee would take an already high infrastructure cost burden and make it higher. The risk is that eventually the burden will become too great and development in the Natomas Basin will slow. Given the estimated cost burdens today, it is likely that non-residential projects, particularly in South Sutter County, will indeed be developed more slowly.

If what the comment is referring to is that there is still ample room in the cost structure to absorb higher fees—Mitigation Fees or any other fees—then the Applicants disagree. The City of Sacramento has already removed elements from its North Natomas fee program, as discussed in the Economic Analysis, so that the development community would accept the Mitigation Fees and the fee levels being proposed for the public infrastructure being funded. These are the very same developers, with their specific information on cost and revenues, that determine whether to move forward with a project and how much the land values can give in order to make a deal work.

Response to Comment O1-47

It is possible that the development community will be able to absorb a habitat Mitigation Fee in the \$10,000 range without adversely impacting feasibility. A fee that significantly exceeds this range, however, could have a negative impact on the feasibility of development projects. This is particularly true for lower land value projects, such as warehouse and industrial development, as explained below.

As demonstrated in the Economic Analysis, the cost burdens for warehouse and industrial uses ranged from 36 to 37 percent in North Natomas and 17 to 18 percent in south Sutter County (assuming the lower land values). As indicated in the Economic Analysis, the general range for project feasibility is 10 to 15 percent of the price per square foot of non-residential development. It is unlikely that any warehouse or industrial development or

similar employment-generating investment will occur in North Natomas, and indeed none is planned. The majority of this type of development is slated for south Sutter County. If development impact fees, including the Mitigation Fee, continue to rise without any corresponding increases in land value, development in this area is likely to falter because the cost burden will be too high and developer profit potential will be minimized.

The comment focuses only on the residential capacity for higher fees. Although it might be expedient to increase fees solely based on the capacity for residential projects to absorb the fees, if these higher fees result in the infeasibility of non-residential development projects, the vision for the North Natomas Community Plan and Sutter County's Industrial-Commercial Reserve would be seriously jeopardized. If jobs are eliminated as a result of cost burdens on non-residential development that are too high, other negative impacts could arise, such as increased traffic congestion or possibly a slowing of residential development. It is, therefore, important to consider the ramifications of higher fees on all types of development projects in the Natomas Basin.

Response to Comment O1-48

It is unlikely that any one fee in and of itself (unless it is truly substantial, such as Level 3 school fees) will determine whether a developer decides to proceed with a proposed project. Rather, it is likely that the developer will consider the total cost burden in making the decision on whether or not to proceed. Therefore, the consideration of other North Natomas Fees is relevant and material.

The Mitigation Fee may or may not be the fee that at the margin determines the feasibility of a project. In other words, it could be the level of the school fees, park fee, sewer fee, or any other fee charged that might make or break a developer's decision on whether or not to develop in the Natomas Basin. More likely, however, is that the developer will consider the total cost burden of the project, in comparison to potential revenue and profit, before making a decision on whether or not to move forward.

The Economic Analysis, therefore, examined the incremental impact of an increase in the NBHCP fee on the total cost burden of a representative, sample project in order to test the financial feasibility of a project in light of the MEP considerations. As part of the analysis, it was determined that the cost burdens in the North Natomas and South Sutter County areas are already high within the region (see pp. 24-33 in Appendix A of the Draft NBHCP). Therefore, any additional significant increase in the Mitigation Fee could impact the feasibility of a proposed project in the Natomas Basin.

Response to Comment O1-49

The commentor agrees that it is quite likely that the land prices in the Natomas Basin will continue to escalate. In fact, the comment points out that "expectation of competing bids from potential developers in anticipation of future urbanization in an expanded City Sphere of Influence (as proposed under the recent Sacramento City-County Natomas Joint Vision), will only exacerbate the price pressures for potential preserve lands in currently unincorporated Sacramento County."

The comment states that "if, however, the only alternative to selling land for habitat preserves were clearly continued non-preserve agricultural use, floor prices for land sales

would likely stabilize.” The comment states that this would be the case “under a strategy that required a higher mitigation ratio, thereby reducing the residual amount of unprotected land that would otherwise be subject to speculative pressures.” The Applicants disagree. Instituting a higher mitigation ratio does not *de facto* eliminate the potential for landowner speculation for future development potential. If anything, a higher mitigation ratio will drive all land values higher. There would be twice as much demand for habitat land with no change in the potential supply of that land. The law of supply and demand therefore dictates that land values will be higher.

Even when properties are denied development potential and restricted to non-urban uses by law, there is little that can be done to eliminate landowner speculation on property values.

Response to Comment O1-50

The commentor states that as the land cost component of the fee increases, developers will have increased incentive to take advantage of the dedication process. The Applicants agree that, as land values escalate, it is likely that developers will choose to dedicate land, and, if so, developers will not pay the land acquisition component of the fee. It is also possible that the developers will be able to achieve some economies of scale in land pricing if they are successful in negotiating the purchase of large tracts of land. If so, developers may wish to dedicate land rather than pay the land component of the Mitigation Fee.

It is important to note, however, that any land dedication will be subject to the same provisions of the NBHCP to which TNBC is subject in its acquisition process. All land dedications made to date have followed the same review and approval process as the process followed when land is acquired directly by TNBC.

There is no guarantee that the potential land that a developer may want to dedicate will meet the guidelines or criteria for land to be acquired by TNBC.

One of the current land acquisition strategies of TNBC is to focus on the acquisition of contiguous tracts of land. Any potential economies of scale that might result from the acquisition of large, contiguous tracts of land, in terms of cost savings for land acquisition, mitigation monitoring, land stewardship, etc. have already been factored into the cash flow and financial modeling of the NBHCP.

Response to Comment O1-51

The commentor suggests that other conservation strategies, such as land acquisition through conservation easements, could result in cost savings and, therefore, a reduced fee. While conservation easements may or may not result in lower land acquisition costs, it is not true that such a strategy would result in reduced TNBC costs overall. In fact, it could add severe restriction to the Plan Operator’s ability to locate the managed marsh component of the plan and thus jeopardize the success of NBHCP implementation.

TNBC will still need to ensure that 25 percent of the acres will be in managed marsh; therefore, there would be no impact on the R&E fee component. TNBC will still be responsible for administration of the NBHCP as well as mitigation monitoring of the preserves. If the landowner continues to farm the land, TNBC will not receive any farming

revenue, which is substantial in providing essential revenues for the Plan Operator to implement the NBHCP's conservation measures. Because farming revenues would be reduced, the O&M Endowment fee would need to be adjusted upward.

Additionally, TNBC would still be required to make an advance purchase of 200 acres and provide for changed circumstances; therefore, there would be no impact on the supplemental endowment fund.

Overall, there is likely to be minimal net impact on all funds except the land acquisition fund under a conservation easement strategy, but the strategy would pose a significant hindrance to management options and compliance success as discussed below.

While it is possible that R&E construction projects could be placed on land where easements have been acquired, according to TNBC this is an unlikely scenario given a number of factors. It is unlikely that a seller would want to convert land from agricultural production to managed marsh because of the potential revenue loss. The seller would still be responsible for paying annual property taxes, insurance, ongoing maintenance, and other expenses. The seller would need to maintain a revenue stream to pay these annual expenses. This conversion is also difficult from a buyer's perspective. Stewardship of managed marsh under an easement situation would require extra coordination between the property owner (seller) and TNBC to insure that none of the actions taken by TNBC in constructing or managing the marsh would impact other operations of the property owner.

In the case that the easements stay in agricultural production, it is unlikely that TNBC would benefit from the revenue stream. As a result, it is likely that the Plan would not earn revenues comparable to the funding plan projections and would therefore need to reach further into the Endowment Fund in order to fully fund the operations and maintenance of the Plan. This could set back the long-term viability of the Plan.

TNBC has attempted for nearly 4 years to acquire conservation easements instead of fee title and has found very little interest among landowners in the Natomas Basin. In the few cases where landowners did express an interest, the easement price being offered by the landowner was at or near the fee simple price, essentially defeating the purpose of acquiring easements as opposed to purchasing the land outright.

It should also be noted that TNBC makes every effort to operate efficiently and conserve costs in its stewardship of the NBHCP. The cash flow model used to calculate the fee is, however, conservative and builds in contingencies, as highlighted in previous responses.

Response to Comment 01-52

The commentator states that the "economic analysis of the NBHCP demonstrates a fairly strong position on adequate funding, short of public or private guarantee" and acknowledges that the methodology used to calculate the fee provides for annual updates, contains a number of conservative assumptions and contingencies, and provides for ongoing operations and maintenance in perpetuity. The Applicants agree.

The commentator states that there are at least three concerns with respect to ensuring adequate funding. They are as follows:

- The funding plan should be able to respond to changes in costs over time.

- The funding plan should analyze revenues and expenditures and demonstrate, using conservative assumptions, that costs are covered with some cushion for contingencies.
- The funding plan should provide for the ability to respond to unforeseen circumstances.

The commentor concurs that, on each of these points, the funding plan used by the NBHCP meets these concerns adequately.

The funding plan does respond to changes in costs over time, as noted by the comment that “a financial model has been developed and refined over the years and now appears to provide a relatively flexible tool to estimate fee levels based on new assumptions and the actual experience of TNBC. Since the original interim fee was established in 1995, there have been five fee adjustments.” The comment also acknowledges that many of the assumptions used in the funding plan or cash flow model in the Economic Analysis (in terms of analyzing revenues and expenditures) are conservative. Finally, the comment concurs that the funding plan analyzed in the Economic Analysis provides the ability to respond to changed circumstances through the inclusion of the Supplemental Endowment Fund. The comment states, however, that this component of the fee could be raised even further without jeopardizing development feasibility. The Applicants disagree with this assertion based on the Economic Analysis regarding the MEP and financial feasibility assessment of the NBHCP (see prior discussion above for additional comment on this issue).

The only issue that the comment states is not addressed by the NBHCP funding plan is the inclusion of a public guarantee of funding that would provide additional revenues and could, therefore, allow for increased the mitigation requirements of the NBHCP. The Applicants disagree with this assertion. First, the biological adequacy of the NBHCP (and not the economic feasibility) is the primary determinant of the adequacy of the mitigation requirements. If the biological analysis determines that the NBHCP mitigates fully for the covered species and these costs are fully covered by the current funding plan, then it does not appear that public funding guarantee is needed for the NBHCP. Second, the NBHCP funding plan does not rely on general public funding (e.g., state and federal grants, etc.) because these outside sources cannot be relied upon unless the funds have been committed to the NBHCP. Also, there are certain constraints that often come with federal or state grants, and these constraints could pose limitations on use of the grants for funding mitigation. For example, Federal money cannot be used to fund mitigation but may be used to augment the NBHCP’s Operating Conservation Program. Consequently, the NBHCP is structured so that the Mitigation Fees will adequately fund the proposed conservation program in a manner consistent with ESA requirements.

Response to Comment 01-53

The Economic Analysis of the NBHCP was based on a 15-year development schedule (prior analyses had assumed a 50-year development schedule) and on actual development trends over the past 4 years. Based on review of the Economic Analysis, Sutter County requested that the development schedule for the Sutter County property be extended because (given the cost structure and nature of the warehouse and light industrial industry) it is unlikely that these land uses will build out in the same time frame as the residential development in North Natomas. Therefore, the current absorption schedule is estimated to be through 2027 as opposed to 2015. Both development schedules used in the Economic Analysis are attached.

Table A-3
Natomas Basin HCP
Habitat Lands Acquired & Restored/Enhanced

Assumes
 17,500 acres of development
 1/2 acre of mitigation land per gross acre of developed land
 25% marsh

**Revised Fee Estimate Based
 on Draft NBHCP
 October 11, 2002**

	Assumption	Total 1994-2045	0 1994	0 1995	1 1996	2 1997	3 1998	4 1999	5 2000	6 2001	7 2002	8 2003	9 2004	10 2005	11 2006	12 2007	13 2008
Annual Developed Acreage		17,500	0.0	0.0	30.4	104.9	1,380.4	1,465.5	598.1	392.0	500.0	1,174.4	1,214.4	1,217.3	1,217.3	1,217.3	501.6
Cumulative Developed Acreage	17,500		0.0	0.0	30.4	135.3	1,515.7	2,981.1	3,579.2	3,971.2	4,471.2	5,645.6	6,860.1	8,077.4	9,294.7	10,512.0	11,013.6
Annual Mitigation Requirement	50%	8,750	0.0	0.0	15.2	52.4	690.2	732.7	299.0	196.0	250.0	587.2	607.2	608.7	608.7	608.7	250.8
Cumulative Mitigation	(50% prior to 2001)		0.0	0.0	15.2	67.7	757.8	1,490.6	1,789.6	1,985.6	2,235.6	2,822.8	3,430.0	4,038.7	4,647.4	5,256.0	5,506.8
Habitat Acquired (1)		8,750.0	-	-	-	-	-	1,296.8	334.0	141.1	1,010.0	240.8	607.2	608.7	608.7	608.7	250.8
Cumulative Habitat Acreage			-	-	-	-	-	1,296.8	1,630.8	1,772.0	2,782.0	3,022.8	3,630.0	4,238.6	4,847.3	5,456.0	5,706.7
Surplus / Shortfall Acquisition			0.0	0.0	-15.2	-67.7	-757.8	-193.7	-158.8	-213.6	546.4	200.0	200.0	200.0	200.0	200.0	200.0
Land Acquisition																	
Out-of-Basin Lands		0.0	-	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
In-Basin Lands		8,750.0	-	-	-	-	-	1,296.8	334.0	141.1	1,010.0	240.8	607.2	608.7	608.7	608.7	250.8
		8,750.0															
Initial Use of Acquired Land																	
Marsh			-	-	-	-	-	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Existing Rice Base			-	-	-	-	-	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Other Converted to Rice			-	-	-	-	-	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other			-	-	-	-	-	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Use of Land																	
Marsh		0.0	-	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Existing Rice Base		6,562.5	-	-	-	-	-	972.6	250.5	105.9	757.5	180.6	455.4	456.5	456.5	456.5	188.1
Other Converted to Rice		0.0	-	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other		2,187.5	-	-	-	-	-	324.2	83.5	35.3	252.5	60.2	151.8	152.2	152.2	152.2	62.7
Subtotal		8,750.0	-	-	-	-	-	1,297	334.0	141.1	1,010.0	240.8	607.2	608.7	608.7	608.7	250.8
Rice/Other Converted to Marsh (2)		2,187.5	-	-	-	-	-	0.0	0.0	192.5	51.2	76.3	293.5	101.2	192.8	152.2	152.2
Marsh Percent of Total Habitat	25%	25%															
Cumulative Acreage																	
Marsh		2,187.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	192.5	243.7	320.0	613.5	714.7	907.5	1,059.7	1,211.8
Rice		4,300.3	0.0	0.0	0.0	0.0	0.0	972.6	1,223.1	818.8	1,550.0	1,654.3	1,816.2	2,171.5	2,435.2	2,739.5	2,775.5
Other		2,262.2	0.0	0.0	0.0	0.0	0.0	324.2	407.7	760.6	988.3	1,048.5	1,200.3	1,352.4	1,504.6	1,656.8	1,719.5
Subtotal		8,750.0	0.0	0.0	0.0	0.0	0.0	1,296.8	1,630.8	1,772.0	2,782.0	3,022.8	3,630.0	4,238.6	4,847.3	5,456.0	5,706.7
Marsh Deficit (based on 25% of 2 years previous total habitat acres)											164.0	123.0	82.0	41.0	0.0	0.0	0.0
Cumulative Acreage																	
Marsh			0%	0%	0%	0%	0%	0%	0%	11%	9%	11%	17%	17%	19%	19%	21%
Rice			0%	0%	0%	0%	0%	75%	75%	46%	56%	55%	50%	51%	50%	50%	49%
Other			0%	0%	0%	0%	0%	25%	25%	43%	36%	35%	33%	32%	31%	30%	30%
Hunting																	
Hunting Acreage as Percent of Total (3)			0%	0%	0%	0%	0%	0%	0%	0%	0%	30%	33%	35%	38%	40%	45%
Hunting Acreage			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	846.8	1,114.8	1,413.5	1,742.8	2,102.4	2,478.1

Source: City of Sacramento, Natomas Basin Conservancy, and SACOG Housing and Employment Forecasts

"land_cost"

(1) After the first 400 acres is acquired, each year additional habitat is acquired based on the amount of urban development from the current year.

(2) The acres of rice converted to marsh in 2001 and 2002 are amounts provided by the Natomas Basin Conservancy. In each remaining year, these acres are estimated as the number of acres needed to reach and maintain the specified percent of marsh.

(3) The HCP does not limit the number of acres eligible for hunting. The percentages represent how much may be hunted under this economic analysis, not what necessarily can or will be hunted.

**Table A-3
Natomas Basin HCP
Habitat Lands Acquired & Restor**

	14 2009	15 2010	16 2011	17 2012	18 2013	19 2014	20 2015	21 2016	22 2017	23 2018	24 2019	25 2020	26 2021	27 2022	28 2023	29 2024	30 2025
Annual Developed Acreage	501.6	501.6	501.6	501.6	298.7	298.7	298.7	298.7	298.7	298.7	298.7	298.7	298.7	298.7	298.7	298.7	298.7
Cumulative Developed Acreage	11,515.1	12,016.7	12,518.2	13,019.8	13,318.5	13,617.2	13,915.8	14,214.5	14,513.2	14,811.9	15,110.6	15,409.2	15,707.9	16,006.6	16,305.3	16,604.0	16,902.6
Annual Mitigation Requirement	250.8	250.8	250.8	250.8	149.3	149.3	149.3	149.3	149.3	149.3	149.3	149.3	149.3	149.3	149.3	149.3	149.3
Cumulative Mitigation	5,757.6	6,008.3	6,259.1	6,509.9	6,659.2	6,808.6	6,957.9	7,107.3	7,256.6	7,405.9	7,555.3	7,704.6	7,854.0	8,003.3	8,152.6	8,302.0	8,451.3
Habitat Acquired (1)	250.8	250.8	250.8	250.8	149.3	149.3	149.3	149.3	149.3	149.3	149.3	149.3	149.3	149.3	149.3	149.3	149.3
Cumulative Habitat Acreage	5,957.5	6,208.3	6,459.1	6,709.9	6,859.2	7,008.5	7,157.9	7,307.2	7,456.6	7,605.9	7,755.2	7,904.6	8,053.9	8,203.3	8,352.6	8,501.9	8,651.3
Surplus / Shortfall Acquisition	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
Land Acquisition																	
Out-of-Basin Lands	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
In-Basin Lands	250.8	250.8	250.8	250.8	149.3	149.3	149.3	149.3	149.3	149.3	149.3	149.3	149.3	149.3	149.3	149.3	149.3
Initial Use of Acquired Land																	
Marsh	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Existing Rice Base	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Other Converted to Rice	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Use of Land																	
Marsh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Existing Rice Base	188.1	188.1	188.1	188.1	112.0	112.0	112.0	112.0	112.0	112.0	112.0	112.0	112.0	112.0	112.0	112.0	112.0
Other Converted to Rice	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	62.7	62.7	62.7	62.7	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3
Subtotal	250.8	250.8	250.8	250.8	149.3	149.3	149.3	149.3	149.3	149.3	149.3	149.3	149.3	149.3	149.3	149.3	149.3
Rice/Other Converted to Marsh <i>Marsh Percent of Total Habitat</i>	152.2	62.7	62.7	62.7	62.7	62.7	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3
Cumulative Acreage																	
Marsh	1,364.0	1,426.7	1,489.4	1,552.1	1,614.8	1,677.5	1,714.8	1,752.1	1,789.5	1,826.8	1,864.1	1,901.5	1,938.8	1,976.1	2,013.5	2,050.8	2,088.1
Rice	2,811.4	2,936.8	3,062.2	3,187.5	3,236.9	3,286.2	3,578.9	3,653.6	3,728.3	3,802.9	3,877.6	3,952.3	4,027.0	4,101.6	4,176.3	4,251.0	4,325.6
Other	1,782.2	1,844.8	1,907.5	1,970.2	2,007.6	2,044.9	1,864.1	1,901.5	1,938.8	1,976.1	2,013.5	2,050.8	2,088.1	2,125.5	2,162.8	2,200.2	2,237.5
Subtotal	5,957.5	6,208.3	6,459.1	6,709.9	6,859.2	7,008.5	7,157.9	7,307.2	7,456.6	7,605.9	7,755.2	7,904.6	8,053.9	8,203.3	8,352.6	8,501.9	8,651.3
<i>Marsh Deficit (based on 25% of 2 years)</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Acreage																	
Marsh	23%	23%	23%	23%	24%	24%	24%	24%	24%	24%	24%	24%	24%	24%	24%	24%	24%
Rice	47%	47%	47%	48%	47%	47%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Other	30%	30%	30%	29%	29%	29%	26%	26%	26%	26%	26%	26%	26%	26%	26%	26%	26%
Hunting																	
Hunting Acreage as Percent of Hunting Acreage	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
	2,878.8	3,004.2	3,129.6	3,255.0	3,329.6	3,404.3	3,479.0	3,553.6	3,628.3	3,703.0	3,777.6	3,852.3	3,927.0	4,001.7	4,076.3	4,151.0	4,225.7

Source: City of Sacramento, Natomas Basin Conservancy, and SACOG Housing and Employment Forecasts

"land_cost"

(1) After the first 400 acres is acquired, each year additional habitat is acquired based on the amount of urban development from the current year.

(2) The acres of rice converted to marsh in 2001 and 2002 are amounts provided by the Natomas Basin Conservancy. In each remaining year, these acres are estimated as the number of acres needed to reach and maintain the specified percent of marsh.

(3) The HCP does not limit the number of acres eligible for hunting. The percentages represent how much may be hunted under this economic analysis, not what necessarily can or will be hunted.

Table A-3
Natomas Basin HCP
Habitat Lands Acquired & Restor

	31 2026	32 2027	33 2028	34 2029	35 2030	36 2031	37 2032	38 2033	39 2034	40 2035	41 2036	42 2037	43 2038	44 2039	45 2040	46 2041	47 2042
Annual Developed Acreage	298.7	298.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Developed Acreage	17,201.3	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0
Annual Mitigation Requirement	149.3	149.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Mitigation	8,600.7	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0
Habitat Acquired (1)	98.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Habitat Acreage	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0
Surplus / Shortfall Acquisition	149.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Land Acquisition																	
Out-of-Basin Lands	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
In-Basin Lands	98.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Use of Acquired Land																	
Marsh	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Existing Rice Base	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Other Converted to Rice	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Use of Land																	
Marsh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Existing Rice Base	74.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Converted to Rice	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	24.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal	98.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rice/Other Converted to Marsh	37.3	37.3	24.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Marsh Percent of Total Habitat</i>																	
Cumulative Acreage																	
Marsh	2,125.5	2,162.8	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5
Rice	4,362.3	4,325.0	4,300.3	4,300.3	4,300.3	4,300.3	4,300.3	4,300.3	4,300.3	4,300.3	4,300.3	4,300.3	4,300.3	4,300.3	4,300.3	4,300.3	4,300.3
Other	2,262.2	2,262.2	2,262.2	2,262.2	2,262.2	2,262.2	2,262.2	2,262.2	2,262.2	2,262.2	2,262.2	2,262.2	2,262.2	2,262.2	2,262.2	2,262.2	2,262.2
Subtotal	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0
<i>Marsh Deficit (based on 25% of 2 years)</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>
Cumulative Acreage																	
Marsh	24%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Rice	50%	49%	49%	49%	49%	49%	49%	49%	49%	49%	49%	49%	49%	49%	49%	49%	49%
Other	26%	26%	26%	26%	26%	26%	26%	26%	26%	26%	26%	26%	26%	26%	26%	26%	26%
Hunting																	
Hunting Acreage as Percent of Hunting Acreage	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
	4,300.3	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0

Source: City of Sacramento, Natomas Basin Conservancy, and SACOG Housing and Employment Forecasts

"land_cost"

(1) After the first 400 acres is acquired, each year additional habitat is acquired based on the amount of urban development from the current year.

(2) The acres of rice converted to marsh in 2001 and 2002 are amounts provided by the Natomas Basin Conservancy. In each remaining year, these acres are estimated as the number of acres needed to reach and maintain the specified percent of marsh.

(3) The HCP does not limit the number of acres eligible for hunting. The percentages represent how much may be hunted under this economic analysis, not what necessarily can or will be hunted.

Table A-3
Natomas Basin HCP
Habitat Lands Acquired & Restor

	48 2043	49 2044	50 2045	51 2046	52 2047	53 2048	54 2049	55 2050
Annual Developed Acreage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Developed Acreage	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0
Annual Mitigation Requirement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Mitigation	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0
Habitat Acquired (1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Habitat Acreage	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0
Surplus / Shortfall Acquisition	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Land Acquisition								
Out-of-Basin Lands	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
In-Basin Lands	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Use of Acquired Land								
Marsh	0%	0%	0%	0%	0%	0%	0%	0%
Existing Rice Base	75%	75%	75%	75%	75%	75%	75%	75%
Other Converted to Rice	0%	0%	0%	0%	0%	0%	0%	0%
Other	25%	25%	25%	25%	25%	25%	25%	25%
Use of Land								
Marsh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Existing Rice Base	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Converted to Rice	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rice/Other Converted to Marsh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Marsh Percent of Total Habitat</i>								
Cumulative Acreage								
Marsh	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5
Rice	4,300.3	4,300.3	4,300.3	4,300.3	4,300.3	4,300.3	4,300.3	4,300.3
Other	2,262.2	2,262.2	2,262.2	2,262.2	2,262.2	2,262.2	2,262.2	2,262.2
Subtotal	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0
<i>Marsh Deficit (based on 25% of 2 years)</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>
Cumulative Acreage								
Marsh	25%	25%	25%	25%	25%	25%	25%	25%
Rice	49%	49%	49%	49%	49%	49%	49%	49%
Other	26%	26%	26%	26%	26%	26%	26%	26%
Hunting								
Hunting Acreage as Percent of	50%	50%	50%	50%	50%	50%	50%	50%
Hunting Acreage	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0

"land_cost"

Economic Analysis
of the NFHCP
March 12, 2002

Figure A-3
Natomas Basin HCP
Habitat Lands Acquired & Restored/Enhanced

Base Case
17,500 acres of development
1/2 acre of mitigation land per gross acre of developed land
25% marsh

	Assumption	Total 1994-2045	0 1994	0 1995	1 1996	2 1997	3 1998	4 1999	5 2000	6 2001	7 2002	8 2003	9 2004	10 2005	11 2006	12 2007
Annual Developed Acreage		17,500	0.0	0.0	30.4	104.9	1,380.4	1,465.5	598.1	403.2	1,689.7	1,689.7	844.8	844.8	844.8	844.8
Cumulative Developed Acreage	17,500		0.0	0.0	30.4	135.3	1,515.7	2,981.1	3,579.2	3,982.4	5,672.1	7,361.8	8,206.7	9,051.5	9,896.4	10,741.2
Annual Mitigation Requirement	50%	8,750	0.0	0.0	15.2	52.4	690.2	732.7	299.0	201.6	844.8	844.8	422.4	422.4	422.4	422.4
Cumulative Mitigation	(50% prior to 2001)		0.0	0.0	15.2	67.7	757.8	1,490.6	1,789.6	1,991.2	2,836.1	3,680.9	4,103.3	4,525.8	4,948.2	5,370.6
Habitat Acquired (1)		8,750	-	-	-	-	-	1,297.0	334.0	320.0	885.1	844.8	422.4	422.4	422.4	422.4
Cumulative Habitat Acreage			-	-	-	-	-	1,297.0	1,631.0	1,951.0	2,836.1	3,680.9	4,103.4	4,525.8	4,948.2	5,370.6
Surplus / Shortfall Acquisition			0.0	0.0	-15.2	-67.7	-757.8	-193.6	-158.6	-40.2	0.0	0.0	0.0	0.0	0.0	0.0
Land Acquisition																
Out-of-Basin Lands		1,359.8	-	-	-	-	-	0.0	0.0	0.0	177.0	169.0	84.5	84.5	84.5	84.5
In-Basin Lands		7,390.2	-	-	-	-	-	1,297.0	334.0	320.0	708.1	675.9	337.9	337.9	337.9	337.9
		8,750.0														
Initial Use of Acquired Land																
Marsh			-	-	-	-	-	0%	0%	0%	0%	0%	0%	0%	0%	0%
Existing Rice Base			-	-	-	-	-	75%	75%	75%	75%	75%	75%	75%	75%	75%
Other Converted to Rice			-	-	-	-	-	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other			-	-	-	-	-	25%	25%	25%	25%	25%	25%	25%	25%	25%
Use of Land																
Marsh		0.0	-	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Existing Rice Base		6,562.5	-	-	-	-	-	972.8	250.5	240.0	663.8	633.6	316.8	316.8	316.8	316.8
Other Converted to Rice		0.0	-	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other		2,187.5	-	-	-	-	-	324.3	83.5	80.0	221.3	211.2	105.6	105.6	105.6	105.6
Subtotal		8,750.0	-	-	-	-	-	1,297	334.0	320.0	885.1	844.8	422.4	422.4	422.4	422.4
Rice/Other Converted to Marsh (2)		2,187.5	-	-	-	-	-	0.0	0.0	436.9	221.8	261.6	105.6	105.6	105.6	105.6
Marsh Percent of Total Habitat	25%															
Cumulative Acreage																
Marsh		2,187.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	436.9	658.6	920.2	1,025.8	1,131.4	1,237.1	1,342.7
Rice		4,375.0	0.0	0.0	0.0	0.0	0.0	972.8	1,223.3	1,144.2	1,598.3	1,970.3	2,051.7	2,262.9	2,474.1	2,685.3
Other		2,187.5	0.0	0.0	0.0	0.0	0.0	324.3	407.8	370.0	579.2	790.4	1,025.8	1,131.4	1,237.1	1,342.7
Subtotal		8,750.0	0.0	0.0	0.0	0.0	0.0	0.0	1,297.0	1,631.0	1,951.0	2,836.1	3,680.9	4,103.4	4,525.8	4,948.2
Cumulative Acreage																
Marsh			0%	0%	0%	0%	0%	0%	0%	22%	23%	25%	25%	25%	25%	25%
Rice			0%	0%	0%	0%	0%	75%	75%	59%	56%	54%	50%	50%	50%	50%
Other			0%	0%	0%	0%	0%	25%	25%	19%	20%	21%	25%	25%	25%	25%
Hunting																
Hunting Acreage as Percent of Total (3)			0%	0%	0%	0%	0%	0%	0%	0%	30%	33%	35%	38%	40%	45%
Hunting Acreage			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	850.8	1,196.3	1,436.2	1,697.2	1,979.3	2,416.8

Source: City of Sacramento, Natomas Basin Conservancy, and SACOG Housing and Employment Forecasts

"land_cost"

- (1) After the first 400 acres is acquired, each year additional habitat is acquired based on the amount of urban development from the current year.
- (2) The acres of rice converted to marsh in 2001 and 2002 are amounts provided by the Natomas Basin Conservancy. In each remaining year, these acres are estimated as the number of acres needed to reach and maintain the specified percent of marsh.
- (3) The HCP does not limit the number of acres eligible for hunting. The percentages represent how much may be hunted under this economic analysis, not what necessarily can or will be hunted.

**Figure A-3
Natomas Basin HCP
Habitat Lands Acquired & Restored/Enhanced**

	Assumption	Total 1994-2045	13 2008	14 2009	15 2010	16 2011	17 2012	18 2013	19 2014	20 2015	21 2016	22 2017	23 2018	24 2019	25 2020	26 2021
Annual Developed Acreage		17,500	844.8	844.8	844.8	844.8	844.8	844.8	844.8	844.8	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Developed Acreage	17,500		11,586.1	12,430.9	13,275.8	14,120.6	14,965.5	15,810.3	16,655.2	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0
Annual Mitigation Requirement	50%	8,750	422.4	422.4	422.4	422.4	422.4	422.4	422.4	422.4	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Mitigation	(50% prior to 2001)		5,793.0	6,215.5	6,637.9	7,060.3	7,482.7	7,905.2	8,327.6	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0
Habitat Acquired (1)		8,750	422.4	422.4	422.4	422.4	422.4	422.4	422.4	422.4	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Habitat Acreage			5,793.1	6,215.5	6,637.9	7,060.3	7,482.8	7,905.2	8,327.6	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0
Surplus / Shortfall Acquisition			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Land Acquisition																
Out-of-Basin Lands		1,359.8	84.5	84.5	84.5	84.5	84.5	84.5	84.5	84.5	0.0	0.0	0.0	0.0	0.0	0.0
In-Basin Lands		7,390.2	337.9	337.9	337.9	337.9	337.9	337.9	337.9	337.9	0.0	0.0	0.0	0.0	0.0	0.0
		8,750.0														
Initial Use of Acquired Land																
Marsh			0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Existing Rice Base			75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Other Converted to Rice			0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other			25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Use of Land																
Marsh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Existing Rice Base		6,562.5	316.8	316.8	316.8	316.8	316.8	316.8	316.8	316.8	0.0	0.0	0.0	0.0	0.0	0.0
Other Converted to Rice		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other		2,187.5	105.6	105.6	105.6	105.6	105.6	105.6	105.6	105.6	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal		8,750.0	422.4	422.4	422.4	422.4	422.4	422.4	422.4	422.4	0.0	0.0	0.0	0.0	0.0	0.0
Rice/Other Converted to Marsh (2)		2,187.5	105.6	105.6	105.6	105.6	105.6	105.6	105.6	105.6	0.0	0.0	0.0	0.0	0.0	0.0
Marsh Percent of Total Habitat	25%															
Cumulative Acreage																
Marsh		2,187.5	1,448.3	1,553.9	1,659.5	1,765.1	1,870.7	1,976.3	2,081.9	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5
Rice		4,375.0	2,896.5	3,107.7	3,319.0	3,530.2	3,741.4	3,952.6	4,163.8	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0
Other		2,187.5	1,448.3	1,553.9	1,659.5	1,765.1	1,870.7	1,976.3	2,081.9	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5
Subtotal		8,750.0	5,793.1	6,215.5	6,637.9	7,060.3	7,482.8	7,905.2	8,327.6	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0
Cumulative Acreage																
Marsh			25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Rice			50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Other			25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Hunting																
Hunting Acreage as Percent of Total (3)			50%	55%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%
Hunting Acreage			2,896.5	3,418.5	3,982.7	4,236.2	4,489.6	4,743.1	4,996.5	5,250.0	5,250.0	5,250.0	5,250.0	5,250.0	5,250.0	5,250.0

Source: City of Sacramento, Natomas Basin Conservancy, and SACOG Housing and Employment Forecasts

"land_cost"

- (1) After the first 400 acres is acquired, each year additional habitat is acquired based on the amount of urban development from the current year.
- (2) The acres of rice converted to marsh in 2001 and 2002 are amounts provided by the Natomas Basin Conservancy. In each remaining year, these acres are estimated as the number of acres needed to reach and maintain the specified percent of marsh.
- (3) The HCP does not limit the number of acres eligible for hunting. The percentages represent how much may be hunted under this economic analysis, not what necessarily can or will be hunted.

**Figure A-3
Natomas Basin HCP
Habitat Lands Acquired & Restored/Enhanced**

	Assumption	Total 1994-2045	27 2022	28 2023	29 2024	30 2025	31 2026	32 2027	33 2028	34 2029	35 2030	36 2031	37 2032	38 2033	39 2034	40 2035
Annual Developed Acreage		17,500	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Developed Acreage	17,500		17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0
Annual Mitigation Requirement	50%	8,750	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Mitigation	(50% prior to 2001)		8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0
Habitat Acquired (1)		8,750	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Habitat Acreage			8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0
Surplus / Shortfall Acquisition			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Land Acquisition																
Out-of-Basin Lands		1,359.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
In-Basin Lands		7,390.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		8,750.0														
Initial Use of Acquired Land																
Marsh			0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Existing Rice Base			75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Other Converted to Rice			0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other			25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Use of Land																
Marsh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Existing Rice Base		6,562.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Converted to Rice		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other		2,187.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal		8,750.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rice/Other Converted to Marsh (2)		2,187.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Marsh Percent of Total Habitat	25%															
Cumulative Acreage																
Marsh		2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5
Rice		4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0
Other		2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5
Subtotal		8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0
Cumulative Acreage																
Marsh			25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Rice			50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Other			25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Hunting																
Hunting Acreage as Percent of Total (3)			60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%
Hunting Acreage			5,250.0	5,250.0	5,250.0	5,250.0	5,250.0	5,250.0	5,250.0	5,250.0	5,250.0	5,250.0	5,250.0	5,250.0	5,250.0	5,250.0

Source: City of Sacramento, Natomas Basin Conservancy, and SACOG Housing and Employment Forecasts

"land_cost"

(1) After the first 400 acres is acquired, each year additional habitat is acquired based on the amount of urban development from the current year.

(2) The acres of rice converted to marsh in 2001 and 2002 are amounts provided by the Natomas Basin Conservancy. In each remaining year, these acres are estimated as the number of acres needed to reach and maintain the specified percent of marsh.

(3) The HCP does not limit the number of acres eligible for hunting. The percentages represent how much may be hunted under this economic analysis, not what necessarily can or will be hunted.

**Figure A-3
Natomas Basin HCP
Habitat Lands Acquired & Restored/Enhanced**

	Assumption	Total 1994-2045	41 2036	42 2037	43 2038	44 2039	45 2040	46 2041	47 2042	48 2043	49 2044	50 2045
Annual Developed Acreage		17,500	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Developed Acreage	17,500		17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0	17,500.0
Annual Mitigation Requirement	50%	8,750	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Mitigation	(50% prior to 2001)		8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0
Habitat Acquired (1)		8,750	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Habitat Acreage			8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0
Surplus / Shortfall Acquisition			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Land Acquisition												
Out-of-Basin Lands		1,359.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
In-Basin Lands		7,390.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		8,750.0										
Initial Use of Acquired Land												
Marsh			0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Existing Rice Base			75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Other Converted to Rice			0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other			25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Use of Land												
Marsh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Existing Rice Base		6,562.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Converted to Rice		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other		2,187.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal		8,750.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rice/Other Converted to Marsh (2)		2,187.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Marsh Percent of Total Habitat	25%											
Cumulative Acreage												
Marsh		2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5
Rice		4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0	4,375.0
Other		2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5	2,187.5
Subtotal		8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0	8,750.0
Cumulative Acreage												
Marsh			25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Rice			50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Other			25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Hunting												
Hunting Acreage as Percent of Total (3)			60%	60%	60%	60%	60%	60%	60%	60%	60%	60%
Hunting Acreage			5,250.0	5,250.0	5,250.0	5,250.0	5,250.0	5,250.0	5,250.0	5,250.0	5,250.0	5,250.0

Source: City of Sacramento, Natomas Basin Conservancy, and SACOG Housing and Employment Forecasts

"land_cost"

(1) After the first 400 acres is acquired, each year additional habitat is acquired based on the amount of urban development from the current year.

(2) The acres of rice converted to marsh in 2001 and 2002 are amounts provided by the Natomas Basin Conservancy. In each remaining year, these acres are estimated as the number of acres needed to reach and maintain the specified percent of marsh.

(3) The HCP does not limit the number of acres eligible for hunting. The percentages represent how much may be hunted under this economic analysis, not what necessarily can or will be hunted.

Response to Comment 01-54

The commentor is referred to Master Responses 3 (Joint Vision) and 4 (Cumulative Impacts) and to responses to Comment Letter I10 for a discussion of development outside of the 17,500 acres of Planned Development. The comment also references Appendix H of the NBHCP, which is the Biological Resources Technical Memo. It is very important to differentiate between the consideration of lands outside the Permit Areas relevant to providing foraging habitat for the Swainson's hawk (which is discussed in Appendix H of the Draft NBHCP, Appendix K of the Final NBHCP, and Master Response 5 [Swainson's Hawk Foraging Habitat]) and the unknown potential future use of lands for urban development (or other purposes), which is discussed in the EIR/EIS. The commentor states that Table 4-1 shows 19,400 acres of land in Sacramento County that would be Mitigation Lands under the NBHCP. Table 4-1, however, is just a list of the land use types that exist within the Natomas Basin by jurisdiction, and does not indicate that 19,400 acres are proposed as Mitigation Lands under the NBHCP.

Response to Comment 01-55

The commentor states that the Mitigation Fee does not adequately reflect land prices in and outside of the Natomas Basin and should be adjusted to ensure adequacy of funding. The Applicants do not agree with the assertion that the current fee does not reflect transaction prices of the NBHCP. The cost assumption used in the funding plan/cash flow analysis is based on actual land acquisition costs and TNBC's experience.

According to John Roberts, TNBC's Executive Director, the average (mean) cost of all acquisitions is \$5,985 per acre. Under the Settlement Agreement, the highest cost was \$11,000 per acre and the last three land acquisition costs have ranged between \$7,500 and \$8,300 an acre. Currently, the fee as adopted by the City, which includes a Settlement Agreement Premium, reflects a land cost assumption of \$11,000 plus transaction costs and contingencies. No land acquisitions have occurred since the expiration of the Settlement Agreement, but, given recent acquisitions, it is projected that the land costs will approximate \$7,500 including transaction costs and contingencies.

It is also important to note that the \$11,000 per acre high in land acquisitions costs was during the Settlement Agreement and included purchase of land near Fisherman's Lake, one of the preserve acquisition areas specified in the Settlement Agreement. Fisherman's Lake land was expected to be more expensive than other land in the Natomas Basin.

The base level land acquisition cost (excluding the Settlement Premium) in the cash flow model was increased in July of 2002 from \$6,000 per acre, including transaction costs and contingency (May 29, 2001), to \$7,525 per acre, including transaction costs and contingency. This increase was based on information provided by TNBC based on recent acquisitions and its best estimate of land costs in 2003 as discussed above.

The proposed fee, based on the Draft NBHCP, for land acquisition, including transaction costs and contingency of \$7,550, provides for an additional \$50 per acre to cover pre-acquisition survey costs.

With the expiration of the Settlement Agreement in October 2002, it is anticipated that the upward pressure on land costs will subside. TNBC currently has also acquired 745.86

surplus acres of preserve lands, not including the 200-acre advance. Having such a surplus in preserve lands will also reduce any near-term upward pressure in land acquisition costs.

Also inherent in the comments on land prices is the suggestion that if land acquisition prices are allowed to reflect market prices, which the Economic Analysis states is correct, developers may choose to donate land more often and therefore achieve some level of cost savings. This may or may not be the case. In the case of one of the land transactions at \$11,000 per acre, the highest cost to date, the developer contributed the land in lieu of the payment of the Mitigation Fee for land acquisition.

In response to the comment on the Joint Vision announcement, the commentor is referred to Master Response 3 (Joint Vision). It is important to note, however, that TNBC in its acquisition of land is as much subject to the market forces of supply and demand of available land in the Natomas Basin as other potential buyers. If a program such as the Joint Vision or any other land use program were to proceed and were to affect the supply and demand of available land in the basin and as a result prices were to increase beyond the levels contemplated in the existing Mitigation Fees, the land acquisition fee in the funding plan for the NBHCP will be adjusted accordingly.

The commentor's conclusion on the issue of funding adequacy for land acquisition is that in order to achieve adequate funding, the land component should be set at the average of conservation prices and development prices for the entire area outside the currently permitted development zone. It is unclear on what basis the commentor is making this conclusion. Moreover, we are unable to ascertain the commentor's meaning regarding the "entire area outside the currently permitted development zone." It implies that development prices outside the Natomas Basin should be used, but "outside the Natomas Basin" could mean anywhere. Basing the funding determination on development prices anywhere would be infeasible and hardly representative of the conditions of the Plan Area.

In preparing the funding plan for the NBHCP, the Economic Analysis is based on the assumption that using the actual experience of TNBC in land acquisition costs is a superior methodology for estimating future costs than using costs in other areas that may not be relevant to the Natomas Basin.

Response to Comment 01-56

The commentor states that the R&E component of the fee is inadequate. While the comment recognizes the fact that the current fee is based on TNBC's actual experience, it suggests that the restoration projects to date are incomplete because they do not include plant maintenance and that the fee should, therefore, be increased to account for this factor.

TNBC has completed R&E construction on three tracts to date (Betts, Kismat, and Silva). Extensive plantings of native grass, shrubs, and trees have taken place. Plant mortality has been very minimal. Early in year one of the post-construction life of the preserves, coots destroyed some of the plantings of tule and cattails. TNBC replanted at its expense and planted in larger clusters to reduce future predation by coots. The additional costs were nominal (approximately \$5,000) and have been included in TNBC's Administrative/O&M budget.

In the reserve design it was anticipated that there would be some plant mortality, and this was factored into the overall planting scheme. Therefore, there was some over-planting just for this purpose.

As to plant care and maintenance on the three preserves, TNBC has engaged a habitat lands management contractor. A contract was authorized by TNBC's Board resolution #04.01.05 on April 4, 2001. It provides for a three-year agreement whereby the contractor is paid \$65,000 for year one, \$55,000 for year two, and \$35,000 for year three. This includes watering, weed control, pruning as necessary, exotic weed control, and other plant protection tasks, among other responsibilities. These funds are paid out of TNBC's Administration/O&M budget, "Contract Work & Monitoring," for which \$180,000 was budgeted for 2003.

While three other TNBC Mitigation Land tracts are not complete (in contrast to the Betts, Kismat, and Silva tracts), they are 95 percent or more complete and only await dry soils for completion. These three additional tracts (Lucich South, Bennett North, and Bennett South) are also under a habitat management contract agreement. This was approved at TNBC's December 2002 Board of Directors meeting and is also for a three-year period, covering the above three tracts at a cost of \$11,500 per year for each of the three years. Accordingly, six of TNBC's 15 preserves are under habitat management contracts with experienced habitat lands management contractors providing for plant care, among other tasks. As additional R&E projects are completed, new contracts will be tendered, and all costs for these plant maintenance services will be factored into TNBC's administrative budget.

Response to Comment O1-57

The comment states that the administration component of the NBHCP fee may be inadequate because it is not evident how the administrative budget was determined. The comment indicates that certain items may be missing from the fee estimate. The comment indicates that that cost of stewardship in the 1997 NBHCP was \$116 an acre. The source of this information is unclear. Page IV-56 of the 1997 NBHCP details the cost assumptions for the O&M and administration costs. The 1997 fee assumed the following:

Operation & Maintenance	
Marsh	\$124 per acre/year
Non-farmable agricultural land	\$72 per acre/year
Fallow Rice	\$82 per acre/year
Land leased for planted rice base	\$72 per acre/year
Land leased for other crops	\$72 per acre/year
Hunting Blinds	\$47 per acre/year
NBC Administrative Costs	
Initial 400-acre Acquisition	\$50,000 per year
Subsequent Acquisitions	\$200,000 per year
After All Lands Acquired	\$100,000 per year

With TNBC's operating experience, these costs have been refined on annual basis since 1997. Table 6 and Table 7 of the Revised Fee Estimate Based on the Draft NBHCP (EPS, 2002) detail the current cost assumptions for the O&M and Administrative components of the fee. In fact, the cash flow model covers all of the items indicated as deficient by the commentor.

- **Outreach and Visitation:** These costs are covered under Contract Work & Public Education with a budget of \$45,000 per year and Publications, Printing, & Distribution with a budget of \$40,000 as shown on Table 7. In total, TNBC will have an allocated \$85,000 to cover costs related to contract work and public education, including outreach and visitation to preserve lands.
- **Hunting:** The cash flow model assumes \$12 per hunting acre. This assumption is net of costs. The net revenue assumptions are based on reasonable estimates provided by TNBC. Since 2002 was the first year for substantial hunting leases, the budgeted numbers are preliminary. TNBC is moving cautiously with hunting in order to maintain the integrity of its efforts to promote biological advantage for the species covered in the 1997 NBHCP. As it learns more about integrating hunting with impacts on habitat reserves, it will know more precisely what income could reasonably be projected.
- **Rice Farming:** Tasks associated with administering rice farming are covered by TNBC's Executive Director and staff and are therefore covered by the annual salary allocation for staff.
- **Management Plans:** The R&E fee component includes a cost of \$253 per acquired acre to cover the cost of all future Site Specific Land Management Plans as detailed in Table 5 of the Economic Analysis "Revised Fee Estimated Based on Draft NBHCP." (EPS, 2002)
- **Pest & Water Management:** Both pest and water management costs were included in the O&M cost estimates that were used as the basis for deriving the O&M costs per acre for Marsh, Upland/Fallow, Land Leased for Planted Rice Base, Land Leased for Other Crops, Other, and Hunting lands shown in Table 6.

It should be noted that the detailed cash flow and assumption tables for the Economic Analysis of the NBHCP were included in the Technical Appendices of the Economic Analysis and, although not included in the Appendix to the Draft NBHCP, these Appendices were available for public review during the review period for the NBHCP and the EIR/EIS.

Response to Comment 01-58

The commentor is correct in the assumption that the cash flow model does not include any allowance for merit increases in staff compensation. The cash flow has been structured so that the salaries reflect market rates for current staff positions, but in the interest of minimizing administrative costs, no future merit adjustments have been assumed.

Response to Comment 01-59

Under the Economies of Scale argument, the commentor states that contiguous preserves are better than those that are not. The Applicants and the Lead Agencies agree with this general assumption, which is also stated in the NBHCP. Contrary to the commentor's assertion, however, the NBHCP does not deny TNBC the opportunity to establish

significant and connected preserves. In fact, the NBHCP specifies priorities in acquisition with emphasis on large contiguous preserve areas as further described below.

The NBHCP's Plan Operator, TNBC, has worked diligently to comply with the 1997 NBHCP requirement of one 2,500-acre contiguous preserve and other satellite preserves consisting of a minimum of 400 contiguous acres. With respect to the 2,500-acre contiguous preserve (the "North Basin reserve"), TNBC has already achieved approximately one-half of this goal even though it has not completed year four of a 50-year NBHCP. It has expressed repeatedly its confidence that it can complete this requirement.

The additional requirement of other preserves in 400-acre contiguous agglomerations is also being met. TNBC's Central Basin preserves now total approximately 1,230 acres, far exceeding the 400 acres needed. One of the tracts in the Central Basin preserve area is 575 acres, by itself meeting the 400-acre minimum preserve required in the 1997 NBHCP. Three of the five Central Basin tracts are now contiguous; TNBC has expressed confidence that all five will soon be contiguous. Landowners or developers in the interstices have communicated in public meetings on multiple occasions (as well as in printed documents circulated in such meetings) their commitment that these lands would ultimately be habitat lands.

As to the South Basin preserves, those around Fisherman's Lake, TNBC currently holds four tracts, two of which are contiguous and two of which are not. The two that are not contiguous are within one parcel of being contiguous. They also have adjacency or near-adjacency with either the Sacramento River and heavy Swainson's hawk nesting areas (Alleghany 50 tract) or this characteristic plus adjacency to Fisherman's Lake itself. TNBC continues to work on annexing additional preserves in this area to capitalize on the land already acquired in the biologically sensitive region.

TNBC is confident that this preserve strategy addresses the various and sometimes challenging biological requirements and needs of the 26 species originally covered in the 1997 NBHCP and that the system of reserves will continue to function in accordance with the biological requirements contained in the revised NBHCP.

As to the recommendation that the acquisition areas be designated, this is inconsistent with effective land acquisition strategy and could raise constitutional issues. In order to avoid potential claims of inverse condemnation, and at the least, to minimize the potential for landowners to withhold designated properties from the market, the NBHCP purposely avoids designating specific reserve sites. To date, this strategy has worked well as numerous acquisitions have been made and are being assembled into consolidated reserves as discussed above using the "willing seller/willing buyer" formula presented in the 1997 NBHCP. It is anticipated that this strategy will continue to function adequately under the revised NBHCP.

The commentor states that "To deny the Conservancy this ability [that is, designation of targeted acquisition land] is to prevent the establishment of an effective and efficient preserve system." TNBC has not been denied the ability to target acquisition lands. TNBC and the Applicants have elected to use the most effective and practicable strategy in fulfilling TNBC's multi-faceted Plan Operator requirements, as called for in the NBHCP.

Response to Comment O1-60

The commentator states that the Economic Analysis “purports to define the MEP by comparing the resulting habitat fees of the Natomas area with those in other locations,” implying that the Economic Analysis is unsuccessful in this area. The Economic Analysis states that there are no precise guidelines that define how the MEP is to be determined. Therefore, two methodologies were used to analyze the MEP from an economic perspective as discussed in the responses to the earlier comments in this letter.

The fee comparison indicates that the Mitigation Fee will be higher, particularly at the \$10,000 fee range, than other nearby or comparable jurisdictions. While this points to impracticability, it is not evidence in and of itself of impracticability. Therefore, the Economic Analysis considered a second analysis, the total cost burden analysis. In the case of the total cost burden analysis, the commentator states that the analysis is deficient because it ignores the potential offsetting factor of the cost of land. As mentioned above, while a residual land value analysis would show the relationship of the total cost burden with the value of the land, this would have been an impossible task to undertake in the case of the Natomas Basin. Such an analysis might be meaningful for a specific land use project where all the variables are known but is impractical for 17,500 acres of Planned Development over the next 25 years. Please refer to Response to Comment O1-44 for further discussion of this issue.

The commentator also states that the impact of the higher NBHCP fees on home values is very small. Although this is accurate, it does not consider two important issues. The first is the consideration of the total cost burden of homes in North Natomas, which is high relative to the total cost burden in other competing jurisdictions in the region. The second is the impact on non-residential development. As discussed in the Responses to Comments O1-42 through O1-54, the impact on non-residential development is more significant because market values have not experienced the same gains as residential development. The impact on all land uses should be factored into the discussion of whether the fee is practicable or not. Please refer to Response to Comment O1-46 for further discussion of this issue.

Letter O2—FOSH

Response to Comment O2-1

Comment noted. This letter was an attachment to Comment Letter O1. In addition to the responses provided below, also see the Responses to Comment Letter O1 (Responses to Comments O1-1 through O1-60).

Response to Comment O2-2

The commentor notes that the mitigation requirements of the NBHCP are different from those described by the CDFG in the *Staff Report Regarding Mitigation for the Swainson's Hawk in the Central Valley of California* (CDFG, 1994). In response, the Applicants reviewed and considered this report extensively in the preparation of the NBHCP, and the Operating Conservation Program of the NBHCP is substantially consistent with many of the recommendations from the *Staff Report*. It is important to note, however, that the CDFG does not consider this report as either the sole or final criterion for the success of a mitigation program. Rather, CDFG has stated in their comment letter on the NBHCP (Comment G3-22) that: "The staff report, however, is not the biological 'benchmark' governing the adequacy of the NBHCP under CESA. The staff report does not, in fact, apply to the NBHCP, and CDFG believes it should not be included in the Plan as an appendix." CDFG has participated in the development of the NBHCP and has provided specific guidance as to an appropriate conservation program for multi-species habitat conservation in the Natomas Basin.

The Addendum to the Biological Resources Technical Memo (Appendix K of the Final NBHCP) provides additional information on the factors raised in the comment regarding foraging habitat, prey base (availability and abundance), and nesting trees. As explained in the Addendum, the existing Land Use and Habitat Assessment Database (see Section 3.4 of the EIR/EIS and Appendix H of the Draft NBHCP) contains data on the specific crops in the Natomas Basin. The Addendum uses this information to clarify the "less than significant" finding for impacts to Swainson's hawks from implementing the NBHCP. Specifically, the Addendum clarifies the quality and function of Swainson's hawk foraging habitat based on crop types and temporal availability of prey base. The Addendum finds that the NBCHP is expected to offset reductions in foraging habitat availability during the nesting season. After the nesting season, foraging habitat availability would decline, but foraging opportunities are not anticipated to be limiting during this period because of an abundance of accessible prey. The Addendum concludes that implementation of the NBCHP is not expected to result in a significant impact to the Swainson's hawk population in the Natomas Basin.

The comment also states that the analysis includes conflicts. As discussed above and confirmed by CDFG in its comment letter on the NBHCP (Letter G3), the issues raised in this comment are not conflicts. Specific comments are addressed in Responses to Comments O2-3 through O2-7, below.

Response to Comment O2-3

Please see Response to Comment O2-2 regarding the applicability of the CDFG's *Staff Report* as a mitigation benchmark. The guidelines cited by the commentor do not represent CDFG's

sole guidance on the treatment of mitigation for Swainson's hawk. CDFG has indicated that the guidelines are one component of the process used by CDFG to recommend measures for inclusion in the NBHCP. In addition to the *Staff Report*, the CDFG has provided guidance to the Applicants on additional avoidance, minimization, and mitigation measures, as well as conditions for restoration and enhancement (R&E) of Mitigation Lands, which have been included in the NBHCP. The R&E measures for the Mitigation Lands, as recommended by CDFG, supplement the measures contained in the *Staff Report*.

Response to Comment O2-4

In consultation with CDFG, the Operating Conservation Program of the NBHCP has been prepared to mitigate for the effects of take associated with the Covered Activities, including Planned Development, on Swainson's hawks.

Response to Comment O2-5

Biological research indicates that the Swainson's hawk is adept at foraging great distances in a number of landscapes. A literature review conducted for the NBHCP, however, suggests that non-rice crops (e.g., row crops) are less suitable for foraging than alfalfa or grasslands. The Biological Resources Technical Memo (Appendix H of the Draft NBHCP, page 5-30, paragraph 2) states for example: "Non-rice crops (row crops) are used less (Estep, 1989; Babcock, 1995) and considered poorer quality foraging habitat for the Swainson's hawk than native grasslands, alfalfa and pasture." As noted in this quotation from the Biological Resources Technical Memo, this statement is based in part on Estep and does not contradict those published findings. Further, Estep (1989) ranked the suitability of various agricultural land types for foraging by Swainson's hawks as follows from best to worst as follows:

1. Alfalfa
2. Disced field
3. Fallow
4. Dry-land pasture
5. Beets
6. Tomatoes
7. Irrigated pasture
8. Grains
9. Other row crops
10. Other

As indicated by this ranking, Estep (1989) considered non-rice crops (beets, tomatoes, grains, and other row crops) of moderate to low importance. Native grassland did not exist in Estep's study area and therefore was not included in the ranking. However, Estep (1989) commented that "Dryland pasture most resembles the physical characteristics of historic grassland foraging habitat in the Central Valley. ... [Two radio-tagged birds] used this foraging habitat as their primary source of food, hunting in other cover-types opportunistically, usually in response to farming activities." Also see the Addendum to the Biological Resources Technical Memo (Appendix K of the Final NBHCP) for additional discussion regarding the value of different cover types as foraging habitat for Swainson's hawk.

Response to Comment O2-6

The commentor presents some calculations of the amount of habitat available per territory and asks what amount of foraging lands per nest is required to support each nesting pair of hawks. The commentor suggests 2,500 acres of foraging habitat could be necessary to support a territory. It should be noted, however, that the attachment referenced by commentor is from a preliminary (1992) version of the NBHCP prepared by the Sacramento Area Flood Control Agency (SAFCA), and that the attachment is a summary table of alternatives that does not contain a reference to a 2,500-acre minimum territory size noted in this comment.

The comment assumes that there are 9,000 acres in the Swainson's Hawk Zone and that, under the NBHCP, 2,187 acres in the Swainson's Hawk Zone will be managed to provide high-quality foraging habitat for the Swainson's hawk. Analyses conducted in the Biological Resources Technical Memo (2002) and the Addendum to that document (2003) show that the acreage assumptions are not accurate. The Swainson's Hawk Zone contains 10,255 acres, a portion of which provides foraging opportunities for Swainson's hawk. The 2,187 acres of upland reserves to be acquired as Mitigation Lands under the NBHCP are not restricted to the Swainson's Hawk Zone. Priority is given to acquiring lands in the Swainson's Hawk Zone, but lands to serve as upland habitat can be acquired outside of the Swainson's Hawk Zone.

The comment also assumes that the only habitat available to birds nesting at the existing 43 territories will be the 2,187 acres of upland habitat provided in the reserve system. This assumption is incorrect for three reasons (also see the Addendum to the Biological Resources Technical Memorandum [Appendix K of the Final NBHCP]), as follows:

- The commentor assumes that the birds at the 43 territories in and immediately adjacent to the Natomas Basin only forage in the Natomas Basin. There is no reason to believe that the birds do not forage in Yolo County on the west side of the Sacramento River. Yolo County supports abundant agricultural fields suitable as foraging habitat for the Swainson's hawk and is well within the foraging range of nesting hawks. No radio-tracking studies have been conducted specifically using the birds nesting in the Natomas Basin, but in the south Sacramento area, nesting birds were found to travel across the Sacramento River and forage exclusively in Yolo County (Babcock, 1995). Thus, it is inappropriate to use only the habitat in the Natomas Basin in determining how much would be available per nesting pair.
- The commentor assumes that only TNBC upland reserves will provide habitat. As explained in Response to Comment G3-8 and elaborated on in the Addendum to the Biological Resources Technical Memorandum (Appendix K of the Final NBHCP), foraging opportunities in the Mitigation Lands will also be provided by fallow rice and the upland component of the managed marsh. The total acreage of foraging habitat in the reserves will be about 3,172 acres.
- Foraging habitat will remain in undeveloped areas outside of the reserves. An estimated 12,862 acres of potential foraging habitat would not be impacted by Planned Development and is assumed to remain available to Swainson's hawks.

Because the assumptions in the comment do not account for all of the habitat available to Swainson's hawks in the Natomas Basin and outside of the Basin, the acreage of foraging habitat available per nesting pair is underestimated in the comment.

The comment further states that 2,500 acres are necessary to support a nesting pair of Swainson's hawks. This statement is based on home-range studies derived from radio-tracking of Swainson's hawks. The information from the radio-tracking studies represents the area traversed by hawks while foraging, not the acreage actually used for foraging. Therefore, it is not appropriate to consider this area as the acreage required to support a pair.

Several studies have determined the home ranges of Swainson's hawks (summarized in England et al., 1997), but none has investigated the acreage necessary to support a nesting pair. The size of home ranges of Swainson's hawks vary considerably among individuals and geographic areas. In the Central Valley, Estep (1989) identifies home ranges whose sizes vary from 830 acres to 21,500 acres. Notably, the bird with the small home range of 820 acres nested in an area dominated by alfalfa. Alfalfa supports abundant prey that is accessible to hawks throughout the breeding season. Because of the proximity of accessible, abundant prey, this hawk did not need to travel far to find prey and hence had a small home range. Similarly, small home ranges were found in northeastern California in an area dominated by alfalfa; a home range as small as 170 acres was found in this area (Woodbridge, 1991, cited in England et al., 1997). Assuming that the acreage required to support a nesting pair is a subset of the home range (or at least no greater than the home range size), these results show that the acreage required to support a pair can be substantially less than asserted by the commentor if the habitat provides consistently abundant and accessible prey.

It is also important to note that many of the existing Mitigation Lands include upland areas adjacent to water or marshlands. Because upland components of the managed marsh reserves are included, additional foraging area is created and prey abundance increased. For example, pages V-19 and V-20 of the Draft NBHCP note the following:

In the Central Valley, meadow mice and insects make up a significant portion of the Swainson's hawks' diet. In the management of nearby similarly designed preserves (e.g., Beach Lake Mitigation Bank, Stones Lakes National Wildlife Refuge), the increased availability of water in previously dry grasslands has increased *Microtus* abundance (Caltrans, 1991). This would be expected given the biological requirement of *Microtus* for green food. This species has been found to increase its reproductive rate nearly ten-fold in the presence of persistent green food over dry grasses (Batzli, 1986; Bowen, 1987; Gill, 1976). Those green plant species generally preferred by *Microtus* (bent grass, chickweed, bedstraw, sorrel, plantain and bromus) are tolerant of limited inundation and will do well in a seasonally wetland environment, as well as those ruderal habitats associated with agricultural and water conveyance systems (Ostfeld and Klosterman, 1986).

Response to Comment O2-7

In response to comments on the effect of changes in foraging habitat on Swainson's hawks, an Addendum to the Biological Resources Technical Memorandum (Appendix K of the

Final NBHCP) was prepared to provide additional clarification of the conclusion in the EIR/EIS that the impact of Planned Development on the Swainson's hawk would be less than significant. The Addendum uses information contained in the Habitat and Land Use Assessment Database on specific crop types. As described in the Addendum, the primary impact to foraging habitat expected from Planned Development is a reduction in row crops. Some row crops predominantly provide foraging opportunities for Swainson's hawks in late summer and early September after the young have fledged. Some row crops have been found to support abundant prey populations that become available during the short period when crops are being harvested. Foraging opportunities are not anticipated to be a limiting factor during these months given the large number of prey that become available during a short period when the crop is harvested.

The comment states that the analysis does not consider the foraging needs of birds that nest outside of the Basin but forage in the Basin and how these birds could influence habitat availability for birds nesting in the Basin. Also, the comment states that the foraging requirements of other raptors need to be considered. The Addendum also provides information on the function and value of foraging habitat for the Swainson's hawk in the Natomas Basin. The clarification of the analysis in the Addendum shows that the reserve system would offset reductions in foraging habitat availability during the nesting season that could result from Planned Development. Because foraging habitat availability in the Natomas Basin is not expected to change substantially, no substantial effect on the nesting population in the Natomas Basin or to birds nesting outside of the Basin that might forage in the Basin is expected. While foraging habitat availability could decline in late summer and early fall, as described above, prey availability is not likely a limiting factor during this time given the abundance of prey that becomes available. Regardless of the origin of birds that forage in the Basin, the function and value of foraging habitat will be retained during the nesting season for Swainson's hawks.

Response to Comment O2-8

Regarding the mitigation ratio, the commentor is referred to the Uplands section of Master Response 1 (Mitigation Ratio). Also see Response to Comment O2-2 above regarding the applicability of the CDFG *Staff Report* to the NBHCP. Also, please see the response submitted to CDFG in response to the Friends of the Swainson's Hawk letter of October 28, 2002 (Appendix I of this Final EIR/EIS).

As discussed in previous comments to this letter, the Addendum to the Biological Resources Technical Memorandum (Appendix K to the Final NBHCP) was prepared to provide additional information clarifying the less-than-significant determination in the Draft EIR/EIS. The Addendum uses information in the Habitat and Land Use Assessment Database (CH2M HILL, 2002) to determine specific crop types supported in the Basin. Using information on crop types, the Addendum evaluates changes in the function and value of foraging habitat in the Basin with particular attention to foraging habitat availability during the nesting season. The Addendum presents information on the temporal availability of foraging opportunities during the 6- to 7-month period that Swainson's hawks inhabit the Natomas Basin.

Although Planned Development would result in the loss of about 8,875 acres of potential foraging habitat for Swainson's hawks, most of this acreage consists of row crops. As

described in more detail in the Addendum, row crops predominantly provide foraging opportunities for the Swainson's hawk during harvest. Prior to harvest, the dense cover created by the crop prohibits access to prey. Because most row crops are harvested in late summer to early fall, they provide limited foraging opportunities during the nesting season. Upland habitat in the Mitigation Lands will be managed to provide abundant, consistently accessible prey throughout the hawk's residency period and, as shown in the Addendum, would offset reductions in foraging opportunities during the nesting season that could result from Planned Development.

Response to Comment O2-9

The commentor is concerned about purchase of upland areas in Area B and whether such reserves would support nesting pairs of Swainson's hawks. In response, it is important to note that the ability of TNBC's Board to approve acquisitions in Area B is subject to substantive conditions. Foremost is the requirement that land acquisitions in Area B must first be "approved in writing by the USFWS and CDFG based on available scientific information that a reserve of adequate size, viability, and habitat value can be established in this area and can support a population of giant garter snakes, Swainson's hawks and other Covered Species" (p. IV-12 of the Draft NBHCP). Based on substantial evidence, it is expected that such acquisitions would not jeopardize the likelihood of the survival and recovery of the Covered Species because such acquisitions can occur only if there is evidence that the land will support the Covered Species.

The NBHCP does not require all upland acquisitions in the Swainson's Hawk Zone but gives high priority to such acquisitions as described in the NBHCP.

TNBC, in conjunction with the Land Use Agencies, will monitor proposed development in the Swainson's Hawk Zone, where the majority of known Swainson's hawk nest sites are currently located and, hence, much of the Swainson's hawk nesting and foraging in the Basin occurs. Based on existing general plans and the City's and Sutter County's NBHCP Permit Areas, development in this zone is expected to be limited over the life of the Plan. However, if the NBHCP is amended and such development does occur, Mitigation Lands established for such development shall, likewise, be located within the Swainson's Hawk Zone. *In addition, TNBC shall set as a top priority the acquisition of upland reserve sites in the Swainson's Hawk Zone via easement or land purchase.* [Emphasis added] Further, any reserve lands established in the Swainson's Hawk Zone shall, to the maximum extent possible, be managed to benefit all upland-associated Covered Species, though any management in this zone must be fully consistent with Swainson's hawk biology and needs.

In addition, the upland acquisition criteria on pages IV-25 and 26 of the Draft NBHCP state:

Generally, priority for acquiring upland habitat is as follows (in descending priority order): (1) sites located within the Swainson's Hawk Zone; (2) sites that, in the judgment of TNBC and the Technical Advisory Committee, would provide specific, important benefits to other upland-associated Covered Species (e.g., tricolored blackbird nesting colonies); (3) sites supporting Swainson's hawk nests or foraging habitat outside the

Swainson's Hawk Zone; (4) sites that would provide a good potential for enhancement of upland habitat values; and (5) any other site that would result in a benefit to any upland Covered Species.

Thus, the NBHCP does encourage upland reserves to be located within the Swainson's Hawk Zone but does not preclude acquisition of Mitigation Lands with upland features in other areas of the Basin.

Response to Comment O2-10

The commentor raises several issues regarding Swainson's hawk nest sites and implementation of the NBHCP. The commentor is correct in stating that many of the known Swainson's hawk nest sites are in the southern portion of the Basin and that most of the potential foraging habitat that would be lost is in the City's Permit Area. The EIR/EIS evaluates potential effects of reductions in foraging habitat near nest sites in two ways. First, the effects of changes in foraging habitat were evaluated for individual territories that are located in areas of Planned Development. The EIR/EIS assesses the likelihood that these territories would be abandoned because of reductions in foraging habitat. As a result of this assessment, the Draft EIR/EIS identifies two territories in areas of Planned Development that could be abandoned with loss of nearby foraging habitat (see pp. 4-75 - 4-76 of the Draft EIR/EIS). The Draft EIR/EIS also addresses the spatial distribution of nest sites, foraging habitat, and Planned Development through evaluating changes in foraging habitat within 1 mile of nest sites. The NBHCP mitigates potential impacts through creating new nesting opportunities and providing high-quality foraging habitat in close proximity to nest opportunities.

The commentor is concerned that the timing of mitigation for the Swainson's hawk needs to precede or be contemporaneous with the loss of foraging habitat. The comment states that the City (through TNBC) was supposed to have acquired 525 acres of uplands. In fact, TNBC has exceeded this acquisition goal and has to date acquired 682.8 acres of uplands as part of the existing Mitigation Lands.

The commentor further suggests that since TNBC has currently acquired 2,800 acres of Mitigation Lands, 25 percent of the total should be upland. In reviewing the most recent inventory of TNBC reserve acquisitions, it is important to note that the TNBC is (1) currently ahead of the required mitigation requirement for land acquisitions, and (2) 24.4 percent of the TNBC reserve system is currently upland reserves not including the required upland edges of managed marsh. It should also be noted that in addition to the land allocated for uplands above, the land areas designated as "associated uplands" are included in the managed marsh land allocation component. These associated uplands are regularly used by raptors as foraging area. On average, 20 to 30 percent of managed marsh areas designated in the above acreage is allocated to associated uplands.

By way of background, TNBC has implemented the NBHCP with respect to uplands in accordance with the formula that allocates the percentage of land to rice fields, managed marsh, and upland reserves. Upland projects to date include 145.97 acres of the Betts-Kismat-Silva tract located in Sacramento County. This reserve includes 338 acres, of which the remaining acreage is managed marsh with upland edges. The upland areas of this reserve include 38 acres that are intensively managed as irrigated pasture. This property is

grazed and provides high-value Swainson's hawk foraging habitat . Additionally, there are several trees that could accommodate Swainson's hawks nesting on the reserve.

The Brennan tract is near Swainson's hawk nest NB-14 and consists of 241 acres, nearly all (237.516) of which are designated for upland reserve. The site has been planted with high-value Swainson's hawk foraging crops. It also contains potential nesting trees and numerous perching opportunities.

R&E construction projects that were initiated in 2002 were 95 percent or better completed on three properties: Lucich South, Bennett North, and Bennett South. Once soils dry out in spring 2003, the projects will be completed. The largest upland reserve feature on these projects is on the Bennett South tract where a 29.046-acre native grass area has replaced a rice field. Selected tree planting areas are also included, and the upland area is approximately 1 mile from the Sacramento River corridor and known Swainson's hawk nesting trees.

Currently, key uplands features for summer 2003 projects are planned for the Souza and Natomas Farms tracts. The Souza reserve lies adjacent to the Sacramento River corridor and is 100 percent allocated to uplands at 44.68 acres. The adjacent Natomas Farms reserve is allocated to approximately 60.26 acres of upland. Both tracts have abundant trees for potential Swainson's hawk nests and are located near numerous other identified Swainson's hawk nest trees. The total planned upland in these tracts is 125.62 acres. (Please note that these are planned projects. Each has received approval from TNBC's Board of Directors and the NBHCP Technical Advisory Committee (TAC). Exact acreage numbers could change if construction challenges necessitate amendments in the plans.)

In addition to current restoration projects, TNBC has four additional reserve sites (Alleghany 50, Cummings, Ayala, and Sills) that are being scheduled for restoration. These new reserves will provide 142.71 of upland acres. The Alleghany 50 tract, which is also along the Sacramento River corridor, is also allocated at 100 percent upland, and its total is 50.2601 acres. (Note: The acreage allocations are staff estimates only, and have not been approved by TNBC's Board of Directors or the NBHCP TAC.)

The commentor further notes that there is no timetable for achieving upland preservation and enhancement, and the commentor is therefore concerned that the TNBC could delay buying upland properties until the City is fully developed. Further, the commentor is concerned that if Sutter County does not develop, the ratio of uplands and wetlands reserves would be disproportionate to the impacts in the Basin.

The NBHCP includes several processes for ensuring that the Mitigation Lands address the impacts of development and that progress is made in the acquisition and enhancement of a balance of habitat types. See, for example, the Overall Program Review and the Independent Midpoint Reviews described in Chapter VI, Plan Implementation on pages V1-27 to VI-29. The Overall Program Review occurs at 9,000 acres of development in the Natomas Basin (roughly 50 percent of the Planned Development). During this review, the proportionality of mitigation including the "relative distribution of developed lands and reserve lands within each of the Land Use Agency's jurisdictions and the success of the 25 percent managed marsh/50 percent rice and 25 percent upland..." are to be reviewed and adaptive management and other recommendations to ensure the effectiveness of mitigation are to be

developed if necessary. In addition to the Overall Program Review, both the City and Sutter County have Independent Midpoint Reviews covering the same review requirements as the Overall Program Review. Finally, pages VI-36 and VI-37 of the Draft NBHCP describe procedures for ensuring that the type of habitat created by TNBC reflects the habitat impacted, in the event the City or Sutter County do not participate. To ensure that upland areas are given specific attention at all review levels, this Overall Program Review section (and therefore, the midpoint reviews) has been changed (see the Final NBHCP for specific text changes).

The commentor correctly notes that neither the City nor Sutter County has land use jurisdiction and control over the portion of the Swainson's Hawk Zone located in the unincorporated areas of Sacramento County. In addition, the County of Sacramento chose not to participate in the development of the NBHCP, and, therefore, with the exception of Metro Air Park, has no Incidental Take Permit coverage for the County's portion of the Basin. It should also be noted that lands within the Swainson's Hawk Zone in the unincorporated area of Sacramento County are also not considered mitigation for NBHCP impacts.

Page IV-17 of the Draft NBHCP states:

...a typical proportion for upland habitats within [the managed marsh portion of] the reserve system would be approximately 20 to 30 percent. Upland areas have several purposes: (1) providing basking and resting sites, escape cover and winter retreats for giant garter snakes; and (2) providing foraging and nesting areas for other Covered Species (e.g., loggerhead shrike, tricolored blackbird, burrowing owl, and Swainson's hawk). Upland areas intended to provide upland habitat for giant garter snakes under the NBHCP may consist of dryland pasture, grasslands, levees, and any other land use approved by NBHCP's Technical Advisory Committee."

As previously noted, TNBC has already created integrated managed marsh and upland areas including the Betts-Kismat-Silva tract that includes managed marsh with upland edges. The upland areas of this reserve include 38 acres that are intensively managed as irrigated pasture. This property is grazed and provides high-value Swainson's hawk foraging habitat. Additionally, there are several trees that could accommodate Swainson's hawks nesting on the reserve.

Response to Comment O2-11

a. The first few paragraphs and bullets of the comment are general statements on the findings of the NBHCP regarding the Swainson's hawk conservation program and lists of the findings of the NBHCP and EIR/EIS. The comment states that these findings are not supported by evidence but does not identify the specific reasons and basis for asserting that the conclusions are unfounded. In one instance, the commentor cites published reports used in the EIR/EIS (Estep; Babcock, 1989) as sources that the commentor disputes whereas in other comments (O2-5) the commentor states that Estep's same findings were not factored into the analysis. The methodology used in developing the Operating Conservation Program and the analysis supporting the conclusions in the NBHCP are provided in detail in the NBHCP and the EIR/EIS. See Appendix H of the Draft NBHCP and Sections 3.4 and

4.4 of the EIR/EIS. The methodology and conclusions in these documents have been explained and supported using available published and unpublished literature, as relevant. In addition, in response to comments raised on Swainson's hawk, an Addendum to the Biological Resources Technical Memo has been prepared to clarify the analysis conducted for the EIR/EIS. See this Addendum for further elaboration on support of the findings of the EIR/EIS (Appendix K of the Final NBHCP).

b. The NBHCP does require upland habitat to be acquired in the Swainson's Hawk Zone or in proximity to occupied nest sites. The NBHCP specifically directs TNBC to consider these areas as priorities for upland acquisitions. Measure V.B.4.b.1 (pp. V-18 to V19) of the Draft NBHCP encourages acquisition of upland reserves in the Swainson's Hawk Zone. This measure states:

TNBC, in conjunction with the Land Use Agencies, will monitor proposed development in the Swainson's Hawk Zone, where the majority of known Swainson's hawk nest sites are currently located and, hence, much of the Swainson's hawk nesting and foraging in the Basin occurs. Based on existing general plans and the City's and Sutter County's NBHCP Permit Areas, development in this zone is expected to be limited over the life of the Plan. However, if the NBHCP is amended and such development does occur, Mitigation Lands established for such development shall, likewise, be located within the Swainson's Hawk Zone. *In addition, TNBC shall set as a top priority the acquisition of upland reserve sites in the Swainson's Hawk Zone via easement or land purchase.* [Emphasis added] Further, any reserve lands established in the Swainson's Hawk Zone shall, to the maximum extent possible, be managed to benefit all upland-associated Covered Species, though any management in this zone must be fully consistent with Swainson's hawk biology and needs.

In addition, the upland acquisition criteria on pages IV-25 and 26 of the Draft NBHCP state:

Generally, priority for acquiring upland habitat is as follows (in descending priority order): (1) sites located within the Swainson's Hawk Zone; (2) sites that, in the judgment of TNBC and the Technical Advisory Committee, would provide specific, important benefits to other upland-associated Covered Species (e.g., tricolored blackbird nesting colonies); (3) sites supporting Swainson's hawk nests or foraging habitat outside the Swainson's Hawk Zone; (4) sites that would provide a good potential for enhancement of upland habitat values; and (5) any other site that would result in a benefit to any upland Covered Species.

Regarding upland reserve acquisitions to date, please see Response to Comment O2-10 above.

c. The commentor presents two concerns: (1) the NBHCP and EIS/EIR do not document that foraging lands being converted to urban uses are far from nest sites and therefore the impact is considered less than significant, and (2) that the CDFG *Staff Report* (1994) requires at least a 0.5:1 mitigation ratio for Swainson's hawk foraging habitat within 10 miles of a nest site.

For the reasons cited throughout this comment letter (and in Comment Letter O1), the EIS/EIR adequately analyzes the impacts that would affect the Swainson's hawk as a result

of implementing the NBHCP. The Draft EIR/EIS includes substantial analysis of the impacts of the NBHCP including analyses of the total change in foraging habitat in the Natomas Basin, the change in foraging habitat in close proximity to nest sites, and impacts to individual nest sites. Also see the Biological Resources Technical Memo and its Addendum, Appendix H of the Draft NBHCP and Appendix K of the Final NBHCP, respectively.

The commentor is correct that the CDFG *Staff Report* (1994) recommends at least a 0.5:1 mitigation ratio for Swainson's hawk foraging habitat within 10 miles of a nest site. The Applicants consulted this report in the preparation of the NBHCP. CDFG has, however, requested that this report not be included in the Appendix of the NBHCP and further has stated that the *Staff Report* does not apply to the NBHCP (See also Comment G3-22).

d. The NBHCP and the EIR/EIS use Estep's (1989) valuations of different types of foraging lands. See the Addendum to the Biological Resources Technical Memo for additional discussion of the value of crop types and the effect on Swainson's hawk foraging habitat (Appendix K of the Final NBHCP). The Addendum provides additional clarifying information on both the function and value of various crop types relevant to prey availability. This information cites and relies on relevant published scientific data (including Estep, 1989) and elaborates on crop type information developed for the original Land Use and Habitat Assessment Database. See the Biological Resources Technical Memo Appendix H of the Draft NBHCP and the Addendum to this memo, Appendix K of the Final NBHCP.

The NBHCP does not require particular land management practices for lands that will continue to be in private ownership within the Swainson's Hawk Zone. Under the NBHCP, Sutter County would initiate a general plan amendment process to maintain portions of the county in the Hawk Zone in agriculture but would not require specific crops or agricultural practices in this area.

e. In response to the comment on prey availability, nesting trees, and foraging habitat, see the Addendum to the Biological Resources Technical Memo for additional discussion of the value of crop types and the effect on Swainson's hawk foraging habitat from implementation of the NBHCP (Appendix K of the Final NBHCP).

f. The comment notes that there is general concurrence that alfalfa production provides high forage value for the Swainson's hawk. While there is the potential to enhance hawk foraging values through increased alfalfa production, such modifications to agricultural practices are not required to mitigate fully the impact to hawk foraging habitat resulting from Planned Development. As Mitigation Lands are acquired by TNBC, site-specific management plans will be prepared for each reserve or block of reserves. Through this process, TNBC will ensure that the habitat values within the reserves are enhanced. This will include management practices for upland habitats and could include cultivation of alfalfa within Mitigation Lands where feasible. Any determination of how much land within the Swainson's Hawk Zone could be converted to alfalfa, however, would be speculative at this time and would be beyond the scope of this analysis of the NBHCP. Also see the Addendum to the Biological Resources Technical Memo for additional discussion of the value of crop types and the effect on Swainson's hawk foraging habitat from implementation of the NBHCP (Appendix K of the Final NBHCP).

Response to Comment O2-12

The comment states that EIR/EIS analysis of land use demonstrates that all lands in the Basin are not of comparable suitability for Covered Species, which compromises the proposed 0.5:1 mitigation ratio.

In accordance with CEQA and NEPA Guidelines, the EIR/EIS evaluated alternatives to the Proposed Action. The comment is correct that the EIR/EIS identifies the environmentally superior alternative (CEQA Guidelines, Section 15126.6). The Final EIR/EIS also identifies the USFWS's Preferred Alternative, in accordance with Council on Environmental Quality (CEQ) regulations for implementing NEPA (Section 1502.14(e)). As noted in Section 1505.2(b), the lead agency "may discuss preferences among alternatives based on relevant factors including economic and technical considerations and agency statutory missions." In addition, *NEPA's 40 Most Asked Questions* (Question 4a) states that "The 'agency's preferred alternative' is the alternative which the agency believes would fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors. The concept of the 'agency's preferred alternative' is different from the 'environmentally preferable alternative,' although in some cases one alternative may be both." Numerous factors, therefore, contribute to an agency's selection of a preferred alternative, and those considerations must be addressed in the NEPA lead agency's record of decision (ROD).

The table cited in the comment (Table I-2, NBHCP Revisions) is included as a quick reference for readers to see where in the Draft NBHCP the issues raised in Judge Levi's decision are addressed in the document. The table is for reference, and the intent is for the reader to read the cited sections for detailed discussions of issues.

Response to Comment O2-13

Pages I-20 – I-30 of the NBHCP describe key milestones in the plan formulation process over a 15-year period. As the Draft NBHCP states, the recent draft NBHCP reflects revisions incorporated into the prior adopted 1997 NBHCP to address Judge Levi's decision, address concerns identified during the implementation of the NBHCP, account for recent changes in applicable regulatory requirements since 1997, and respond to public review and comment. Opportunities for public review and comment were provided throughout the 1997 NBHCP and revised NBHCP process.

The Applicants and Wildlife Agencies have relied upon updated analyses and new information and evidence to support the NBHCP's Operating Conservation Program. Moreover, additional information and analyses have been provided in the EIS/EIR in accordance with NEPA and CEQA. The Wildlife Agencies will base their determinations and decisions to issue incidental take authorizations upon their independent review of the record and judgment as to whether the revised NBHCP and accompanying documents meet the criteria for issuance of ITPs under federal and state law.

Response to Comment O2-14

Comment noted. The Applicants and the Lead Agencies do not support the commentor's statement that the NBHCP must be substantially revised to conform with legal requirements

for the reasons presented in the above responses to comments. See the Responses to Comments O2-1 through O2-13.

Letter O3—Institute for Ecological Health

Response to Comment O3-1

The NBHCP is adequate, and scientific data support the conclusions in the NBHCP. The NBHCP presents an Operating Conservation Program to meet the biological goals and objectives presented in Section I.C of the Draft NBHCP and to meet the approving agencies' requirements for issuance of ITPs. In support of the analysis in both the NBHCP and the EIR/EIS, a quantitative GIS analysis was conducted to classify and identify habitat types and land uses in the Natomas Basin (see Responses to Comment O1-4 and O1-7). This GIS analysis provides the Land Use Agencies and the Wildlife Agencies with previously unavailable data that allow for a quantitative assessment for the Covered Species. The methodology and the approach to analysis are presented and applied in both the Biological Resources Technical Memo and its Addendum (Appendix H and Appendix K to the Final NBHCP) and in the Draft EIR/EIS (see Section 3.4 of the EIR/EIS for a presentation of the methodology for analysis, and see Section 4.4. for a detailed assessment of impacts to biological resources based on the GIS database). The NBHCP contains extensive conservation measures for the Covered Species. The strategies for the Covered Species are presented in detail in Chapters IV, V, and VI of the NBHCP. Chapter VII of the NBHCP demonstrates the effectiveness of the Operating Conservation Program for all of the 22 Covered Species. See Responses to Comments O3-2 through O3-37. It is important to note that the Covered Species other than the giant garter snake and Swainson's hawk inhabit similar habitats and therefore are expected to benefit from the conservation measures of the NBHCP. See Section II.C of the NBHCP, which discusses the Covered Species and their habitat associations. Also see Response to Comment G2-12 for the reasons for their inclusion as Covered Species in the NBHCP.

Response to Comment O3-2

The commentor is concerned that land use planning efforts by the City of Sacramento and Sacramento County will undermine the success of the NBHCP. In response, the NBHCP has been analyzed and prepared for a specific development footprint and acreage amount. The avoidance, minimization, and mitigation measures included are those required to address the Planned Development and do not extend take coverage to other development See pp. I-2 and I-3 of the Draft NBHCP; specifically, this section states:

Any additional urban development within the Natomas Basin that occurs outside of the City's and Sutter's Permit Areas, with the exception of the MAP development, including any development within Sacramento County or within the jurisdiction of another Potential Permittee, also would constitute a significant departure from the Plan's OCP and would trigger a new effects analysis, a new conservation strategy, and issuance of Incidental Take Permits to the Potential Permittee for that additional urban development. Notwithstanding the foregoing, so long as the City and Sutter County limit urban development to their respective Permit Areas and the City and Sutter County continue to meet their obligations under this NBHCP, the OCP and associated Permits remain valid for each Permittee's Covered Activities.

Regarding future land use planning efforts, the commentor is also referred to Master Responses 3 (Joint Vision) and 4 (Cumulative Impacts).

Response to Comment O3-3

The Draft NBHCP presents an Operating Conservation Program to meet the biological goals and objectives presented in Section I.C of the Draft NBHCP and to meet the approving agencies' requirements for issuance of ITPs. In support of the analysis in both the NBHCP and the EIR/EIS, a quantitative GIS analysis was conducted to classify and identify habitat types and land uses in the Natomas Basin. Specific responses to the comments on goals and objectives are presented in Responses to Comments O1-4, O1-7, O3-4 through O3-8.

Response to Comment O3-4

The time horizon for the ITPs would be 50 years (see Section VI.A of the NBHCP and Section 1.4 and 2.4.2 of the EIR/EIS).

Response to Comment O3-5

The NBHCP (Section I.C) states that the overall biological goal of implementing the NBHCP is to "Establish and manage in perpetuity a biologically sound and interconnected habitat reserve system that mitigates impacts on Covered Species resulting from Covered Activities and provides habitat for existing, and new viable populations of Covered Species." Other specific goals and objectives for wetlands and uplands habitats are also presented in that section. The USFWS must find that the issuance of a Section 10(a) permit would not result in the appreciable reduction in the likelihood of the survival and recovery of the species. The biological goals and objectives presented in the NBHCP (Section I.C) have been developed to collectively meet the USFWS's criteria for issuing ITPs.

The specific purpose and need of the USFWS are discussed in detail in Section 1.4.1.1 of the EIR/EIS. This includes: (1) protecting, conserving, and enhancing listed species and unlisted species and their habitats, (2) ensuring compliance with applicable regulations, and (3) implementing the biological goals and objectives to those ends. The decisions that USFWS is required to make are presented in Section 1.4.3 of the EIR/EIS.

Response to Comment O3-6

The commentor suggests that the NBHCP should include a goal of ensuring the survival of the Covered Species over the long term in the Natomas Basin. In response, Goals 1 and 2 of the NBHCP (Section I.C.1) state:

- (1) Establish and manage in perpetuity a biologically sound and interconnected habitat reserve system that mitigates impacts on Covered Species resulting from Covered Activities and provides habitat for existing, and new viable populations of Covered Species.
- (2) Implement an adaptive management program that responds to changing circumstances affecting Covered Species and their habitats.

These two primary goals were included to meet the main purpose of the NBHCP, which is to mitigate impacts to Covered Species. The adaptive management section of the NBHCP is

designed to provide for monitoring (in perpetuity) the status of Covered Species and adaptive management to ensure that the most up-to-date, relevant scientific data are used and that the biological goals and objectives are being achieved.

See also Response to Comment O3-5.

Response to Comment O3-7

The objectives in the NBHCP are measurable. The comment cites only brief selections out of more than two pages of goals and objectives in the NBHCP. As discussed in Response to Comment O3-5, the goals and objectives are comprehensive, align with the USFWS's purpose and need, and are relevant to the decisions that need to be made by the USFWS. In addition, Chapters IV, V, and VI of the NBHCP comprise measurable components for implementing the Operating Conservation Program.

Response to Comment O3-8

In response to the comment on connectivity, see Master Response 2 (Connectivity). In response to the acquisition acreage, 400 acres is a minimum habitat block that would be purchased as Mitigation Lands. As stated in the NBHCP (Section IV.C.2), this does not mean that only 400-acre blocks will be acquired. The Draft NBHCP also requires that one contiguous 2,500-acre reserve block be developed (and this could be the result of multiple contiguous purchases) to minimize the "perimeter effect," promote biodiversity by allowing multiple species and niches to occupy the same site, and benefit the genetic diversity of dispersing interconnected reserves. See Section IV.C.2 of the Draft NBHCP.

Response to Comment O3-9

The commentor provides introductory information regarding the reasons why many of the Covered Species should not be included in the NBHCP. Please refer to more detailed responses for each species, included in Responses to Comments O3-10 through O3-12. Also see Responses to Comments G2-12 and O3-1. Relevant to the tricolored blackbird, see Response to Comment O3-31.

Response to Comment O3-10

The commentor requests that additional special-status species should be included as Covered Species in the NBHCP. The NBHCP currently addresses 22 Covered Species based on known species occurrence records, observation data, and habitat occurrence. Additional discussion on the reasons that these 22 species are proposed as Covered Species is presented in Response to Comment G2-12. Also see Response to Comment O3-1. In addition, the NBHCP addresses the potential to add new species if they become listed in the future, including mechanisms for adding new conservation measures. The EIS/EIR discusses the impacts and additional mitigation measures, if required, for all special-status species identified by the USFWS as potentially occurring in the Basin.

Response to Comment O3-11

The commentor requests that the California tiger salamander not be included as a Covered Species because of lack of presence, and that other species such as Sacramento Orcutt grass should be given "no take" status.

The biological assessment for the California tiger salamander does reveal that there are no recorded occurrences of the species in the Natomas Basin. Biological research conducted for the NBHCP, however, also indicates the possibility that this species may occupy suitable habitat within the Basin. Pages II-31-and 32 of the Draft NBHCP state:

Currently, the California tiger salamander occurs in the Central Valley and Sierra Nevada foothills from Yolo County south to Tulare County, and into the coastal valleys and adjacent coastal foothills from Sonoma County south to Santa Barbara County (Zeiner et. al, 1994). Isolated populations are reported from Gray Lodge Wildlife Area in Butte County and from Grass Lake in Siskiyou County. Although populations of California tiger salamander have declined, the species continues to breed in a relatively large number of locations within its range (59 FR 18353-18354, April 18, 1994).

Therefore, conservation measures are developed for this species. Similar analysis for Sacramento Orcutt grass is included on pages II-39-40 of the Draft NBHCP. For this species, the vernal pools at the eastern edge of the Basin may provide habitat. Thus, this species is included as a Covered Species. Note, however, that page V-4 of the Draft NBHCP states that: "In some cases, USFWS and CDFG may require complete avoidance of vernal pool species, such as where Covered Species such as slender Orcutt grass, Sacramento Orcutt grass, Colusa grass and/or vernal pool tadpole shrimp are found to be present."

Response to Comment 03-12

The EIR/EIS evaluates impacts to those special-status species potentially occurring in the Natomas Basin, including shorebirds that have the potential to occur in the Basin (see Table 3-8 of the EIR/EIS). The comment is correct in its summation of the Sacramento Valley's recent designation as a shorebird site of international importance. The Draft EIR/EIS was published in August 2002, which was prior to this designation. In accordance with the requirements of CEQA and NEPA, the Draft EIR/EIS addresses the environmental setting as it existed at the time the document was prepared. No revisions to the Draft EIR/EIS are necessary. The designation of the Sacramento Valley as a shorebird site of international importance does not present significant new information regarding the environmental setting that would result in new significant effects or increase the severity of an impact and therefore require recirculation of the EIR/EIS. The criteria for recirculation are presented in Section 1.7 of the Final EIR/EIS.

Response to Comment 03-13

As the commentor states, both Sacramento County and Sutter County allow residences to be constructed in agricultural zones. For example, a residence can be constructed in Sacramento County's AG-40 zone (agricultural zone with a minimum 40-acre lot size), as well as accessory structures, as long as the parcel contains a minimum of 5 gross acres per accessory structure (Sacramento County Zoning Code, Section 205-07). These structures are permitted uses that could be built on parcels outside of the City and Sutter County Permit Areas without discretionary action. In addition, Section 120-14 of the Sacramento County Zoning Code addresses non-conforming parcels (e.g., existing parcels less than 40 acres in an AG-40 zone). In accordance with Section 120-14 of the Zoning Code, residences can be

built on non-conforming parcels without discretionary approval as long as various requirements are met (e.g., the property was legally created prior to the effective date of the zoning ordinance).

The Lead Agencies cannot substantiate the commentor's claim that home development in unincorporated areas currently results in a substantial conversion of farmlands. The City and Sutter County understand that new homes can be built under existing conditions in these areas subject to the underlying zoning designation (e.g., one home per 40-acre parcel), but remainder areas are typically farmed (see Table III-1 in the NBHCP for Rural Residential land uses). The possibility of such changes has been addressed in the NBHCP. As discussed in Section VI.F.1. of the NBHCP, such changed circumstances would be addressed by Adaptive Management, and modifications to the NBHCP (through the Adaptive Management process) could be incorporated to the extent development of ranchettes constitutes a significant land use change outside of the Permit Areas and Mitigation Lands (see p. VI-22 of the Draft NBHCP).

Although the NBHCP would not restrict the construction of residences and accessory buildings on parcels zoned for agriculture, individuals undertaking any such actions would be subject to the prohibitions against take articulated in the ESA and CESA. No take authorization would be granted under this NBHCP to individuals outside of the City and Sutter County Permit Areas. There is no evidence that the development of rural residences and accessory buildings would severely undermine the effectiveness of the NBHCP's Operating Conservation Program.

Response to Comment O3-14

The NBHCP requires that Sutter County, upon issuance of ITPs, initiate a General Plan Amendment to amend, from Industrial/Commercial Reserve to Agriculture, the designation of lands located within 1 mile of the inside toe of levees adjacent to the Sacramento River (Swainson's Hawk Zone). The South Sutter County Specific Plan does not include any lands within the Swainson's Hawk Zone. The Specific Plan does not specifically propose to dispose of treated wastewater within the Swainson's Hawk Zone. Rather, disposal of treated wastewater through land applications is one possible alternative that, if selected, could include disposal within various portions of the Natomas Basin. Land disposal of treated wastewater is not a Covered Activity under the NBHCP and, if such application occurs in the future, it would be subject to securing appropriate permits and conducting all analysis required under state and federal law. Future analysis of land discharge of treated wastewater would address the potential impacts to the Swainson's hawk and the Mitigation Lands as well as other wildlife resources and would require mitigation for such impacts. Therefore, revision of the South Sutter County Specific Plan as a condition of the NBHCP permit issuance is not considered appropriate. The commentor is also referred to Response to Comment O1-27 regarding wastewater disposal issues.

Response to Comment O3-15

Water availability is addressed in Section IV.D.4 of the NBHCP. Potential changes in water availability are discussed in Section VI.K.2.g of the NBHCP and Section 4.3 of the EIR/EIS. TNBC holds certain water rights as a landowner within the Natomas Basin and, as such, is entitled to its water deliveries. See Response to Comment G8-32 for additional discussion of

potential changes in water availability. The conversion of row crops to orchards does not appear to be a significant threat to the viability of the NBHCP for several reasons: (1) orchards have not been a significant agricultural use in the Natomas Basin, owing in part to the heavy soils conducive to rice farming (see Table 4-2 in the NBHCP, which shows 182 acres of orchard use in the 53,537-acre Natomas Basin); (2) orchards are not considered important habitat for the giant garter snake, Swainson's hawk, or other Covered Species; and (3) acreage of orchards in the Natomas Basin appears to be stable or slightly declining during recent years.

Response to Comment O3-16

See Master Response 1 (Mitigation Ratio).

Response to Comment O3-17

See Master Response 1 (Mitigation Ratio) for a response to the comment on the mitigation ratio and the inapplicability of other HCP mitigation ratios. See Section 3.4 of the EIR/EIS and Tables 3-1, 3-2, 3-4, and 3-6 for a description of the habitat types in the Natomas Basin for the referenced species and a breakdown of the habitat types by jurisdiction.

Response to Comment O3-18

The commentor states that the NBHCP does not address the biology of species other than the Swainson's hawk and the giant garter snake. In response, please note that considerable research and development of species-specific mitigation measures were undertaken for all Covered Species. Biological data on each species are included in Chapter 2, Biological Data, and Chapter V includes avoidance, minimization, and mitigation measures for each species. In addition, a Biological Resources Technical Memo was prepared covering each species, including its needs, habitat, and impacts (Appendix H of the NBHCP). The mitigation program and analysis apply to all Covered Species, not just the Swainson's hawk and giant garter snake. Also see Responses to Comments O1-4 and O1-7.

Response to Comment O3-19

The commentor states that the NBHCP does not have a map of existing TNBC reserves. The NBHCP does include a map of reserves (see Figure 17: Reserves and Connections to Reserves).

The comment states that the current Mitigation Lands are small and not biologically viable and that edge effects are not accounted for. The Applicants do not concur with this opinion for several reasons:

- The NBHCP requires that Mitigation Lands achieve a 400-acre minimum reserve size with at least one reserve consolidated to include 2,500 contiguous acres.
- Edge effects and other biological reasons for these reserve sizes are included in Chapter IV, pages 9 and 10 of the Draft NBHCP.
- Existing literature on restoration biology indicates that there is no set or ideal reserve size. Reserve sizes must take into account the biology, location, and characteristics of the

site. For example, the California Mitigation Banking Program Guidelines specifically state that there is no minimum reserve size; rather each reserve site in the Mitigation Banking Program is accepted based on the biological efficacy of the site. The average reserve size for mitigation banking sites in Sacramento and adjacent counties is 487 acres (California Environmental Resources Evaluation System [CERES], Catalogue of Mitigation Banks in California). Thus, the Applicants chose to use a minimum size of 400 acres, which does not preclude larger reserves.

- TNBC has already assembled more than 2,802 acres in three areas of the Natomas Basin. Many of these Mitigation Lands are adjacent to one another, thereby creating larger contiguous blocks of reserves.

Current Mitigation Lands purchased by TNBC, their individual site acreage, the combined acreage for contiguous sites, and the total acreage by area of the Basin are shown in the table below.

Mitigation Lands (grouped by area and to demonstrate contiguous acreage)

Area of the Basin/Reserve	Acres by Site	Contiguous Acres	Total Acreage by Area
<u>North Area</u>			
Frazer North	92.6		
Lucich North	268.0		
	<i>Sub-Total</i>	360.6	
Bennet North	226.7		
Bennet South	132.5		
Lucich South	351.9		
	<i>Sub-Total</i>	711.1	
Brennan	241.4		
	<i>Sub-Total</i>	241.4	1313.0
<u>Central</u>			
Sills	575.6		
	<i>Sub-Total</i>	575.6	
BKS	338.5		
	<i>Sub-Total</i>	338.5	
Ayala	317.4		
	<i>Sub-Total</i>	317.4	1231.4
<u>South</u>			
Souza	44.7		
Natomas Farms	96.5		
	<i>Sub-Total</i>	141.1	

Mitigation Lands (grouped by area and to demonstrate contiguous acreage)

Area of the Basin/Reserve	Acres by Site	Contiguous Acres	Total Acreage by Area
Cummings	66.8		
	<i>Sub-Total</i>	66.8	
Alleghany 50	50.3		
	<i>Sub-Total</i>	50.3	258.2
TOTAL RESERVE ACREAGE	2,802.6	2,802.6	2,802.6

Response to Comment O3-20

The NBHCP measures include buffers within the Mitigation Lands and setbacks to maintain separation between the reserves and urban development. This combination of siting reserves in appropriate locations and maintaining an internal transition buffer within the reserve promotes separation between incompatible land uses and maximizes the opportunity for TNBC to manage the land effectively for Covered Species.

As described in Section IV.C.1.c of the NBHCP, the buffers are maintained as habitat for Covered Species. This may take the form of upland ruderal habitat or agriculture where such uses are incorporated within a reserve. As noted in the NBHCP, agricultural practices within reserves shall be subject to appropriate best management practices to protect wildlife within the reserve. Employing this approach to buffers, the Site Specific Management Plans will direct the most sensitive habitat toward the center of the reserve and will provide a transition into surrounding agricultural lands.

Response to Comment O3-21

Agricultural lands outside of the Permit Areas do not serve as mitigation in the NBHCP. The baseline conditions of the impact analysis do, however, assume that existing open space or agricultural areas outside of the Permit Areas would not be developed as urban uses because these areas do not have current local authority or take coverage under the ESA or CESA to convert to urban uses. Also see Response to Comment O1-22 and Master Response 1 (Mitigation Ratio).

Response to Comment O3-22

The commentor suggests the effectiveness of the Operating Conservation Program is speculative. The operating results of TNBC in the interim since the 1997 NBHCP show that the implementation effectiveness of the NBHCP's Operating Conservation Program is not speculative and that the mechanisms described within the NBHCP are capable of directing the proposed habitat improvements.

With regard to the biological validity of the Operating Conservation Program, the most current available data on the Covered Species and appropriate conservation measures have been considered in the preparation of the NBHCP. While habitat restoration is an evolving science, the NBHCP has been developed to result in an increase in habitats that resemble the

original habitat types within the Natomas Basin. For example, the Natomas Basin currently provides 96 acres of ponds and seasonally wet areas, of which 21 acres would be lost because of Planned Development. The NBHCP, however, would provide 2,187.5 acres of restored marsh habitat as part of the Mitigation Lands that would be maintained in perpetuity.

In addition to the restoration of natural habitats within the Basin, the NBHCP establishes extensive measures to avoid, minimize, and mitigate the take of Covered Species, measures that will be required for all Authorized Development and other Covered Activities conducted by private developers, the Land Use Agencies, and TNBC.

Response to Comment O3-23

See Master Response 1 (Mitigation Ratio) and Master Response 2 (Connectivity).

Response to Comment O3-24

The intent of the NBHCP is, to the extent feasible and appropriate, manage the Mitigation Lands to provide habitat for all Covered Species. The first sentence of Section IV.C.1 b of the NBHCP has been modified (see text changes in the Final NBHCP).

Response to Comment O3-25

The commentor has questioned the adequacy of the buffer requirements as established within the NBHCP. Please also see Response to Comment O3-20 for further discussion on this topic. The commentor correctly notes that a typical buffer is anticipated to vary between 30 and 75 feet in width. However, this is not a set requirement but rather a guideline to be considered during the preparation of Site Specific Management Plans. It is through the Site-Specific Management Plan process that the unique characteristics of each of the Mitigation Lands would be considered and an appropriate buffer would be established based on specific needs of the reserve site. The single condition noted, roadways adjacent to reserves, reflects the need to consider each case individually – many of the reserves are located in areas where no major road frontage exists and future traffic volumes may never be significant.

The process established under the NBHCP is to resolve design issues associated with the Mitigation Lands at the time Site-Specific Management Plans are prepared. Through this strategy, Site-Specific Management Plans will be prepared with the most current available data, including data collected through implementation and monitoring of the Mitigation Lands.

Regarding the statement that the mitigation ratio should be increased to provide for habitat plus surrounding buffers, there is no evidence to suggest such a configuration would substantially increase the value of habitat within the reserve. Further, the mitigation ratio, as a component of the Operating Conservation Program, has been the subject of extensive analysis to determine whether the NBHCP avoids, minimizes, and mitigates take to the maximum extent practicable in accordance with the ESA, and minimizes and fully mitigates effects in accordance with CESA. This analysis does not support an increase of the Mitigation Ratio beyond the proposed 0.5:1 ratio. See the Draft and Final EIR/EIS, the

Biological Resources Technical Memo and its Addendum (Appendix H of the Draft NBHCP and Appendix K of the Final NBHCP).

Response to Comment 03-26

The commentor has questioned the adequacy of the NBHCP in providing connectivity for Covered Species. The following response addresses specific aspects of this comment. A detailed discussion of biological connectivity is provided in Master Response 2 (Connectivity).

As noted within the NBHCP, the primary opportunities for migration between TNBC reserves and within the Natomas Basin in general are either along irrigation/drainage canals or through agricultural land. These are the same avenues for migration that existed prior to initiation of the NBHCP planning process. There is no evidence that suggests the pattern of connectivity offered by canals and land outside of the Permit Areas of the City and Sutter County will be substantially impacted by implementation of the NBHCP. Rather, major changes in patterns of land uses outside of the Permit Areas of the City and Sutter County would likely require extensive review and analysis, possible modification of the NBHCP or adoption of a separate HCP, and review and approval by the Wildlife Agencies.

The commentor states that the connectivity needs for each Covered Species must be analyzed to ensure conservation of the species in perpetuity. The NBHCP Covered Species include a total of 22 plant, animal, and avian species with substantially varying needs for connectivity. The giant garter snake, however, is the species most dependent upon connectivity with regard to long-term viability of populations within the Basin. A second species, the northwestern pond turtle, is likely to inhabit the Basin. This species utilizes waterways and will be affected by connectivity provided by Basin waterways similar to the giant garter snake. Therefore, the analysis of connectivity for the giant garter snake is considered applicable to the northwestern pond turtle.

Two additional species that could be affected by habitat connectivity are the California tiger salamander and western spadefoot toad. Both of these species rely upon habitats composed of uplands, vernal pools, and slow-moving waters, habitat types that are very limited within the Basin. Because of this lack of habitat, the potential for these species to occur in the Basin is considered low. If these species become established in the Basin at a future date, then connectivity between Mitigation Lands would be provided either along Basin canals or through agricultural lands. If such future occurrences are noted, then the adaptive management provisions of the NBHCP would require analysis of the specific occurrence and evaluation of provisions to further support these species.

In addition to the species discussed above, the Draft NBHCP proposes coverage for seven avian species, three vernal pool shrimp, seven plant species that rely upon vernal pools or marsh/canal habitat, and the valley elderberry longhorn beetle (VELB). It is assumed that connectivity is not a limiting factor for the avian species as migration does not rely upon a ground or water corridor. Vernal pool shrimp species proposed for coverage by the NBHCP include vernal pool fairy shrimp, vernal pool tadpole shrimp, and midvalley fairy shrimp. All of these species are vernal pool dependent, and none has been documented to occur within the Basin. For these species, connectivity of habitat to waterways can be detrimental because of predation by fish. The seven plant species proposed for coverage under the

NBHCP are either vernal pool obligate or rely upon waterways. None of these species has been documented within the Basin, and connectivity within the Basin is not considered a factor in the presence of these species within the Basin. The final proposed Covered Species, the VELB, is not known to exist within the Basin but has been documented along the boundaries of the Basin. It is anticipated that establishment of VELB populations within the Basin would only result from planting of elderberry shrubs within TNBC reserves and that ground and water connectivity within the Basin would not be a significant factor to the presence of this species within the Basin.

As noted in the Master Response 2 (Connectivity), the system of canals and ditches located within the Basin but outside of the Permit Areas of the City of Sacramento, Sutter County, and MAP are likely to remain. The drainage and irrigation service provided by these canals and ditches will continue to be required as Planned Development occurs within the Permit Areas. These canals and ditches provide linear connectivity, both in water and on land, which extends throughout the Basin. Additionally, agricultural land, whether actively farmed or fallowed, provides land connectivity for species such as the western spadefoot toad and the California tiger salamander, should these species find suitable habitat within the Basin. Therefore, the connectivity that would exist under the NBHCP not only addresses the needs of giant garter snake but also the balance of the proposed Covered Species.

Response to Comment O3-27

See Response to Comment O3-19 for information regarding the minimum reserve size. Related to land uses adjacent to reserves, please note that Chapter IV of the NBHCP specifies reserve acquisition criteria to minimize conflicts with urban or residential uses and further discusses buffers and setbacks for the Mitigation Lands.

Regarding species-specific needs and the reserves, we call the reader's attention to Chapter IV of the NBHCP, which discusses reserve acquisition, development, and management criteria to support the Covered Species as well as to the species-specific measures included in Chapter V.

Regarding foraging areas in proximity to nest sites, the commentor is referred to pages V-18 through V-21 of the Draft NBHCP, which discuss preservation of nest sites and minimization measures within a foraging buffer surrounding nest sites for the Swainson's hawk. Similarly, page V-22 of the Draft NBHCP discusses nesting and foraging buffers for the tricolored blackbird.

Response to Comment O3-28

The commentor questions how acquisition of lands in Area B will support conservation of the giant garter snake and Swainson's hawk. Please note that Area B is adjacent to the Natomas Basin and includes many of the habitat features of the Natomas Basin. The NBHCP specifically states that only 20 percent of mitigation lands may be acquired in this area and that such acquisition must be based on biological information. In addition, Section IV.C.2.b of the Final NBHCP has been revised to clarify ways in which the acquisition of reserve lands will meet the biological goals and objectives of the NBHCP (see text revisions in the attachment to the Final NBHC).

Thus, the primary criterion for acquisition of Mitigation Lands in Area B is the ability of such land to support the Covered Species, particularly the giant garter snake and the Swainson's hawk.

Response to Comment O3-29

The strategy for what is needed to conserve the Natomas Basin's giant garter snake population is contained in numerous portions of the Draft NBHCP, including Chapters IV, V, and VI. Specific conservation strategies and implementation measures of relevance to the giant garter snakes are presented in Sections IV.C, IV.D, V.A, V.B, and V.C. In addition, all the plan implementation measures for funding assurances, monitoring, adaptive management, and mid-point review are designed to conserve giant garter snakes and the other Covered Species. The Draft NBHCP will meet the conservation need by implementing the measures contained in the Operating Conservation Program.

Response to Comment O3-30

Although an ITP under Section 10 of the ESA and 2081 under CESA does not require contributing to recovery, the USFWS must nonetheless conclude that issuance of incidental take authorizations will not appreciably reduce the likelihood of the survival and recovery of species in the wild. Further, the plan must minimize and mitigate the impact of take to the maximum extent practicable under ESA and minimize and fully mitigate the impacts of take under CESA. In the future, Swainson's Hawk foraging habitat in the Basin would not be limited to the Swainson's Hawk Zone, but rather it would be available in the Mitigation Lands and in portions of Sutter and Sacramento Counties that are in agricultural production. The amount and quality of this remaining foraging habitat is discussed in detail in the Addendum to the Biological Resources Technical Memo (Appendix K of the Final NBHCP) and in Master Response 5 (Swainson's Hawk Foraging Habitat). The plan does not rely on foraging habitat within the Swainson's Hawk Zone as the only foraging habitat for hawks in the Basin. If development occurs in the County of Sacramento in the future, the impacts of this development on special-status species would need to be evaluated and mitigated in accordance with CEQA, and potentially NEPA, ESA, and CESA.

Response to Comment O3-31

The Draft NBHCP proposes a variety of measures that in total represent the Operating Conservation Program that would address the needs of Covered Species. The various components of the Operating Conservation Program include the 0.: 1 mitigation ratio, monitoring obligations, adaptive management provisions, and requirements applicable to both urban development and TNBC operations to avoid and minimize take of Covered Species.

Within the Mitigation Lands, the Operating Conservation Program directs the land management as follows: 25 percent managed marsh, 50 percent rice, and 25 percent upland habitat. The monitoring provisions require that data on the presence of Covered Species be collected annually, both within the Mitigation Lands and at selected sites in the Basin outside the reserves, to guide actions required through the Operating Conservation Program. The adaptive management provisions are linked to the results of the monitoring

results and will ensure that the Operating Conservation Program is responsive to the Covered Species within the Basin.

With regard to the tricolored blackbird colony, the success of this population will be monitored annually and the reserve acquisition program of the NBHCP could be modified if it is determined that foraging habitat is a limiting factor for the colony. This colony is located well outside of the City's Permit Area, and this colony may forage upon unincorporated lands within Sacramento County. If, through the annual monitoring, it is determined that additional foraging habitat is required, the NBHCP would allow for modification of both acquisition programs and habitat management/restoration to provide enhanced foraging. The long-term success of the NBHCP will rely not on establishing a rigid Operating Conservation Program based on limited information, but rather will result from a flexible program that responds to new information collected through monitoring as well as evolving scientific data as applicable to the Covered Species.

Response to Comment O3-32

The NBHCP includes a number of requirements and policies regarding vernal pools and vernal pool species. Pages IV-24 through 25 of the Draft NBHCP, "Conservation Strategies for Vernal Pool Species as Mitigation for Urban Development," outline the general procedures for TNBC activities related to vernal pool species. Specific requirements for avoidance, minimization, and mitigation of vernal pool species assigned to all developers in the Permit Areas with vernal pool species identified onsite are stated in Chapter V (pp. V-3 through V-6 of the Draft NBHCP). Additional species-specific avoidance measures applied to developers are included on pages V-16 and 17 of the Draft NBHCP. Finally, TNBC requirements for vernal pool species on Mitigation Lands are located on pages V-26 and 27 of the Draft NBHCP. These requirements were developed in consultation with the Wildlife Agencies, using the most recent mitigation standards promulgated by those agencies. Those standards have been determined to be adequate (see e.g., *USFWS Programmatic Consultation for Projects with Relatively Small Effects to Vernal Pools*).

It is also important to note that vernal pool habitat is considered limited in the Plan Area. Chapter II, Biological Data, summarizes occurrences of vernal pool species in the Plan Area. Briefly, there are no known occurrences in the NBHCP area of the covered vernal pool species [reference to the Draft NBHCP: vernal pool fairy shrimp (p. II-34); vernal pool tadpole shrimp (p. II-35); midvalley fairy shrimp (p. II-36); Boggs Lake hedge-hyssop (p. 11-39); Sacramento Orcutt grass (p. II-40); slender Orcutt grass (p. II-41); Colusa grass (p. II-41) or legeneere (p. II-42)]. Thus, we believe the NBHCP includes substantial protections for vernal pool resources that may be but have not to date been identified in the Natomas Basin.

Response to Comment O3-33

See above Responses to Comments O3-13 and O3-15.

Response to Comment O3-34

Section VI.E.2 of the NBHCP provides guidance for biological monitoring of both the individual Covered Species and the habitat types within the Mitigation Lands. With regard to the final form of the monitoring program, the NBHCP requires that a detailed Biological Effectiveness Monitoring Program be prepared within 2 years of issuance of ITPs. Section

VI.E.3 provides guidance for the preparation of the overall monitoring program as well as the monitoring programs required in each Site Specific Management Plan that will address monitoring requirement for an individual reserve. Through the adaptive management provisions of the NBHCP, adjustment to reserve management, including monitoring programs, may be made as new scientific information becomes available.

Response to Comment O3-35

The commentor suggests that the adaptive management section should include future research on biological issues because our knowledge in the field is rapidly expanding. We concur, and the NBHCP currently does include new scientific information (regarding species, restoration biology, ecosystem functioning) in the adaptive management and changed circumstance section (Section VI.K.2.b “Availability of New Scientific Information”).

Response to Comment O3-36

The commentor requests that the changed circumstance section include climate changes, changes in connectivity, sale of water rights outside the Basin, and other issues. The NBHCP changed circumstances section addresses climate changes (including drought, flood, and fire) and changes in water availability (Section VI.K). In addition, the NBHCP addresses connectivity in Section IV.C.3. Also see Master Response 2 (Connectivity).

Regarding changes in agricultural practices outside the reserve system, the NBHCP covers these types of circumstances in the adaptive management portion of the NBHCP on page VI-22 which states that modifications to the NBHCP through the adaptive management process may be needed for several reasons; among these are “significant land use changes outside of the reserve system,” as further explained in Responses to Comments O3-13 and O3-15. The NBHCP also includes monitoring related to connectivity in Chapter IV (pp. IV-7 to 9).

Response to Comment O3-37

The NBHCP states that its effectiveness is based on Planned Development of 17,500 acres because the impact assessment and mitigation program included in the NBHCP is based on a specific footprint and amount of development. The City and Sacramento County recently convened a Joint Vision planning process after the Draft EIR/EIS was released that may evaluate the potential for expanded development in the Basin. However, this is a very preliminary planning process. Any new development resulting from this process has not been determined and would be required to undertake a new analysis of impacts and development of mitigation measures. Please see Master Response 3 (Joint Vision) and Master Response 4 (Cumulative Impacts). In response to the commentor’s summary of concerns regarding rural development, see Responses to Comments O3-13.

Letter O4—Swainson’s Hawk Technical Advisory Committee

Response to Comment O4-1

The comment states that the Swainson’s Hawk Technical Advisory Committee (TAC) supports the concept of regional resource planning in the Natomas Basin. Comment noted.

Response to Comment O4-2

The comment states that the Swainson’s Hawk TAC supports the TNBC’s efforts. Comment noted.

Response to Comment O4-3

The comment states that the remainder of the comments in comment letter O4 do not attempt to quantify the loss of nest trees as a result of implementing the NBHCP, but that the loss of nest trees is a “significant immediate threat” because trees planted at restoration sites will not reach maturity prior to loss of nest trees at Fisherman’s Lake, Sacramento International Airport, and along the Sacramento River as a result of Planned Development. The EIR/EIS specifically analyzed and identified nest trees that could be removed because of development and found that there would be a less-than-significant impact. A total of 7 nest sites was identified as potentially affected by Planned Development (5 of these trees are within the City of Sacramento and 2 are at Metro Air Park). In 2002, the 2 nest trees in and immediately adjacent to Metro Air Park were removed. Of the remaining 5 territories located in the City of Sacramento, 2 are in the right-of-way of Interstate 5 and would not be removed because of Planned Development. The remaining 3 territories in the City of Sacramento could be removed. None of the nest sites along Fisherman’s Lake would be directly affected by development. The remaining nest sites in the Natomas Basin and along the Sacramento River are not located within any of the Permit Areas.

As discussed below, the NBHCP acknowledges that nest sites could be affected by Planned Development. In addition, the NBHCP provides mitigation measures that focus on a tree planting program to provide additional nesting for Swainson’s hawks. Surveys for Swainson’s hawk territories in the Natomas Basin have been conducted for TNBC annually since 1999. These surveys have identified a total of 70 territories in the Natomas Basin and along the Sacramento River. Only some of the territories are active each year. For example, in 2002, of the 70 territories, 43 were active (i.e., had at least one adult present on the nesting territory), leaving 27 unoccupied territories in that year (Estep, 2002). Similarly, in 2001, only 46 territories were occupied (Estep, 2002). No more than 5 nest trees would be removed because of Planned Development under the NBHCP and, given that only a portion of the known territories are occupied in a year, there may be alternate nest sites to support breeding Swainson’s hawks displaced from these 5 territories. Over the longer term, trees planted as part of the Operating Conservation Program of the NBHCP would provide additional nesting opportunities. Based on this information, the potential loss of nest trees attributable to Planned Development covered by the NBHCP is not expected to result in significant impacts on the Swainson’s hawk.

Further, the NBHCP includes a tree planting program to provide additional nesting opportunities as the trees mature. In 2001, 200 trees were planted on the Betts-Kismat-Silva

tract of the reserve system. In 2002 and 2003, an additional 60 trees were planted at Bennett South and 83 trees at Betts-Kismat-Silva, respectively. Species planted that could be used for nesting by the Swainson's hawk are valley oak and western sycamore. In the Central Valley, nest trees averaged 57.7 feet tall with a standard deviation of 9.8 feet (Estep, 1989). Valley oaks can grow about 3 feet per year (Redwood Barn Nursery, Davis California) and could reach 48 feet (the lower end of the range of tree heights found to be used) in about 16 years. Sycamores grow at a faster rate of 6 to 10 feet per year (Empire National Nursery <http://www.cdr.com/nursery>) and could achieve this height in 5 to 8 years. Tree planted in 2001 could reach a suitable size to support nesting as early as 2006. Over the longer term, trees planted as part of the Operating Conservation Program of the NBHCP would provide additional nesting opportunities. Based on this information, the potential short-term loss of nest trees because of Planned Development is not expected to result in significant impacts to the Swainson's hawk. See Section V.A.5.b. of the NBHCP for measures relevant to tree planting.

The comment states that loss of foraging habitat constitutes a long-term threat to the species and that remaining comments in the comment letter focus on foraging habitat. See Responses to Comments O4-7 through O4-23, the Addendum to the Biological Resources Technical Memorandum (Appendix K of the Final NBHCP), and Master Response 5 (Swainson's Hawk Foraging Habitat).

Response to Comment O4-4

Comment noted. The commentor identifies generic steps that may be followed in developing a plan to preserve a species in an area over a long time period.

Response to Comment O4-5

The NBHCP uses the most recent information available on the location of Swainson's hawk nest sites and identifies territories with the greatest potential to be adversely affected by activities covered under the NBHCP. The USFWS believes that take may occur, therefore the NBHCP and EIR/EIS describe the potential consequences of Planned Development on Swainson's hawks. In Section 3.4.2.1, the EIR/EIS identifies territories in the Natomas Basin and along the Sacramento River that could be affected by Planned Development. In Section 4.4.5.2.11, the EIR/EIS specifically identifies territories that could be lost or abandoned because of Planned Development in the immediate vicinity of the nest tree and/or removal of the nest tree. Changes in foraging habitat from Planned Development and management of the Mitigation Lands are also quantified and described. As described in the EIR/EIS, changes in foraging habitat under the NBHCP are not expected to reduce the number of Swainson's hawks territories and, therefore, are not expected to result in significant impacts to the Swainson's hawk.

Response to Comment O4-6

The commentor states that the NBHCP and EIR/EIS do not adequately assess the effects of the implementation of the NBHCP on the Swainson's hawk and inaccurately characterize the long-term extent of habitat loss and protection. Contrary to the commentor's assertion, the NBHCP and the EIR/EIS adequately assess and describe the effects of the NBHCP on the Swainson's hawk. With respect to foraging habitat, the NBHCP quantifies the acreage

change in potential foraging habitat for Swainson's hawks as a result of Planned Development (and other Covered Activities) and with implementation of the NBHCP (see Tables 4-12 and 4-13 in the EIR/EIS). The NBHCP also analyses changes in foraging habitat in the vicinity of known nest sites. As described in the Draft EIR/EIS, changes in potential foraging habitat under the NBHCP are not expected to reduce the number of Swainson's hawk territories and, therefore, are not expected to result in significant impacts to the Swainson's hawk.

To further clarify this conclusion, an Addendum to the Biological Resources Technical Memorandum (Appendix K of the Final NBHCP) provides additional information on the potential effects of the NBHCP on Swainson's hawk, from changes in foraging habitat through consideration of the value of foraging habitat and the temporal availability of foraging opportunities. The Addendum clarifies the findings of the previous analysis (Appendix H of the Draft NBHCP) that the NBHCP is expected to maintain foraging opportunities similar to existing conditions; therefore, adverse effects to the Swainson's hawk population are not anticipated.

The commentor notes that Goal Number 1 of the NBHCP is to provide habitat for existing and new viable populations of Covered Species. The objective of this goal is to provide habitat to contribute to the maintenance of viable populations for species that currently exist in the Basin or that become established in the future. The goal does not mean that current population levels should be maintained. The NBHCP is consistent with this goal in that it includes creation and long-term management of habitat for the Swainson's hawk, a species that currently occurs in the Basin.

Response to Comment 04-7

The commentor states that the NBHCP did not address how loss of foraging habitat could affect the nesting population and if take of Swainson's hawk would occur. The NBHCP and EIR/EIS do analyze potential effects. The Biological Resources Technical Memo (Appendix H of the Draft NBHCP) and EIR/EIS quantify changes in potential foraging habitat in the Natomas Basin with implementation of the NBHCP and analyze the potential effect of changes in foraging habitat on the Swainson's hawk population. The Biological Resources Technical Memo notes that "Urban development could reduce the amount of foraging habitat available in the Natomas Basin as a whole. However, few territories likely would be abandoned as a result of the projected reduction." The Tech Memo concludes that "the reduction in foraging habitat is not expected to result in the loss of territories associated with nest trees located outside of the areas proposed for development" because loss of potential foraging habitat would primarily occur away from nest sites, maintenance of foraging habitat in the Swainson's Hawk Zone would be a focus of the NBHCP, and upland reserves would be managed to provide better-quality foraging habitat than is provided in the agricultural fields.

The NBHCP analyzes changes in the amount of habitat within 1 mile of known territories and addresses specific territories located in areas of Planned Development that could be affected by reductions in foraging habitat. The NBHCP evaluates and mitigates impacts attributable to the Covered Activities as required under a Section 10(a)(1)(b) permit. The EIR/EIS acknowledges the potential for a short-term loss of several Swainson's hawk territories but, as explained in Response to Comment 04-3, available information indicates

that sufficient unoccupied territories would be available to accommodate nesting pairs displaced from the 5 nest trees potentially directly impacted by Planned Development. Nevertheless, the EIR/EIS identifies this short-term loss as a potentially significant impact to the species (Section 4.4.2.11). The NBHCP includes planting trees as a means for developing territories in the future. Over the long term, this measure is expected to offset the potential short-term decline in territories. Furthermore, as described in the EIR/EIS, changes in foraging habitat under the NBHCP are not expected to reduce the number of Swainson's hawks territories and therefore are not expected to significantly impact the Swainson's hawk.

The Addendum to the Biological Resources Technical Memorandum provides additional support for this conclusion (Appendix K of the Final NBHCP). The Addendum shows that implementation of the NBHCP is expected to maintain foraging opportunities similar to existing conditions, and therefore adverse effects to the Swainson's hawk population are not anticipated. As a result, a finding of "less than significant" is appropriate.

Response to Comment O4-8

The comment states that the commentor concurs with the methodology for quantifying land in the Natomas Basin between 1993 and 2000. The commentor, however, applies an alternate classification system for suitable habitat for the Swainson's hawk and an alternate method for calculating the percentage change in foraging habitat availability. Based on the alternate classification system and calculation approach, the commentor disputes the findings of the EIR/EIS that there would be a 32 percent loss of cover types that could be used by Swainson's hawks for foraging. The commentor's specific concerns are identified in Comments O4-9 through O4-13. The following responses to these specific comments (O4-9 through O4-13) address the comments related to this introduction. See responses to these comments, below.

The commentor also disagrees with the conclusion that land management practices on Mitigation Lands would compensate the loss of foraging habitat. Much of the potential foraging habitat that would be affected by Planned Development consists of row and field crops that predominantly provide foraging habitat in late summer and early fall during harvest. Earlier in the summer, prey in row and field crops are largely inaccessible because of dense vegetation cover (Estep, 1989). Mitigation Lands would be managed to provide consistently accessible prey for the Swainson's hawk throughout the hawk's residency period (April through September) and most importantly during the nesting season. The Addendum to the Biological Resources Technical Memo provides additional discussion on the foraging habitat value of the reserve system relative to the value of habitat that would be impacted by development (Appendix K of the NBHCP).

Response to Comment O4-9

The commentor suggests that presenting the change in foraging habitat as a percentage of the entire Basin is misleading and applies only to cumulative effects in the Basin. As explained in Master Response 4 (Cumulative Impacts), Planned Development comprises the cumulative condition for the Basin and, therefore, presenting the change relative to the Basin as a whole is appropriate. In addition, the absolute change in acreage is not affected by the base used to calculate the percentage. The change in foraging habitat acreage is the

same regardless of whether the percentage change is calculated using the Basin as a whole or only the areas where Planned Development would occur, as suggested by the commentor.

It is important to note that foraging habitat within the entire Basin contributes to supporting Swainson's hawks, not just foraging habitat in the area in which Planned Development is occurring. The total amount of foraging habitat in the Basin, whether it is in the Mitigation Lands or in agricultural areas, will continue to contribute to maintaining hawks in the Basin. To understand the potential for impacts, it is therefore appropriate from a biological perspective to evaluate the effects of the NBHCP in the context of the Basin as a whole.

Response to Comment 04-10

The increased quality of foraging habitat on the Mitigation Lands is an important component in evaluating the effectiveness of the NBHCP. The Operating Conservation Program for the NBHCP includes numerous measures to avoid, minimize, and mitigate the impact of take of Covered Species other than acquisition and management of Mitigation Lands. With respect to the Swainson's hawk, these include measures to avoid impacts to nesting birds and existing territories, implementation of a tree planting program, designation of the portion of the Swainson's Hawk Zone in Sutter County as open space/agriculture, and monitoring land use changes in the Swainson's Hawk Zone. In evaluating the effectiveness of the NBHCP's Operating Conservation Program, all aspects of the plan need to be considered collectively. Master Response 1 (Mitigation Ratio) provides additional information on the biological and economic justification for the 0.5:1 mitigation ratio in the context of the full suite of conservation measures included in the NBHCP.

The NBHCP does not assume nor does it require that foraging habitat for Swainson's hawk be created from rice. The analysis in the EIR/EIS (Section 4.4.5.2.11) evaluated providing foraging habitat through preservation and enhancement of existing habitat as well as creation from non-habitat. If existing rice fields are not suitable for conversion to upland, this would not be pursued in creation and management. Currently, 368 acres of alfalfa are produced in the Basin (see Table 4-12), indicating that it is possible in some locations to produce alfalfa. Also, TNBC has successfully converted a rice field to a native grassland on the Bennett South tract, indicating that it is possible to convert rice to more suitable habitat for Swainson's hawk foraging.

The NBHCP also does not require TNBC to provide alfalfa as upland habitat for the Swainson's hawk. Thus, if a particular property intended for upland habitat is not suitable for alfalfa, TNBC has the flexibility to use a more effective crop type or grassland composition. TNBC has been working with members of the Swainson's Hawk TAC and representatives from the University of California, Davis Agricultural Extension program to identify the most effective plant species composition and management practices for providing upland foraging habitat for the Swainson's hawk.

Lastly, the comment questions the likelihood of optimal placement of foraging habitat in reserves for the Swainson's hawk. To date, TNBC has been successful in acquiring lands near known nest sites (e.g., the Sousa, Cummings, and Alleghany 50 tracts). Several of the lands acquired to fulfill requirements for rice and managed marsh also are close to known nest sites (e.g., Bennett South, Frazer North). The Sousa, Cummings, and Alleghany 50 tracts

encompass about 160 acres and currently support non-rice crops that provide low- or moderate-value foraging habitat for the Swainson's hawk. These lands will be converted to high-value foraging habitat.

Response to Comment 04-11

The commentors state that they and the CDFG consider foraging habitat within 1 mile of nest sites to be "vital" to the maintenance of the territory, not "more important" as characterized in the Draft EIR/EIS. The *Staff Report Regarding Mitigation for Impacts to Swainson's hawks (Buteo swainsoni) in the Central Valley of California* does not characterize foraging habitat within 1 mile of a nest site as "vital."

The comment then states that nesting hawks would not be able to achieve reproductive success if they had to rely solely on foraging habitat within 1 mile of the nest. The Draft EIR/EIS considered foraging habitat within 1 mile of a nest as more important for maintaining the nest site than foraging habitat at greater distances based on CDFG's *Staff Report*. In the *Staff Report*, CDFG recommends a higher mitigation ratio for impacts to foraging habitat within 1 mile of a nest site than for impacts to foraging habitat farther than 1 mile from a nest site, suggesting that the CDFG considers foraging habitat close to the nest site "more important" than habitat farther away. As noted above, the *Staff Report* does not characterize foraging habitat within 1 mile of a nest site as "vital." The EIR/EIS does not consider foraging habitat farther than 1 mile from a nest site to be unimportant for the Swainson's hawk. As presented in Section 4.4.5.2.11, the EIR/EIS considers changes in foraging habitat in the Natomas Basin as a whole and also within 1 mile of known nest sites. Table 4-12 of the EIR/EIS presents the change in acreage of potential foraging habitat in the Natomas Basin and Table 4-13 present the change in acreage of potential foraging habitat within 1 mile of nest sites. The effects of changes in potential foraging at both of these scales are discussed in Section 4.4.5.2.11. The impact evaluation was not based solely on changes in potential foraging habitat within 1 mile of nest sites.

Response to Comment 04-12

The EIR/EIS addresses the impacts of Planned Development on foraging habitat in the immediate vicinity of Swainson's hawk territories in two ways. First, the EIR/EIS addresses the impact of urban development on specific existing territories (See Section 4.4.5.2.11). As described in the Draft EIR/EIS, nine territories were identified within Planned Development areas. At the time of analysis, however, nest trees at two of the territories had been removed, and these territories were not further considered in the analysis. Impacts to the remaining seven territories were individually evaluated. The analysis considered two scenarios: (1) removal of the nest tree and (2) retention of the nest tree. If the tree was removed, the territory would be lost. The analysis also addressed the potential effect of loss of foraging habitat in the vicinity of the nest tree if the nest tree was not removed by Planned Development. As explained in the Draft EIR/EIS, three territories would be surrounded by development and could be abandoned because of loss of foraging habitat. (The nest tree at one of these territories was removed in 2002). The remaining four territories are located close to (within about one-quarter mile of) potential foraging habitat that would not be affected by Authorized Development and therefore are likely to remain viable if the nest trees are retained. It is important to note that the nest tree of one of these territories was removed in 2002.

Second, the Draft EIR/EIS quantified changes in the amount of foraging habitat that collectively occurs within 1 mile of known nests (Section 4.4.5.2.11) and discussed the potential effects of changes in foraging habitat on the Swainson's hawk population in the Basin. The EIR/EIS concludes that the loss of potential foraging habitat because of Planned Development was not expected to result in the loss of territories associated with trees outside of the Planned Development areas. To provide additional clarification of the analysis, an Addendum to the Biological Resources Technical Memorandum was prepared (Appendix K of the Final NBHCP). The clarification of the analysis in the Addendum supports this conclusion. This Addendum provides additional information on the potential effects of the NBHCP on the Swainson's hawk from changes in foraging habitat through consideration of the value of foraging habitat and the temporal availability of foraging opportunities. The Addendum shows that the NBHCP is expected to maintain foraging opportunities similar to existing conditions and, therefore, adverse effects to the Swainson's hawk population are not anticipated.

An increase in human activity near nest trees could result in the abandonment of territories located in the area of Planned Development. The EIR/EIS identifies territories within the Planned Development area that could be abandoned as a result of removal of the nest tree or immediately adjacent new development and the resultant loss of foraging habitat. Abandonment because of increased human activity constitutes another potential causative agent that could cause territory abandonment but would not increase the impact beyond that identified in the Draft EIR/EIS.

Response to Comment 04-13

The EIR/EIS does not state that upland areas associated with restored marsh would be equivalent to cultivated areas. The EIR/EIS describes (see Section 4.4.5.2.11) that, in addition to the specific acreage of upland habitat to be managed for the Swainson's hawk, managed marsh will include upland portions that also will provide foraging opportunities for the Swainson's hawk. These areas would be in addition to the 2,187 acres of upland habitat included in the Mitigation Lands.

The Addendum to the Biological Resources Technical Memorandum (Appendix K of the Final NBHCP) provides clarification of information on the quality of habitat that would be: (1) affected by Planned Development and (2) expected in the habitat reserves. Habitat quality is expressed by classifying habitat as high, moderate, or low value based on Estep and Teresa's (1992) habitat classification system and by describing and quantifying the temporal aspects of prey availability in various crop and cover types. The Addendum shows that most of the habitat that would be affected would consist of moderate-quality habitat that provides habitat predominantly during harvest activities late in the summer and early fall after the young have fledged. In contrast, habitat on the reserves would be managed to provide high-value habitat that provides consistently accessible prey throughout the hawk's residency period. These differences in value are described and quantified in Addendum and the effects on the population of Swainson's hawks evaluated (see Appendix K of the Final NBHCP).

The commentor states that large contiguous fields of hay, grain, and row crops provide the highest foraging value because of the large prey populations and the increase in prey availability during farming operations. The commentor further states that grasslands do not

support such abundant prey and that grasslands are not subject to farming activities that enhance prey availability. Based on Estep (1989) the abundance of prey in hay, grain, and row crops can vary dramatically. Estep (1989) found a high relative abundance of prey in tomatoes and beets but low relative abundance in corn, sunflower, and wheat. Thus, it is not appropriate to consider the hay, grain, and row crops that would be affected by Planned Development as universally supporting large prey populations.

The commentor also states that grassland does not support prey populations as abundant as in agricultural fields. In response, Estep (1989) found moderate and high prey abundance in uncultivated cover types. Edge habitat had high prey abundance and fallow fields and dryland pasture had moderate prey abundance. Estep (1989) stated "Dryland pasture most resembles the physical characteristics of historic grassland foraging habitat in the Central Valley." Also, with respect to current habitat conditions in the Central Valley, Estep (1989) states, "It should be noted that since virtually no native foraging habitat remains in the Central Valley, none can be considered optimal. We can determine suitable and preferred habitats among the existing resources, but optimal Swainson's Hawk habitat no longer exists in the Central Valley." Based on this assessment, creating native grassland conditions would improve foraging habitat conditions for Swainson's hawks although the NBHCP does not require that upland habitat consist of grassland.

TNBC can use agricultural crops as upland habitat and is currently working with the University of California Agricultural Extension Program to identify crop types that produce abundant and accessible prey similar to alfalfa. Where grassland is used for upland habitat, TNBC can implement practices to increase the abundance and accessibility of prey.

The commentor states that the Swainson's hawk require large, contiguous tracts of agricultural lands and that the foraging habitat in the Mitigation Lands will be less energetically practical for hawks to find and use. The commentor then states that the reproductive success of hawks is based on the availability of large, continuous tracts of suitable habitat adjacent to nest sites, suggesting that the habitat reserves will not provide appropriate foraging opportunities for the Swainson's hawk. Mitigation Lands are expected to provide appropriate Swainson's hawk foraging opportunities for several reasons. First, the habitat reserves will be stable in location. Even if foraging habitat on the reserves occurs in "small patches," hawks will not need to expend substantial energy in finding the habitat because over time it will always be in the same place. This situation contrasts with the current condition where foraging opportunities are constantly changing spatially and temporally in response to changing cropping patterns and agricultural practices. Second, each reserve will be at least 400 acres in size. While upland habitat within some reserves (e.g., a managed marsh reserve area) will be smaller in size, the entire unit where hawks could find foraging opportunities will not be small. Third, there is evidence to suggest that hawks can find and do forage in small areas surrounded by cover types unsuitable for foraging. Janes (1987) reports that Swainson's hawks "are often able to successfully occupy wheat country by foraging in small areas of uncultivated land between fields. These narrow strips of land often harbor abundant prey." Similarly, Bechard (1982) finds that male Swainson's hawks concentrated foraging in pastures and "eyebrows" in late June and early July before pea and wheat crops offered foraging opportunities during harvest. "Eyebrows" is a local term for narrow patches of unplowed land. These observations indicate that

Swainson's hawks are adept at finding and using small areas of foraging habitat surrounded by habitats unsuitable for foraging.

In addition, large contiguous areas of agricultural fields will remain available. Outside of the area of Planned Development, there are about 13,000 acres of potential foraging habitat in the Natomas Basin. Yolo County on the west side of the Sacramento River is within foraging range for Swainson's hawk nesting along the Sacramento River (Babcock, 1995) and contains a large number of agricultural lands. Yolo County supports more than 200,000 acres of non-rice agricultural crops with about 40,000 acres of alfalfa (California Agricultural Commissioners, 2003). While only a portion of this habitat would be within the foraging distance of hawks nesting on the Sacramento River, lands in Yolo County nonetheless can contribute to the foraging habitat base for the Swainson's hawk population in the Natomas Basin.

Response to Comment O4-14

The EIR/EIS presents a similar analysis in Section 4.4.5.2.11, showing the change in acreage of foraging habitat in each of the jurisdictions. The quantitative analysis in the EIR/EIS begins with a summary of the expected loss of habitat associated with Planned Development (see Table 4-12). The document then discusses the overall net effect for the Basin as a whole. The EIR/EIS also discusses effects to Swainson's hawks under independent implementation in Section 4.4.11.2.11.

The commentor calculated "net loss of foraging habitat" by dividing the number of acres of habitat that will be lost by the combined acreage that will be developed and preserved. This calculation does not provide a "net loss" in acreage but rather is an alternate approach to calculating the percentage change. Presenting the change in acreage in this context does not alter how much habitat would be affected by Planned Development or provided after development. The approach in the comment does not accurately reflect the expected future conditions in the Basin because it does not consider foraging habitat that is expected to remain in the undeveloped portion of the Basin. As described in Response to Comment O4-9, it is more appropriate biologically to consider all of the potential foraging habitat in the Natomas Basin in evaluating impacts to Swainson's hawks because hawks are using and responding to all of the habitat in the Basin, not just that within the Planned Development areas.

Response to Comment O4-15

The commentor states that approximately 6,000 acres of "good quality foraging habitat" are located within the City's Permit Area whereas the EIR/EIS states that approximately 6,925 acres of foraging habitat are located within the City's Permit Area (Table 4-12, p. 4-69 of the Draft EIR/EIS). The commentor does not define "good quality" foraging habitat. The quality of foraging habitat was clarified in the Addendum to the Biological Resources Technical Memorandum (Appendix K of the Final NBHCP). Based on habitat value classifications presented in Estep and Teresa (1992), the acreage of high-, moderate-, and low-value habitat in the Natomas Basin was determined from the Habitat and Land Use Assessment Database. In the City of Sacramento, 675 acres of high-value habitat and 5,111 acres of moderate-value habitat were identified.

The comment makes the assumption that the upland component of the managed marsh is counted toward the requirement to provide 25 percent of the Mitigation Lands as upland habitat. This interpretation, however, is not accurate. Under the NBHCP, 25 percent of the Mitigation Lands will be designated as upland for upland associated species. The upland component of the managed marsh will provide additional foraging opportunities that exceed those provided by the designated upland reserves. Accordingly, the comment incorrectly subtracted the acreage of upland in the managed marsh from the upland reserve total. Regarding the commentor's approach to calculating the percentage change in foraging habitat, see Response to Comment O4-14.

The Draft EIR/EIS presents an analysis of the potential impact to Swainson's hawks under independent implementation of the NBHCP (Section 4.4.11.2.11). It is important to note that if only the City of Sacramento implemented the NBHCP, the proportion of the habitats in the reserve system could be adjusted, if necessary, to better reflect the habitats impacted (Section K.2.i).

Response to Comment O4-16

The comment states that approximately 2,800 acres of "good quality foraging habitat" are located within Sutter County's Permit Area. The commentor does not define "good quality" foraging habitat, and the basis for the statement that there are 2,800 acres of good quality habitat in Sutter County is unclear. In the EIR/EIS and NBHCP, alfalfa, grassland, idle, non-rice crops, pasture, and ruderal areas are considered to provide potential foraging for the Swainson's hawk. Based on acreages presented in Table 4-1 of the Biological Resources Technical Memorandum (Appendix H of the NBHCP), the Sutter County portion of the Natomas Basin supports about 3,961 acres of potential foraging habitat.

The comment makes the assumption that all of the foraging habitat in the Sutter County portion of the Natomas Basin will be impacted by 7,467 acres of Planned Development. This interpretation, however, is not accurate. The Sutter County portion of the Natomas Basin is about 16,881 acres. Of this acreage, 7,467 acres of Planned Development would occur within the Industrial/Commercial Reserve. The Draft EIR/EIS determined that 1,860 acres of potential foraging habitat could be impacted by Planned Development in Sutter County. The assumption in the comment that all 2,800 acres of potential foraging habitat would be lost overestimates the potential impact.

As described in response to Comment O4-15, the assumption that "approximately 25 percent of upland habitat will be grassland/woodland associated with the restored marsh" is not accurate. In addition, the approach in the comment to calculating the percentage change in foraging habitat does not include habitat conditions in the entire Basin (see Response to Comment O4-14). It is important to note that if only Sutter County implemented the NBHCP, the proportion of the habitats in the Mitigation Lands could be adjusted if necessary to better reflect the habitats impacted (Section K.2.i).

Response to Comment O4-17

The commentor states that approximately 550 acres of "good quality foraging habitat" are located within the MAP area whereas the EIR/EIS identifies that approximately 403 acres of foraging habitat are in the MAP areas (Table 4-12, p. 4-69 of the Draft EIR/EIS). The

commentor does not define “good quality” foraging habitat, and the origin of the number 550 acres is unclear particularly because the EIR/EIS uses a more liberal definition of potential foraging habitat.

The quality of foraging habitat was investigated in more detail in the Addendum to the Biological Resources Technical Memorandum (Appendix K of the Final NBHCP). Based on habitat value classifications presented in Estep and Teresa (1992), the acreage of high-, moderate-, and low-value habitat in the Natomas Basin was determined from the Habitat and Land Use Assessment Database. In Metro Air Park, 50 acres of high-value habitat and 314 acres of moderate-value habitat were identified.

In regard to the commentor’s assumption that “approximately 25 percent of upland habitat will be grassland/ woodland associated with the restored marsh,” see Response to Comment O4-15.

The EIR/EIS presents an analysis of the potential impact to the Swainson’s hawk under independent implementation of the NBHCP (Section 4.4.11.2.11). In regard to the commentor’s approach to calculating the percentage change in foraging habitat, see Response to Comment O4-14.

Response to Comment O4-18

As described in Responses to Comments O4-15, O4-16, and O4-17, the specific acreages cited are not accurate. Assuming that all areas of alfalfa, grassland, pasture, idle, ruderal, and non-rice crops provide potential foraging habitat for the Swainson’s hawk, the EIR/EIS identifies a total impact of 9,188 acres, 162 acres less than suggested in the comment. The primary difference appears to be that the comment considers all foraging habitat in Sutter County to be affected rather than only habitat in the Industrial/Commercial Reserve. As a result, the potential impact is overestimated in the comment.

The Addendum to the Technical Memo provides further clarification on the quality of foraging habitat that would be affected by Planned Development (Appendix K of the Final NBHCP). The Addendum shows that most of the habitat affected by Planned Development would be moderate-value habitat (7,299 acres) followed by low-value habitat (1,156 acres). Only 733 acres of high-value habitat are projected to be affected.

The commentor calculates that implementation of the NBHCP would result in an 82 percent decline in the amount of foraging habitat in the Natomas Basin. This number is overestimated for the reasons presented in this response and in Responses to Comments O4-15 through O4-17. The commentor’s percentage calculations are also overestimated. Although it is true that Planned Development would eliminate foraging habitat, it is not correct to state that that the percentage decline should be calculated based on the area of Planned Development plus the Mitigation Lands. Considering only the areas of Planned Development in determining the effect of the NBHCP is not biologically meaningful. Swainson’s hawks nesting in and adjacent to the Natomas Basin can use all of the potential foraging habitat in the Basin, not just those portions in the area of Planned Development. To determine the response of the Swainson’s hawk population in the Basin to changes in foraging habitat, it is necessary to consider the context within which the changes are occurring. In this case, the context includes foraging habitat that is available outside of the area of Planned Development both in the Natomas Basin and outside of the Basin (e.g., Yolo

County). While the NBHCP does not provide guarantees that foraging opportunities will remain in these areas, there is currently no basis for assuming conversion of these lands to non-agricultural uses [see Master Response 4 (Cumulative Impacts)]. Further, if future development occurs, the impacts of this development will need to be addressed through appropriate environmental review, and impacts will need to be evaluated given implementation of the NBHCP.

The comment calculates that Planned Development would reduce the amount of foraging habitat in the Natomas Basin by 45 percent. Similarly, the EIR/EIS shows that Planned Development (without consideration of the habitat in the reserves) would reduce potential foraging habitat by about 42 percent. The comment states that this level of habitat reduction would be expected to result in a decline in the nesting population. The proposed action being evaluated is the implementation of the NBHCP, including its Operating Conservation Strategy—see Appendix C of the Draft EIR/EIS for a summary of a Covered Activity in the NBHCP for which the Applicants are seeking ITPs. Therefore, whether the nesting population would decline because of habitat loss from Planned Development is not the project under consideration. It is important to note, however, that the analysis should address both habitat loss from Planned Development *and* habitat provided on the Mitigation Lands. Without considering the habitat provided by the Mitigation Lands, the commentor understates the amount of potential foraging habitat that would be in the Basin in the future and, therefore, overestimates the potential effect to foraging habitat and the Swainson's hawk population that would result from implementation of the NBHCP.

The comment states that the nesting population would decline by at least 25 percent but does not explain the basis for this conclusion. For a decline in the nesting population of the Swainson's hawk to occur as a result of a reduction in the acreage of foraging habitat, the amount, distribution, and quality of foraging habitat needs to currently be a limiting factor for the number of hawks nesting in the Basin and their reproductive success, or this would need to become a limiting factor in the future with implementation of the NBHCP. If the amount of foraging habitat available to hawks nesting in the Basin (considering foraging habitat remaining in the Natomas Basin as well as foraging habitat available in Yolo County) does not fall below the acreage required to support the nesting population, then no change in the population would be expected. The comment assumes that foraging habitat is currently limiting and that a decline in foraging habitat would be reflected in the size of the nesting population.

Assuming that foraging habitat could be a limiting factor, the Addendum to the Technical Memorandum (Appendix K of the Final NBHCP) further clarifies the value and temporal availability of foraging habitat in the Natomas Basin, particularly with respect to foraging habitat availability during the nesting season when it could influence the number of active territories and reproductive success. This information indicates that most of the potential foraging habitat consists of row and field crops that do not provide accessible prey until August and September when these crops are harvested. Relatively little of the potential foraging habitat provides foraging opportunities in April through July when the hawks are nesting. Foraging habitat on the Mitigation Lands would be managed such that it would be consistently accessible throughout the hawk's residency period. As described in the Addendum, upland habitat provided in the Mitigation Lands is expected to offset the

potential reduction in foraging habitat availability during the nesting season and, therefore, no change in the nesting population is expected.

Response to Comment O4-19

The comment calculates the habitat conditions that would result in the Basin if development occurred throughout the entire Basin and the 0.5:1 mitigation ratio component of the NBHCP was applied. The comment assumes that any future development in the Natomas Basin will be required to implement only a 0.5:1 mitigation ratio. If there is future development in the Basin, the USFWS and CDFG will need to consider impacts to listed species from the development given the baseline conditions at the time and ensure that adequate mitigation provided. Given that the baseline condition will have changed because of implementation of the NBHCP, a different mitigation ratio could be necessary. See Response to Comment I12-2 for additional discussion of the applicability of the 0.5:1 ratio to potential future developments. Also see Master Response 4 (Cumulative Impacts).

As described in the Master Response 1 (Mitigation Ratio), the 0.5:1 mitigation ratio is one component of the overall Operating Conservation Program of the NBHCP that avoids, minimizes, and mitigates the impact of take of Covered Species. This project-specific mitigation ratio was developed and is appropriate and adequate within the context of the baseline conditions of the status and distribution of Covered Species and current land use patterns. It is unreasonable to assume that the same mitigation strategy would be appropriate for future projects, given the unique conditions that apply to separate habitat conservation plans. The comment's conclusion that the hawk population would decline by more than 50 percent is based on the assumptions that the entire Basin would be developed and all future mitigation lands would be established at a 0.5:1 ratio. These assumptions are speculative.

Response to Comment O4-20

This comment summarizes other comments previously made in comments O4-6 through O4-19. Responses to those comments address the summary conclusions of this comment. See responses to Comments G1-8 through G1-19 and Master Response 1 (Mitigation Ratio). Also, the Draft EIR/EIS does not conclude that there would be no effect on Swainson's Hawks. Rather, potential impacts are discussed throughout Section 4.4.5.2.11 of the Draft EIR/EIS, and the summary of potential impacts (pp. 4-75 - 4-76) concludes that overall impacts would be less than significant in consideration of the Operating Conservation Program of the NBHCP.

Response to Comment O4-21

The EIR/EIS does not state that the NBHCP would have no effect on the Swainson's hawk (see Response to Comment G1-20 above). The EIR/EIS concludes that implementation of the NBHCP is not expected to have a substantial long-term effect on the population and, therefore, concludes that the effect on the Swainson's hawk would be less than significant. The Addendum to the Technical Memo (Appendix K of the Final NBHCP) provides clarification of this conclusion by showing that the NBHCP is expected to offset reduction in foraging habitat availability during the nesting period resulting from Planned Development

and that foraging habitat availability after the nesting season is not anticipated to be a limiting factor.

The comment states that the NBHCP does not provide a management strategy that adequately provides for the long-term sustainability of the Swainson's hawk in the Basin. While the ESA requires that issuance of a take permit not jeopardize a species or interfere with recovery, it does not require that an HCP on its own provide for the long-term sustainability of a species. The legal obligation is to minimize and mitigate the impact of take resulting from proposed activities to the maximum extent practicable, and the Operating Conservation Program of the NBHCP has been developed in coordination with the Wildlife Agencies to meet this obligation.

The EIR/EIS specifically identifies territories that could be abandoned as a result of implementing the NBHCP (see the summary of impacts to Swainson's hawks on pp. 4-75 and 4-76 of the Draft EIR/EIS). The NBHCP acknowledges that a short-term reduction in occupied territories could occur (Section VII.D.2 of the Draft NBHCP) and includes measures to offset this short-term reduction over the long term through creation of new nesting trees. The target population was identified (Section 3.4 of the Draft EIR/EIS, especially Figure 3-5), changes in habitat quantified (Table 4-12 of the Draft EIR/EIS), and the effects on the population analyzed (throughout Sections 4.4.5.2.11 and 4.4.11.2.11 of the Draft EIR/EIS). The Operating Conservation Program of the NBHCP includes a long-term management strategy for the reserve system (Chapter IV of the Draft NBHCP) including monitoring and adaptive management programs that address the Swainson's hawk (Section VI.E and IV.F of the Draft NBHCP).

Response to Comment O4-22

As described in the Response to Comment O4-21, the ESA does not require that an applicant provide for the long-term sustainability of a species. Section 10 of the ESA requires that a permit applicant minimize and mitigate the impact of take of covered activities to the maximum extent practicable, and issuance of the permit with the associated implementation of the HCP must not jeopardize the species or interfere with recovery. As described in the EIR/EIS and elaborated in the Addendum to the Technical Memorandum (Appendix K of the Final NBHCP), upland habitat provided in the reserves would offset projected reductions in foraging habitat during the nesting season. While the NBHCP would reduce the amount of foraging habitat available after the nesting season, foraging opportunities do not appear to be a limiting factor at this time because of the high abundance of prey that becomes available during the relatively short harvest season.

With regard to habitat outside of the areas of Planned Development, there is no basis for assuming that these lands would not remain as habitat. Future development of County lands surrounding Sacramento International Airport would be guided by the adoption of a new Airport Master Plan, and any future changes to the Airport Master Plan would need to evaluate the impacts of that development on the Swainson's hawk and implement appropriate mitigation in consideration of NBHCP. In Sutter County, maintenance of the 1-mile zone as agriculture would be ensured through a general plan amendment process. See also Master Response 3 (Joint Vision). Although new development outside the Permit Areas is speculative, the Adaptive Management provisions of the NBHCP (Section VI.F)

recognize that significant land use changes in this remainder area could require modification to the NBHCP through the Adaptive Management process.

Response to Comment O4-23

Comment noted. See Response to Comment O4-21 above.

Response to Comment O4-24

The Addendum to the Technical Memorandum provides clarifying information on future conditions for foraging habitat in the Basin with implementation of the 0.5:1 mitigation ratio (Appendix K of the Final NBHCP), which shows that upland habitat provided in the reserves would offset projected reductions in foraging habitat during the nesting season. While the NBHCP would reduce the amount of foraging habitat available after the nesting season, foraging opportunities are not a limiting factor at this time because of the high abundance of prey that becomes available during the relatively short harvest season. This analysis indicates that foraging habitat provided through the 0.5:1 mitigation ratio is adequate to mitigate the loss of foraging habitat from Planned Development. Master Response 1 (Mitigation Ratio) provides additional background and rationale on the basis for the 0.5:1 mitigation ratio.

Response to Comment O4-25

The Addendum to the Technical Memorandum (Appendix K of the Final NBHCP) and Master Response 5 (Swainson's Hawk Foraging Habitat) provide additional information on future conditions for foraging habitat in the Basin with implementation of the 0.5:1 mitigation ratio and the habitat composition requirements specified in the NBHCP (i.e., 25 percent managed marsh, 50 percent rice, and 25 percent upland). This additional information shows that upland habitat provided in the reserves would offset projected reductions in foraging habitat during the nesting season. While the NBHCP would reduce the amount of foraging habitat available after the nesting season, foraging opportunities do not appear to be a limiting factor at this time because of the high abundance of prey that becomes available during the relatively short harvest season. This clarification indicates that foraging habitat provided through the 0.5:1 mitigation ratio with the specified habitat composition is adequate to mitigate the loss of foraging habitat from Planned Development.

Response to Comment O4-26

The EIR/EIS addresses the effects on existing territories in Sections 4.4.5.2.11 and 4.4.11.2.11, both in terms of changes in foraging habitat at the Basin level and within 1 mile of a nest tree. Levels of impact and take are estimated in these same sections. Additional information on the effects of implementation of the NBHCP on foraging habitat and the Swainson's hawk population is provided in the Addendum to the Technical Memorandum (Appendix K of the Final NBHCP) in support of the conclusions in the EIR/EIS.

Response to Comment O4-27

The commentor's request to establish commitments from local jurisdictions and landowners to retain suitable habitat within the Swainson's Hawk Zone in perpetuity is not feasible for several reasons: (1) Sacramento County, the primary jurisdiction with land use authority in

the Swainson's Hawk Zone, is not a participant in the NBHCP process, and there is no mechanism to compel the County to participate; (2) the Applicants do not believe that such a measure is necessary for mitigation; (3) such a measure would likely require the use of eminent domain power in Sutter County, and adding this to the NBHCP would result in a substantial increase in the Mitigation Fee (see Responses to Comments O1-42 through O1-60). In addition, Sutter County is taking a step to ensure that lands in the Industrial/Commercial Reserve that are in the Swainson's Hawk Zone be redesignated as Agriculture in the Sutter County General Plan. With regard to the commentor's statement that lands in the Swainson's Hawk Zone should be in uplands, that is contrary to the NBHCP's biological goals and objectives because the homogenous character of the Natomas Basin generally precludes siting large blocks of land for specific habitat purposes.

Response to Comment O4-28

Upland habitat reserves are to be located in consideration of the Swainson's hawk's foraging needs as described in Section IV.C.4 of the NBHCP. To the extent that lands west of I-5/S.R. 99 are important as foraging habitat for Swainson's hawks TNBC may seek to acquire lands in this area. Most of the Mitigation Lands acquired to date are located west of I-5/S.R. 99. These lands include Frazer North, Lucich North, Bennett North, Bennett South, Lucich South, Sills, Sousa, Natomas Farms, Cummings, and Alleghany 50.

Response to Comment O4-29

The comment requests a minimum of 1,000 acres for reserves required under the NBHCP but does not provide any scientific information to justify that suggestion. The basis for reserve sizes is presented in Section IV.C.1.e of the Draft NBHCP.

The comment states that large agricultural tracts are required for maximum foraging efficiency. For the reasons noted below, the Applicants believe, however, that large tracts of agricultural lands that provide foraging opportunities intermittently in response to harvest and irrigation practices could make foraging less efficient because birds would need to search among the expanse of available habitat to find accessible prey. Where hawks nest in close proximity to a crop like alfalfa, which provides consistently accessible prey because of monthly harvest and irrigation, home ranges are smaller than in areas dominated by row and field crops (Woodbridge, 1991, cited in England et al., 1997; Estep, 1989). These observations suggest that maximum foraging efficiency would be achieved with crop/cover types that provide consistently accessible prey in areas close to nest sites rather than in large tracts of agricultural land.

Also, as described in response to Comment O4-13, there is reason to believe that hawks will be able to consistently find and use upland habitat in the Mitigation Lands at the current minimum size of 400 acres. There is no basis to support a larger minimum size as necessary for reserves to be used by hawks.

The comment also suggests that a large reserve size is necessary to reduce human disturbance. The Mitigation Lands are to be located at least 800 feet from existing urban lands or lands that are designated for urban uses in an adopted general plan (Section IV.C.2.a). This required setback will contribute to reducing human disturbance at nest sites if hawks establish territories on reserve lands.

Response to Comment O4-30

The Lead Agencies and the Applicants concur that Planned Development would result in the loss of potential foraging habitat for the Swainson's hawk. As described in Responses to Comments O4-6 through O4-23, however, the Operating Conservation Program of the NBHCP would offset changes in foraging habitat availability during the nesting season with creation and maintenance of foraging opportunities on the Mitigation Lands and would compensate for potential abandonment of territories within the areas of Authorized Development through the tree planting program. As a result, no substantial change in the population of the Swainson's hawk is expected with implementation of the NBHCP.

Letter I1—Chris Chaddock

Response to Comment I1-1

The commentor suggests that out-of-basin mitigation be provided east of Steelhead Creek in response to actions by the Water Agencies. It should be noted that the conservation measures relating to the acquisition of Mitigation Lands are conservation measures of the Land Use Agencies, who would mitigate at a 0.5:1 ratio for Planned Development within their Permit Areas. There are no land acquisition requirements in the proposed Water Agency conservation measures. Area B was selected for potential out-of-basin mitigation because it possesses similar characteristics to the Natomas Basin, and is thus assumed to be capable of supporting viable populations of giant garter snakes, Swainson's hawks, or other Covered Species. There probably are other lands that could serve a similar purpose, including the area directly east of Steelhead Creek as the commentor suggests. The Applicants wish to focus their efforts on lands within the Natomas Basin, however, and do not propose to add any additional areas for potential out-of-basin mitigation.

Please note that an incorrect version of Figure 13 was included in the Draft NBHCP. There is no significance of the dashed line showing the area within 1 mile of the Natomas Basin. Figure 13 has been revised in the Final NBHCP.

Response to Comment I1-2

The operation of RD 1000 drains and pumping plants is not a Covered Activity evaluated in the EIR/EIS. Ongoing activities by RD 1000 and others that are not subject to the Operating Conservation Program of the NBHCP are considered part of the No Action Alternative. This includes the application of aquatic herbicides by individual rice farmers, who under current practices hold the water on their fields for two weeks prior to release.

With regard to TNBC, its general management strategies described in the NBHCP include the use of herbicides to control undesirable aquatic vegetation (see Section IV.D.4 of the Draft NBHCP). TNBC's management practices for herbicide use would not change relative to ongoing management by private rice farmers as presented in Section 4.3.1.1 of the EIR/EIS (see discussion of water quality impacts on p. 4-21 of the Draft EIR/EIS.) Relative to the No Action Alternative, which is the baseline for environmental analysis, there would be no impact associated with implementation of the NBHCP and related actions.

The water quality impacts of urban runoff were addressed in prior planning documents for Authorized Development. The City concluded that Authorized Development within its Permit Area would degrade stormwater quality and result in a significant and unavoidable impact to water quality. Specific mitigation measures in the North Natomas Community Plan EIR, together with the implementation of stormwater quality controls by the City, have resulted in the advanced system of detention ponds and other Best Management Practices characteristic of North Natomas. Sutter County, in its EIR for the General Plan Revision, adopted similar mitigation measures and concluded that impacts to water quality would be less than significant.

Response to Comment I1-3

As discussed in the above response, the operation of RD 1000 drains and pumping stations is not a Covered Activity. Discharge from RD 1000's Pumping Plant #6 is expected to be consistent with ongoing practice, and is therefore part of the No Action Alternative.

Response to Comment I1-4

As discussed in the above response, the operation of RD 1000 drains and pumping stations is not a Covered Activity. Emergency flood discharges are expected to be consistent with ongoing practice, and are therefore part of the No Action Alternative.

Letter I2—Diepenbrock Law Firm

Response to Comment I2-1

In an Inter-office Memo dated May 30, 2002, William Carnazzo, Chief Assistant City Attorney, completed a document search of all relevant North Natomas documents related to the width of the agricultural buffer along the western side of the North Natomas Community Plan area, including Fisherman's Lake. In his memo, Mr. Carnazzo concluded that "the governing documents are the various editions of the community plan, where references to the westerly buffer width consistently specify 200 feet." One of the obligations of the Settlement Agreement required the City to initiate a North Natomas Financing Plan amendment to widen the westerly agricultural buffer from 200 feet to 250 feet "to be consistent with the Mitigation Monitoring Plan of the NNCP." Such an amendment of the Financing Plan was completed in June 2002. The other conclusion reached by Mr. Carnazzo's memo is that the agricultural buffer starts at the City limits (the western edge of the Permit Area), approximately the centerline of Fisherman's Lake. References to the 250-foot-wide buffer in the NBHCP and EIR/EIS will be clarified to be consistent with the opinion of the Chief Assistant City Attorney. As described in Section 1.3 of this Final EIR/EIS, the proposed clarifications in buffer widths do not trigger recirculation.

Response to Comment I2-2

The NBHCP does not specify site-specific drainage improvements that might be needed for individual developments within the Permit Areas. Such improvements would be subject to standard permitting and review procedures. Thus, a drainage plan for a project would need to be submitted as part of the Urban Development Permit application. All aspects of the permit, including drainage, would be reviewed for consistency and responsiveness to the NBHCP. Also note that certain activities are not granted take coverage by the NBHCP, including substantive improvements subject to USACE Section 404 permits and State or regional water quality control board discharge requirements. See Section I.O of the NBHCP for a complete listing of activities that are not Covered Activities.

Response to Comment I2-3

Page VII-15 of the Draft NBHCP, midway through 2nd paragraph - the sentence reads, "Also, the NNCP designates a 250 foot wide non-urbanized buffer along the City side of Fisherman's Lake between the lake and future urban uses." To reflect the Inter-Office Memo dated May 30, 2002 from William Carnazzo about the location and width of the buffer, that sentence has been changed in the Final NBHCP. Also, to reflect the commitment in the 2001 Settlement Agreement about the buffer, additional text has been added consistent with the May 30, 2002 Memo. See the Final NBHCP for these text changes.

Response to Comment I2-4

The area under consideration is riparian habitat along the east side of Fisherman's Lake within the city limits, and does not include areas north of Del Paso Road. The GIS database, which is based on existing DWR land use maps and field reconnaissance, shows this area to be about 23 acres. Closer examination of the database as a result of this comment shows that

a substantial portion of the 23-acre area includes the RD 1000 access road. This access road is not a specific land use feature in the database; rather, it is shared between the riparian area and the adjacent property. The preliminary assessment conducted by the commentor shows the riparian habitat between the water's edge and the RD 1000 access road to be closer to 16 acres in size. The difference in the acreage is attributable primarily to the treatment of the roadway. The difference in the acreage is not substantive and does not result in changes to the findings in the EIR/EIS because: (1) the difference is attributable in part to the treatment of the RD 1000 maintenance road, (2) the acreages are similar, (3) the habitat is expected to be preserved in accordance with the NNCP and Settlement Agreement (see Responses to Comments I2-1, I2-3, and I2-5), and (4) no specific conservation measures or impact assessment are affected by the acreage change. The GIS database is a tool to help assess changes in habitat across the 53,537-acre Natomas Basin, and is appropriate for that purpose. No changes are necessary.

Response to Comment I2-5

One of the City's obligations in the Settlement Agreement is to initiate a North Natomas Community Plan amendment to consider widening the agricultural buffer along Fisherman's Lake to 800 feet. Using a stakeholder group process, the group has selected the consultant and the City has contracted with the consultant to evaluate the biological resources effects of such a widening. After the report is complete, City staff will transmit a report to the City Council with a recommendation based on the consultant's report and other factors. The City Council will decide on the proper width of the buffer. The analysis in the EIR/EIS does not make any assumptions about the buffer width.

Response to Comment I2-6

Fisherman's Lake and portions along both sides of it are owned by RD 1000. Also, RD 1000 has an easement on portions of the land along the east side of Fisherman's Lake. The easement was granted for flood control purposes, and all uses not inconsistent with flood control were reserved to the landowner. Section V.A.2 of the Draft NBHCP has been amended to clarify the ownership of Fisherman's Lake (see the Final NBHCP for these text changes).

Response to Comment I2-7

Fisherman's Lake is owned by RD 1000. It is part of a major flood control system. Specifically, Fisherman's Lake is a portion of the West Drain that conveys runoff from the western portion of the Basin into the Main Drain and out to the Sacramento River, and ultimately to the Pacific Ocean. Like many land uses within the Natomas Basin, Fisherman's Lake serves as habitat for a variety of plant and animal species. It is not, however, a habitat preserve owned by TNBC, a wildlife agency, or other conservancy. Its function as a flood control system is discussed in Section V.A.2 of the NBHCP.

Response to Comment I2-8

Comment noted. See Response to Comment I2-5.

Response to Comment I2-9

Comment noted. See Response to Comment I2-5.

Response to Comment I2-10

Comment noted. See Response to Comment I2-5.

Response to Comment I2-11

Page IV-14, #4 in the NBHCP is an acquisition criterion that does not add potential species to the Basin, but suggests that one of the criteria for selecting Mitigation Land is that the Covered Species can be supported by the land under consideration. The issue of introducing Covered Species into the Basin is addressed in Response to Comment I13-26.

Response to Comment I2-12

The reference on page IV-28 of the Draft NBHCP related to management activities and control of water supply and availability, is related solely to Site Specific Management Plans for the Mitigation Lands. The acquisition criteria for Mitigation Lands do not in any way affect municipal water supply or availability to urban uses.

Response to Comment I2-13

The GIS database developed for the NBHCP and EIR/EIS does not show this property as part of the flood-prone areas illustrated on Figure 7 of the Draft NBHCP. The portion of the floodplain area shown near the subject property extends to include a portion of the West Drain (Fisherman's Lake). Please note that this figure is intended to illustrate the general extent of flood-prone areas in the Natomas Basin, and should not be used as a substitute for detailed floodplain analysis on any specific property.

Response to Comment I2-14

Figure 10 (Habitat Types) illustrates land use classes throughout the Natomas Basin. See the discussion of Methods in Chapter 3 of the Biological Resources Technical Memo (Appendix H of the NBHCP). The area noted as Riparian along Fisherman's Lake in Figure 10 is the area with large trees along the east side of Fisherman's Lake. See Response to Comment I2-4 for more information regarding this area.

"Ruderal" is defined on page II-5 of the Draft NBHCP as follows: "Ruderal includes former agricultural lands that are no longer in production, primarily as a result of proximity to urbanized areas (e.g., surrounding Arco Arena). The Ruderal class includes DWR's "Barren" and "Vacant" land use categories. Ruderal lands typically consist of non-native grasses, and most are occasionally tilled for fire control."

Figure 13 has been revised.

Response to Comment I2-15

The designation of this area is discussed in Response to Comment I2-4.

Response to Comment I2-16

The commentor suggests that the adaptive management approach included on page I-37 of the Draft NBHCP should be further refined. Please note that page I-37 is the Introduction, and that the references to adaptive management provide a brief summary and overview rather than a detailed or refined statement. The full adaptive management approach is contained in Chapter VI, Plan Implementation (see especially Section VI.F). The commentor expresses concerns that property owners will be responsible for an ever-evolving management plan without limits. The types and reasonableness of adaptive management practices are discussed in Chapter IV and the limitations on adaptive management are delineated in Section VI.K.d of the NBHCP.

Response to Comment I2-17

The commentor concurs that introduction of new species into an open space preserve is a biologically sound approach. The commentor states that adjacent property owners should not be unduly burdened as a result of the introduction of new species. In response, species introduction on habitat reserves would occur if impacts to such species are identified as a result of pre-construction surveys and introduction is a recommended method for compensation. Thus, species would be introduced to reserves only when such a species has already voluntarily inhabited property in the Natomas Basin.

Response to Comment I2-18

The main purpose of the NBHCP is not to “facilitate recovery of species.” Rather, the main purpose of an HCP is to demonstrate that impacts associated with incidental take are avoided, minimized, and mitigated to the maximum extent practicable and to ensure that the likelihood of the survival and recovery of a species in the wild is not appreciably reduced. The HCP Handbook provides considerable guidance regarding the burden of recovery of species. In particular, Chapter 3 of the Handbook states:

Issuance of a section 10 permit must not “appreciably reduce” the likelihood of the survival and recovery of the species in the wild. Note that this does not explicitly require an HCP to recover listed species, or contribute to their recovery objectives outlined in a recovery plan. This reflects the fact that HCPs were designed by Congress to authorize incidental take, not to be mandatory recovery tools.

Further, the commentor states that modifications to the flora and fauna within preserves may impede the recovery of species. It is highly unlikely that management practices on the Mitigation Lands would impede recovery of species since the reserves are biologically managed to support the Covered Species. The commentor concludes that property owners should not be responsible for recovery of species related to impacts outside of their immediate control. The NBHCP holds property owners responsible for indirect impacts of habitat loss through payment of a Mitigation Fee to compensate through the reserve system, and for direct project-specific impacts through the avoidance, minimization, and mitigation measures included in Chapter V of the NBHCP. Contributions to adaptive management practices that may support some recovery measures are directly tied to “peer reviewed” scientific information or monitoring results which demonstrate that such measures are necessary to avoid jeopardy to the species.

Letter I3—Downey Brand

Response to Comment I3-1

The Land Use Agencies and Wildlife Agencies strongly support the Water Agencies' participation in the NBHCP. To that end, the revised NBHCP was and is designed to expressly include participation by the Water Agencies, and to provide incidental take coverage for mechanical-related activities. Pages 1-7 through 1-10 of the NBHCP and pages 1-5 and 1-8 of the Draft EIR/EIS describe the status of the Water Agencies' participation in the NBHCP, as well as the Land Use Agencies' and Wildlife Agencies' extensive coordination efforts with the Water Agencies to facilitate the Water Agencies' participation in the NBHCP.

While the Land Use and Wildlife Agencies support the Water Agencies' participation, additional information and further analysis will be needed to evaluate the effects associated with pesticide use in the Basin. The Land Use Agencies and Wildlife Agencies are aware that the Water Agencies requested take coverage for pesticide use on January 10, 2002, February 4, 2002, and March 1, 2002. Notwithstanding these requests, the Water Agencies failed to provide this information prior to release of the NBHCP and accompanying EIR/EIS at a level of detail sufficient to conduct the necessary analyses required to meet ESA, CESA, NEPA, and CEQA requirements. Specifically, it took six months (June 5, 2002) before any preliminary data were provided to the Wildlife Agencies regarding the type of pesticides, application, and use within the Water Agencies' facilities. The USFWS has indicated that insufficient information was made available to enable preparation of an adequate analysis in the NBHCP and accompanying EIR/EIS or for the USFWS to evaluate the impacts to Covered Species of the Water Agencies' pesticide use in that agency's required Section 7 consultation on the NBHCP.

As stated in the City's letter dated July 17, 2002 to Wendy Anderson, Counsel for RD 1000 and Natomas Mutual, Counsel confirmed to the City in May, 2002 that due to the Water Agencies' continued inability to obtain coverage from the USFWS for the use of pesticides under the NBHCP, the Water Agencies would not pursue coverage under the NBHCP at that time. Because the Water Agencies no longer intended to file an application and adopt the NBHCP at that time, the Land Use Agencies and Wildlife Agencies understood that, in conjunction with this decision, the Water Agencies also elected not to participate as co-lead agencies in the environmental review process pursuant to CEQA. Since RD 1000 and Natomas Mutual did not participate in the NBHCP and EIR/EIS preparation effort since January, 2002, we could not presume that RD 1000 intended to fulfill its responsibilities as a Lead Agency. The purpose of our July 17, 2002 letter was to confirm that RD 1000 no longer would be serving in a co-lead agency capacity at the time the Draft EIR/EIS would undergo public review. Because the Water Agencies were not participating in the EIR/EIS preparation and did not intend to adopt any discretionary approvals for purposes of CEQA, it is unclear as to how RD 1000 could continue to participate as a Lead Agency at the time the Draft NBHCP EIR/EIS was released. In addition, the Water Agencies have not submitted formal applications for take permits, either to the USFWS or to CDFG.

Notwithstanding the Water Agencies' decision not to participate in the NBHCP effort at the time of publication of the NBHCP and EIR/EIS, the City and Sutter County have attempted

to facilitate the process and minimize the level of effort involved in the Water Agencies' decision to participate in the future. In this regard, the Water Agency activities (other than activities involving pesticide use) are included in the NBHCP as described on pages I-35 - I-36 and V-27 - V-35 of the Draft NBHCP. Additionally, Chapter 4 of the EIR/EIS contains an evaluation of the impacts of such activities. The Water Agencies may rely on the NBHCP, as adopted, and thereby participate in the NBHCP to obtain incidental take coverage for activities other than pesticide use. The Water Agencies also are free to pursue coverage for pesticide use through a separate incidental take permit application, or future amendment to the NBHCP, based on an adequate analysis of the impacts of pesticide use on the Covered Species.

Response to Comment I3-2

In August 2000, the District Court in *National Wildlife Federation, et. al. v. Secretary of the Interior Bruce Babbitt* found the 1997 NBHCP to be deficient in several respects and invalidated the City's incidental take permit. As a result of the Court's decision, the City of Sacramento, the sole permittee under the 1997 NBHCP, and Sutter County elected to develop a new NBHCP to correct those deficiencies, improve and strengthen the Plan, and obtain new incidental take permits. The Water Agencies have participated in that effort to develop a new NBHCP. During the development of the current NBHCP, the Water Agencies did not request that the USFWS issue them incidental take permits based on the 1997 NBHCP, nor would the USFWS have done so given the District Court's adverse decision on the original plan. The Water Agencies have not submitted formal applications for incidental take permits based on the current NBHCP.

The USFWS has advised the Water Agencies that pesticide and rodenticide use cannot be covered under the current NBHCP. The USFWS's position is based on official guidance that, in turn, is based on the lack of scientific information and data necessary to assess adequately the impacts of such uses on the Covered Species. The information submitted by the Water Agencies in July 2002 in support of their request that pesticide and rodenticide uses be included under the NBHCP was insufficient to enable the USFWS to analyze impacts in the EIR/EIS and to make the findings under Section 10 and Section 7 necessary to issue ITPs to the Water Agencies covering such uses. The Water Agencies have elected not to submit permit applications based on the current NBHCP to cover their other water and canal management activities at this time.

We concur with the commentor's statement that Judge Levi upheld, in *National Wildlife Federation, et. al. v. Secretary of the Interior Bruce Babbitt*, the USFWS's reliance upon the best scientific and commercial data in issuing an incidental take permit to the City. However, sufficient scientific information must be available to the USFWS regarding the effects of pesticide and rodenticide uses on the giant garter snake and other Covered Species to enable the USFWS to find that such uses will not appreciably reduce the likelihood of the survival and recovery of the giant garter snake and other Covered Species. The Water Agencies have not provided to the USFWS adequate information, and such information is not otherwise available to the USFWS, to support the incidental take coverage for pesticide and rodenticide uses. Should the Water Agencies apply for incidental take permits in the future to cover pesticide and rodenticide uses accompanied by information adequate to assess the impacts of such uses on the Covered Species, the USFWS will evaluate the information and

determine, in accordance with Section 10 issuance criteria, whether to grant incidental take coverage for such uses.

Response to Comment I3-3

The Water Agencies' request that the NBHCP eliminate the requirement for the Water Agencies' management plans, should the Water Agencies become Permittees, to be submitted to the NBHCP TAC is noted. If the Water Agencies become Permittees, then the submission of the management plans to the TAC would be a key mechanism for ensuring that management measures implemented by the Water Agencies on their lands are compatible with the NBHCP's goal of retaining viable populations of the giant garter snake and other Covered Species in the Basin, as those plans may be modified from time to time. Obtaining TAC review of the Water Agency management plans for the limited purpose of ensuring their consistency with the NBHCP will not, as RD 1000 states, result in RD 1000 ceding its governmental authority to a non-elected entity. The TAC's role is limited to reviewing the effects of adjustments in management and maintenance measures on the Covered Species within the limitations specified in the NBHCP on page V-34 and will enhance implementation of the NBHCP and the Wildlife Agencies ability to monitor the Water Agencies' compliance with the Plan, should the Water Agencies become Permittees.

It must be emphasized that the Water Agencies' activities have the potential to significantly affect the Covered Species, particularly the giant garter snake. The primary mechanism identified in the Plan to mitigate and minimize adverse impacts to the Covered Species from Water Agency activities, should the Water Agencies become Permittees, is through appropriate management of their canal and ditch maintenance activities. If Water Agency management plans were exempted from consistency review by the TAC as the commentor requests, the TAC would have no way of determining the compatibility of the Water Agencies' activities with the Plan. Review of management plans by technical committees or the Wildlife Agencies is a routine component of HCPs involving both governmental entities and private parties. The Water Agencies' concern that such review would unduly interfere with their governmental authority is misplaced.

Response to Comment I3-4

As documented in Chapter VII of the NBHCP, the EIR/EIS, and the accompanying Biological Resources Technical Memorandum, the Land Use Agencies and Wildlife Agencies conducted extensive technical and environmental analyses demonstrating the effectiveness of the NBHCP's Operating Conservation Program with or without the Water Agencies' participation. Pages IV-8 and IV-9 of the Draft NBHCP evaluate the connectivity between reserves afforded by the Water Agencies' systems of canals and ditches. This analysis is further revised to clarify that the opportunities for connectivity provided in the future by the Water Agencies' canals and ditches are not expected to differ from the existing opportunities for connectivity.

Response to Comment I3-5

The NBHCP limits dredging activities to Water Agencies' channel maintenance in order to limit the scope of Covered Activities to those for which mitigation measures have been offered by the Water Agencies. At this time, new or expanded Covered Activities could not

be considered without further analysis and mitigation measures. Since no additional analysis and mitigation measures for the expanded activity are offered by the Water Agencies or their legal counsel, the requested language change has not been included.

Response to Comment I3-6

The area that is referred to in the definition of Ponds/Wet Areas (Draft NBHCP, p. II-5 and p. III-8; Draft EIR/EIS, p. 3-17) is the area surrounding the North Drain near RD 1000 Pumping Plant #2. This general area was historically known as Prichard's Lake. Because the definition of the land use categories is intended to provide guidance to the reader, the Lead Agencies wish to provide additional clarity. Both documents have been edited in accordance with the commentor's suggestion (for specific text changes, see Section 2.1 of this Final EIR/EIS and the Final NBHCP).

Response to Comment I3-7

The commentor refers to footnote "a" in Table II-3 on p. II-6 of the Draft NBHCP. This footnote presents the assumptions used to convert the one-dimensional Class II, III, and IV canals to acreage. Because Class II, III, and IV canals were only known from their length, it was necessary to use a standard width to calculate acreage. Class I canals are the same as the "Canal" land use class. Because all of the land use classes are two-dimensional elements in the GIS database, there was no need to make assumptions about canal width. This is discussed in the definition of the land use classes (Draft NBHCP, p. II-4, p. II-8; Draft EIR/EIS, p. 3-17); no edits to the NBHCP or EIR/EIS are necessary.

Response to Comment I3-8

Comment noted. The NBHCP does refer to the more current practices for residual rice straw and states on page III-4:

The residual rice straw in the fields after harvesting is typically burned, plowed under, or flooded. Flooding to dispose of rice straw is becoming more prevalent as the practice of burning rice straw is being phased out due to air quality prohibitions. In addition to rotting the rice stubble, flooded rice fields provide wetland habitat for ducks, geese and other migratory waterfowl.

Response to Comment I3-9

Discrepancies in the airport acreage have been corrected. For clarification, the Airport land use class in unincorporated Sacramento County includes Sacramento International Airport and a small airfield adjacent to the Natomas Mutual headquarters, totaling approximately 1,512 acres. The fenceline of Sacramento International Airport is approximately 1,505 acres. The figure of 1,515 acres on p. III-9 of the Draft HCP has been corrected (see the Final NBHCP for text changes). The airport controls, to various degrees, additional land areas totaling over 5,500 acres.

Response to Comment I3-10

The commentor's request for a specific edit to Section 3.4.6.3 of the EIR/EIS has been made. See Section 2.1 of this Final EIR/EIS for text changes.

Response to Comment I3-11

Section 2.4.6.3 of the EIR/EIS summarizes key conservation measures from the NBHCP in order to provide an accurate project description. The full text of all Water Agency conservation measures is provided in Section V.C of the NBHCP. The NBHCP, however, does not include a conservation measure that provides for “law enforcement assistance paid for by land developers.” The Applicants are not aware of any proposed conservation measures that would provide such assistance.

Response to Comment I3-12

The commentor’s request for a specific edit to Section 3.4.6.3 of the EIR/EIS has been made. See Section 2.1 of this Final EIR/EIS for text changes.

Response to Comment I3-13

The commentor’s request for a specific edit to Section 3.3.3 of the EIR/EIS has been made. See Section 2.1 of this Final EIR/EIS for text changes.

Response to Comment I3-14

The commentor’s request for a specific edit to Section 3.3.3 of the EIR/EIS has been made. See Section 2.1 of this Final EIR/EIS for text changes.

Response to Comment I3-15

The commentor’s request for a specific edit to Section 3.3.3 of the EIR/EIS has been made. See Section 2.1 of this Final EIR/EIS for text changes.

Response to Comment I3-16

The commentor’s request for a specific edit to Section 3.3.3 of the EIR/EIS has been made. See Section 2.1 of this Final EIR/EIS for text changes.

Response to Comment I3-17

The commentor’s request for a specific edit to Section 3.3.3 of the EIR/EIS has been made. See Section 2.1 of this Final EIR/EIS for text changes.

Response to Comment I3-18

The commentor’s request for a specific edit to Section 3.4.1 has been made. See Section 2.1 of this Final EIR/EIS for text changes.

Response to Comment I3-19

The commentor’s request for a specific edit to Section 4.1.2.3 has been made. See Section 2.1 of this Final EIR/EIS for text changes.

Response to Comment I3-20

The term “Permittees” is defined in the NBHCP to represent the entities that may rely on the NBHCP in order to seek incidental take coverage. As stated in the NBHCP, the term

“Permittees” refers to “the City of Sacramento, Sutter County, RD 1000, Natomas Mutual and TNBC” (see pp. D5 and 1-4 through 1-10 of the NBHCP). Consistent with the NBHCP’s definition of “Permittees,” the Draft EIR/EIS describes the five Permittees as the City, Sutter County, RD 1000, Natomas Mutual, and TNBC (see Draft EIR/EIS, p. 1-1). Permittees thus consist of those entities that have submitted permit applications for incidental take permits based on the current NBHCP (the City of Sacramento, Sutter County and TNBC) and those entities that may submit such applications in the future (RD 1000, Natomas Mutual and Sacramento County). While the Water Agencies may rely on the NBHCP to seek incidental take authorization, because the Water Agencies did not file applications for incidental take permits at the time the NBHCP and Draft EIR/EIS were released for public review, they are not Applicants. The EIR/EIS, however, addresses the Water Agencies’ conservation measures because the measures are included in the NBHCP. To eliminate confusion, additional text has been added after the first sentence in the second paragraph on page 1-1 of the EIR/EIS. In addition, the first full paragraph on page 1-33 of the Draft NBHCP has been revised to be consistent with the text on pages 1-1 and 1-7 of the Draft EIR/EIS (see the Final EIR/EIS for text edits).

Letter I4—Kim Gagnon

Response to Comment I4-1

The NBHCP requires (see Section V.A.5.b) that surveys for Swainson's hawks be conducted according to the Swainson's Hawk Technical Advisory Committee's (May 31, 2000) methodology or updated methodologies, as approved by the Wildlife Agencies, using experienced Swainson's hawk surveyors. This methodology requires surveys during the breeding season, and therefore the NBHCP as written ensures that pre-construction surveys would not be conducted when hawks are absent from the Basin. Also, the NBHCP allows pre-construction surveys for an individual species to be completed up to one year in advance if the sole period for reliable detection of that species is between May 1 and December 31 (Section V.A.1).

Response to Comment I4-2

Regarding the adequacy of the mitigation ratio, please see Master Response 1 (Mitigation Ratio). Regarding the required one-half-mile buffer around active nest sites, this requirement was incorporated based on the CDFG standard mitigation guidelines for nesting sites as revised. In the *Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California*, CDFG (1997) states:

No intensive new disturbances (e.g., heavy equipment operation associated with construction, use of cranes or draglines, new rock crushing activities) or other project related activities which may cause nest abandonment or forced fledging, should be initiated within one-quarter mile (buffer zone) of an active nest between March 1 - September 15 or until August 15 if a Management Authorization or Biological Opinion is obtained for the project. The buffer zone should be increased to one-half mile in nesting areas away from urban development (i.e. in areas where disturbance [e.g. heavy equipment operation associated with construction, use of cranes or draglines, new rock crushing activities] is not a normal occurrence during the nesting season). Nest trees should not be removed unless there is no feasible way of avoiding it. If a nest tree must be removed, a Management Authorization (including conditions to offset the loss of the nest tree) must be obtained with the tree removal period specific in the Management Authorization, generally between October 1 - February 1. If construction or other project related activities which may cause nest abandonment or forced fledging are necessary within the buffer zone, monitoring of the nest site (funded by the project sponsor) by a qualified biologist (to determine if the nest is abandoned) should be required. If it is abandoned and if the nestling are still alive, the project sponsor shall fund the recovery and hacking (controlled release of captive reared young) of the nestling(s). Routine disturbances such as agricultural activities, commuter traffic, and routine facility maintenance activities within one-quarter mile of an active nest should not be prohibited.

The Operating Conservation Program of the NBHCP mirrors these requirements including monitoring of the site as necessary until the young have fledged.

Response to Comment I4-3

The primary strategy of the NBHCP regarding nest trees is avoidance. This includes designation of the Swainson's Hawk Zone along the river, where the majority of nest trees are located, and the avoidance policies included in Chapter V. As the commentor points out, there may nonetheless be direct or indirect impacts to nest sites despite employment of all available avoidance, minimization, and mitigation requirements.

The NBHCP considers abandonment of a territory that would occur as a result of implementing the NBHCP's Covered Activities to be an impact, regardless of whether the tree is removed or the territory is abandoned because of disturbance or loss of foraging habitat. The NBHCP acknowledges that there could be a reduction in the number of occupied territories in the short term prior to growth of trees to a size necessary to support nesting. Reasons for why hawks select a particular nest site are somewhat speculative. While they need a tree sufficiently large within a reasonable proximity of foraging habitat, they may be in a particular spot because it is the only place available that meets minimum requirements rather than it being preferred. Nest trees in particular are not uniformly available throughout the Basin. There is uncertainty with respect to the suitability of created habitat for Swainson's hawk. The created sites could be of similar, less, or greater quality than the affected nest site. Planting 15 trees rather than 1 increases the likelihood that at least one will be suitable.

At most, five territories could be lost because of nest tree removal associated with Planned Development. As described in more detail in the Addendum to the Biological Resources Technical Memorandum, there currently appear to be sufficient alternate territories to accommodate birds displaced from these territories (Appendix K of the Final NBHCP). Also, a variety of fast- and slow-growing tree species will be planted to provide replacement trees over the short and long term. As described in more detail in the Addendum, TNBC already has initiated a tree planting program. Trees could reach sufficient size to accommodate nesting Swainson's hawks by 2006. Further, the monitoring and adaptive management program will monitor the effectiveness of the NBHCP with respect to providing territories for hawks.

Response to Comment I4-4

The commentor requests clarification of the term "unavoidable," and again reiterates the opinion that no nest trees should be removed. The Permit Areas are shown on Figure 2 of the NBHCP and the active Swainson's hawk nest sites are shown on Figure 13 of the NBHCP. In reviewing these figures, please note that there are no nest sites in Sutter County's Permit Area, and therefore no nest trees will be affected by Authorized Development in Sutter County. Within the City's Permit Area, the majority of nest sites are located within the Swainson's Hawk Zone and within areas which are already being subjected to urban encroachment. Of the nest sites within the City's Permit Area, there are four nest sites that may be affected by Authorized Development. The NBHCP requires first that all reasonable efforts be made to avoid removing the nest tree. For these trees, impacts to the tree may be "unavoidable" if there are no reasonable site planning options to avoid the tree. See also Response to Comment I4-3. Also, nest trees potentially removed would be limited to those within the Permit Areas; most territories in the Basin are outside of these areas.

Response to Comment I4-5

The hawk zone encompasses about 10,255 acres. The 252 acres of development that would be authorized in the hawk zone would be on the southern portion of the zone, adjacent to existing developed areas of the City of Sacramento. This is a small amount of the total area of the hawk zone and given its location would not fragment habitat. The NBHCP includes significant protections for the Swainson's Hawk Zone specifically to retain the suitability of the area for Swainson's hawks.

Response to Comment I4-6

The NBHCP was prepared to address 17,500 acres of Authorized Development, including approximately 252 acres in the Swainson's Hawk Zone pursuant to the 1988 General Plan Update. No take authorization would be provided beyond this area. The City does not control land uses outside of the city limits, and therefore does not control land use in the Swainson's Hawk Zone outside of the identified 252-acre area. The City is participating, however, with Sacramento County in exploring the potential for new development in excess of 17,500 acres. For more information on this, see Master Response 3 (Joint Vision).

Outside of Sutter County, land use in the Swainson's Hawk Zone is under the jurisdiction of Sacramento County (approximately 7,500 acres) with the exception of 252-acre City area. It is premature to state what specific land uses will be allowed in this area because the Joint Vision is still in the early phases of consideration. Regardless, the decision to not allow development in the Swainson's Hawk Zone in Sacramento County lies to a substantial degree with Sacramento County, which is not a participant in this current NBHCP process.

Sutter County has made a substantial commitment to protecting the Swainson's Hawk Zone by committing to initiate a General Plan Amendment to change the Industrial/Commercial Reserve land use designation to Agriculture, consistent with current land uses in this area (see Section 3.1.2(b) of the Implementing Agreement).

Regardless of the actions of the City, Sutter County, and Sacramento County, assurance of permanent preservation could be provided only by fee purchase or the purchase of conservation easements throughout the Swainson's Hawk Zone. The entire Swainson's Hawk Zone is over 10,000 acres in size. If TNBC acquired this area, it would exceed its land acquisition goal of 8,750 acres per the NBHCP and would result in limited ability to acquire lands in areas that provide greater value for the giant garter snake.

Response to Comment I4-7

The NBHCP includes a monitoring program. For Swainson's hawks, annual basinwide surveys (including the Mitigation Lands) will be conducted to determine the status of the Swainson's hawk, including presence, density, and reproductive rate success. Recent surveys by the Swainson's Hawk Technical Advisory Committee conducted for TNBC indicate that nesting continues to be active in the Swainson's Hawk Zone and in other areas of the Natomas Basin. Conduct of a research program is not required for receipt of incidental take permit under Section 10(a) of the ESA.

Response to Comment I4-8

It is difficult to compare the mitigation ratio included in the NBHCP with the mitigation ratio of other HCPs because the ratio must reflect the habitat value and biology of an area. As noted in Master Response 1 (Mitigation Ratio), the Natomas Basin has very little “natural” or native lands remaining. Nonetheless, the mitigation ratio is applied to all lands within the Permit Areas. Additionally, agricultural lands have varying benefit to the hawk. For example, the predominant crop in the Natomas Basin is rice, which provides very limited foraging opportunities for Swainson’s hawks during their presence in the Basin. An exception to this is during rice harvest in the late summer/early fall. In addition, depending on site-specific conditions, additional mitigation measures are applied that (for vernal pool resources, VELB, and some other species) require mitigation in excess of 1:1 for habitat lost. Please also refer to Master Response 1 (Mitigation Ratio).

The NBHCP is not based exclusively on the CDFG’s *Staff Report*. Rather, this was one of many references and research documents consulted in the preparation of the NBHCP. Regarding home ranges and foraging values of land uses in proximity to nest sites, please see the Addendum to the Biological Resources Technical Memo (Appendix K of the Final NBHCP).

The commentor focuses on the 0.5:1 mitigation ratio without consideration of the differential value and function of the lands affected by Planned Development and those provided in the Mitigation Lands as foraging habitat for Swainson’s hawks. Regardless of the mitigation ratio, what is important for the hawks is the quality and quantity of foraging opportunities available in and adjacent to the Basin in the future. As explained in the more detail in the Addendum, habitat in the reserves would offset reduction in foraging habitat availability during the nesting season and thereby mitigate potential effects to the nesting population.

Response to Comment I4-9

The Covered Activities would not affect riparian habitat along the Sacramento River. Away from the Sacramento River, only 124 acres of riparian habitat occur in the Basin, thereby precluding preservation of 400 acres of riparian habitat. As described in Section 4.4.2.11 of the EIR/EIS, none of the 124 acres of riparian habitat in the Natomas Basin is expected to be affected by Planned Development. Although no impact to this habitat is anticipated, TNBC will include riparian habitat in the Mitigation Lands, thus increasing riparian habitat in the Basin over time.

Fisherman’s Lake also will be used in creating additional riparian habitat. Fisherman’s Lake is addressed in Section V.A.2 of the NBHCP. Section V.A.2 of the NBHCP states that “[p]ursuant to the Settlement Agreement, the City has agreed to initiate a North Natomas Community Plan amendment to potentially widen the agricultural buffer along the City side of Fisherman’s Lake [from 200 feet under the NNCP] to 800 feet wide.” Fisherman’s Lake itself will remain in perpetuity because it is part of the primary flood control and drainage infrastructure. Riparian lands and upland buffers on the east (City) side of Fisherman’s Lake are planned, but the final buffer width is in the process of being resolved (see Responses to Comments I2-1 and I2-5). There are no other requirements related to Fisherman’s Lake. It should be noted, however, that the Settlement Agreement contained a provision that TNBC acquire 250 acres in the vicinity of Fisherman’s Lake (in an area

designated as Zone 1 in the Settlement Agreement). TNBC has acquired 258 acres in this area, including the Natomas Farms property fronting on the west side of Fisherman's Lake.

Response to Comment I4-10

The commentor states that all habitat types that currently occur in the Natomas Basin should be provided in the Mitigation Lands. All habitat types that exist prior to Planned Development will persist after Planned Development. Rice existed prior to Planned Development and will persist after Planned Development both in the Mitigation Lands and outside the Mitigation Lands. Marsh is currently very limited in the Basin, but its occurrence will be increased substantially in the Mitigation Lands. Upland habitat is currently predominately agricultural fields. The Basin will continue to support a large amount of agricultural activity. The Mitigation Lands will provide upland habitat in the form of native grasslands and crops such as alfalfa. The Mitigation Lands will be monitored for use by Covered Species to assess the effectiveness of the Mitigation Lands in providing habitat for these species.

The NBHCP supports an incidental take permit for certain, specified species and therefore does not need to address the full suite of wildlife in the Basin. See also Master Response 1 (Mitigation Ratio). The composition of the Mitigation Lands in terms of the types and percentage of each habitat was specifically developed to support the Covered Species of the NBHCP. For example, the marsh areas will include upland areas because Covered Species such as giant garter snake, western pond turtle, tricolored blackbird, and others require emergent marsh or waters with nearby uplands for basking or hibernacula. Thus, the NBHCP includes a policy that approximately 20 to 30 percent of each marsh reserve include upland areas. Similarly specific acquisition and reserve management policies are included in the NBHCP for each habitat type to ensure the needs of the species are met. See also Master Response 1 (Mitigation Ratio).

The commentor identifies species that occur in several native habitats in the Natomas Basin and questions whether habitats in the Basin will continue to be able to support all of the wildlife in the Basin. As shown in Figure 8 of the NBHCP, very little native habitat occurs in the Basin and much of the native habitat is outside of areas of Planned Development. The habitat reserves will substantially increase the acreage of native habitats in the Basin and thereby would generally improve conditions for the species the commentor lists.

Response to Comment I4-11

The correct land use acreage in the Natomas Basin, not including the 17,500 acres of Planned Development, is summarized in Table III-4 of the NBHCP and Table 4-2 of the EIR/EIS. The sentence on page IV-1 of the Draft NBHCP that is referred to by the commentor is correct in that "developed" areas of the Natomas Basin (i.e., the Urban land use class combined with the Airport, Highways, and Rural Residential classes) total about 7,267 acres. The remainder after implementation of Planned Development is $53,537 - 7,267 - 17,500 = 28,770$ acres of the remaining land use classes, which are primarily agricultural lands with some natural areas. The comment letter from ECOS, et al. (see Comment O1-7) includes a similar calculation, but their calculation doesn't include the roughly 4,400 acres of airport buffer lands in the remainder. This additional 4,400 acres accounts for the difference pointed out by the commentor.

The statement on page IV-1 of the Draft NBHCP is not misleading. The amount of agricultural and natural areas projected to remain after completion of the Planned Development (including both the Mitigation Lands and remaining agricultural land) is expected to be about 28,770 acres. It is the Applicants' understanding that the airport buffers (i.e., the area outside the active "fenceline" of the airport) will remain in agricultural production or similar use. The only difference between the airport buffer and other farmlands in the Natomas Basin would be that the buffer would be owned by Sutter County.

It is important to note also that the NBHCP does not depend on the characteristics of the "remainder" area as mitigation. If conditions change in the future (e.g., some of the airport buffer or other agricultural areas go out of production or change land uses), then this would be addressed in the Adaptive Management provisions of the NBHCP (see Section VI.F of the Draft NBHCP) or as a Changed Circumstance (see Section VI.K.2 of the Draft NBHCP), which could require revision or amendment of the NBHCP.

Response to Comment I4-12

This comment references comments presented in comment letter O2 (Friends of Swainson's Hawk). For a response, refer to the responses to the comments to that submittal. Also see Master Response 3 for a response to the comment on the Joint Vision.

Response to Comment I4-13

As discussed in Response to Comment I4-11, "developed" uses in the Natomas Basin include prior urban development (e.g., most of South Natomas), highways, Sacramento International Airport (fenceline area), and rural residential areas, and does not include any of the Planned Development. TNBC's obligations relate only to the 17,500 acres of Planned Development; they have no obligations to purchase land as a result of pre-existing development conditions. Pursuant to the 1997 NBHCP and the Settlement Agreement, 4,324 acres of Authorized Development has taken place as of the preparation of these responses to comments. TNBC has acquired 2,802 acres as of this date (itemized in Response to Comment O2-19), which exceeds the amount required ($4,324 \times 0.5 = 2,162$).

Response to Comment I4-14

There are several factors to consider relevant to the creation of habitat and the Operating Conservation Program of the NBHCP. First, it is important to recognize that the habitats currently being used by Covered Species in the Basin are, for the most part, human-created habitats consisting of agricultural fields. Some of the habitat in the Mitigation Lands will consist of protecting existing agricultural fields and managing the fields in a manner sensitive to wildlife needs. For example, rice in the Mitigation Lands would consist of existing rice fields; therefore, for this component, the Mitigation Lands would not be relying on creating new habitat for species to use. Second, the reserves also include creation of natural systems, restoration of lands to an ecosystem more similar to pre-European settlement conditions than the current intensive agriculture practiced in the Basin. Providing more natural habitats is expected to benefit the Covered Species. Giant garter snakes have been found to use the managed marsh habitat created on the Betts-Kismat-Silva tract, and Swainson's hawks have been observed foraging at some tracts, indicating that it is

reasonable to expect the habitats on the Mitigation Lands to attract Covered Species. Monitoring of the habitat reserves will be conducted to assess their effectiveness at attracting Covered Species (see Section VI.E of the NBHCP). Further, because successful creation of wetland and riparian habitats has been accomplished at many locations in the Central Valley, there is a reasonable likelihood that these habitats can be successfully established in the Natomas Basin. Also see Response to Comment I4-10.

Response to Comment I4-15

The NBHCP includes a discussion of buffers and setbacks in Chapter IV, specifically in reference to buffers and setbacks for TNBC reserves. The “Airport Buffer” lands surrounding the Sacramento International Airport are not part of the Mitigation Lands, but rather are open space areas managed by the County of Sacramento for airport safety. Compatibility between the Mitigation Lands (acquired and managed by TNBC) and Sacramento International Airport has been an important topic during development of the NBHCP and is addressed extensively in that document (for example, see Sections IV.D.1.e and IV.D.5 of the NBHCP), and compatibility is expected to be maintained. The analysis of compatibility is presented in Section 4.11 of the EIR/EIS. See also Responses to Comments G8-18, G8-25, and G8-36.

Response to Comment I4-16

The NBHCP is a component of the application for issuance of ITPs and, as such, the document contains the provisions and operating conditions under which the resource agencies would issue those permits. Compliance with the NBHCP is secured by the Implementation Agreement (Attachment A to the NBHCP). Section 3.2.10 of the Implementation Agreement requires operation of the reserves in perpetuity.

Response to Comment I4-17

The only land locomotive Covered Species are tiger salamander and spadefoot toad, both of which remain close to breeding ponds. If they occur in the Basin, they are restricted to the eastern portion where suitable habitat exists. These species are primarily addressed through the Vernal Pool Conservation Strategy and species-specific measures rather than through the creation and management of habitat reserves. Therefore, specific provisions for connectivity among the habitat reserves for these species were not considered necessary.

Response to Comment I4-18

The status of the listed, candidate, and other species that are proposed as Covered Species is shown in Table I-1 of the NBHCP. Hunting is not a covered activity under the NBHCP, and therefore the limited hunting activity that could be allowed on the Mitigation Lands would not be sanctioned as an activity that could result in incidental take. In addition, the species for which coverage is sought under the NBHCP (including Swainson’s hawk, which is state listed as a threatened species, and the giant garter snake, which is listed as a threatened species under the ESA and CESA) benefit from protections under the Migratory Bird Treaty Act and other applicable regulations. The NBHCP currently states (Section IV.D.1.c) that “[m]anagement plans will identify the level of hunting allowed, *if any* (emphasis added), and will include parcel-specific restrictions to protect the Covered Species during any

hunting activities. No take of Covered Species as result of hunting will be covered under the permits.”

Response to Comment I4-19

The commentor is concerned about protections afforded Fisherman’s Lake under the NBHCP. The commentor suggests acquisition of the canals and creation of a new canal for RD 1000. Fisherman’s Lake area provides habitat for giant garter snakes, Swainson’s hawks, and other Covered Species. The lake is owned and managed by RD 1000 to provide drainage, and RD 1000 has managed Fisherman’s Lake as a drainage canal for many decades. Covered Species have colonized and persisted in the this area coincident with RD 1000’s use and management of the lake. Given the apparent compatibility of RD 1000’s use and management of the lake with use by Covered Species, there is no reason to believe changes in the ownership and management of the lake are necessary to maintain its value for Covered Species.

Fisherman’s Lake is addressed in Section V.A.2 of the NBHCP. Section V.A.2 of the NBHCP states that “[p]ursuant to the Settlement Agreement, the City has agreed to initiate a North Natomas Community Plan amendment to potentially widen the agricultural buffer along the City side of Fisherman’s Lake [from 200 feet under the NNCP] to 800 feet wide.” Fisherman’s Lake itself will remain in perpetuity because it is part of the primary flood control and drainage infrastructure. Riparian lands and upland buffers on the east (City) side of Fisherman’s Lake are planned, but the final buffer width is in the process of being resolved (see Response to Comments I2-1 and I2-4). There are no other requirements related to Fisherman’s Lake. It should be noted, however, that the Settlement Agreement contained a provision that TNBC acquire 250 acres in the vicinity of Fisherman’s Lake (in an area designated as Zone 1 in the Settlement Agreement). TNBC has acquired 258 acres in this area, including the Natomas Farms property fronting on the west side of Fisherman’s Lake.

Response to Comment I4-20

The Applicants have included a provision that no development over 17,500 acres be allowed under the NBHCP unless an amendment to the NBHCP or a new HCP, including the required biological analysis and appropriate mitigation measures, is developed (pages I-5 – I-7 of the Draft NBHCP). The proponents do not have land use authority over the substantial portion of the Natomas Basin that lies in unincorporated Sacramento County. As stated in Section I.B.4.a of the NBHCP, Sacramento County is not a participant in this process. Development pressures in unincorporated Sacramento County have been building over the last approximately 10 years, and concerns about future annexations are being considered in the Joint Vision process (see Master Response 3 [Joint Vision]). The NBHCP does not provide any take coverage for development in Sacramento County (with the exception of MAP) and any development, if approved, would be required to assess the additional impacts and develop appropriate mitigation.

Response to Comment I4-21

Authorized Development has been approved by the City of Sacramento in its General Plan (1988), South Natomas Community Plan (1988), and North Natomas Community Plan (1996), and by Sutter County in its General Plan (1995) and South Sutter County Specific

Plan (2001). Impacts to special-status species and appropriate mitigation measures have been addressed in the environmental documents certified for these plans (refer to Appendix C of the EIR/EIS), which have been refined in the NBHCP and EIR/EIS in a manner that demonstrates compliance with the ESA and CESA.

The concerns raised by the commentor have been addressed in Responses to Comments I4-1 through I4-20.

Response to Comment I4-22

This comment summarizes an earlier comment. See Response to Comment I4-1.

Response to Comment I4-23

This comment summarizes an earlier comment. See Response to Comment I4-2.

Response to Comment I4-24

This comment summarizes an earlier comment. See Response to Comment I4-3.

Response to Comment I4-25

This comment summarizes an earlier comment. See Response to Comment I4-4.

Response to Comment I4-26

This comment summarizes an earlier comment. See Response to Comment I4-5.

Response to Comment I4-27

This comment summarizes an earlier comment. See Response to Comment I4-6.

Response to Comment I4-28

This comment summarizes an earlier comment. See Response to Comment I4-7.

Response to Comment I4-29

This comment summarizes an earlier comment. See Response to Comment I4-8.

Response to Comment I4-30

This comment summarizes an earlier comment. See Response to Comment I4-10.

Response to Comment I4-31

This comment summarizes an earlier comment. See Response to Comment I4-11.

Response to Comment I4-32

This comment summarizes an earlier comment. See Response to Comment I4-12.

Response to Comment I4-33

This comment summarizes an earlier comment. See Response to Comment I4-13.

Response to Comment I4-34

This comment summarizes an earlier comment. See Response to Comment I4-14.

Response to Comment I4-35

This comment summarizes an earlier comment. See Response to Comment I4-15.

Response to Comment I4-36

This comment summarizes an earlier comment. See Response to Comment I4-16.

Response to Comment I4-37

This comment summarizes an earlier comment. See Response to Comment I4-17.

Response to Comment I4-38

This comment summarizes an earlier comment. See Response to Comment I4-18.

Response to Comment I4-39

This comment summarizes an earlier comment. See Response to Comment I4-19.

Response to Comment I4-40

This comment summarizes an earlier comment. See Response to Comment I4-20.

Response to Comment I4-41

Comment noted. Refer to Responses to Comments I4-1 - I4-20 for answers to the questions raised in this letter. The comments raised in this letter have been fully considered in the preparation of the Final NBHCP.

Letter I5—Eric C. Hansen

Response to Comment I5-1

Comment noted.

Response to Comment I5-2

This comment introduces points raised in Comments I5-3, I5-4, and I5-5. See the specific responses to those comments.

Response to Comment I5-3

In reference to the comment on the mitigation ratio, see Responses to Comments I5-6 through I5-8. Also see Master Response 1 (Mitigation Ratio).

Regarding the comment on ditches, drains, and long-term persistence of giant garter snake in the Natomas Basin, the NBHCP was prepared in support of incidental take permits under the ESA and CESA. The ESA requires that an HCP minimize and mitigate the impact of take to the maximum extent practicable and that issuance of an incidental take permit must not appreciably reduce the likelihood of the survival and recovery of the species. CESA has similar requirements, although the impacts are to be fully mitigated.

The NBHCP recognizes the importance of ditches and drains to giant garter snakes, particularly with respect to providing connectivity among reserve lands and other areas of suitable habitat. The irrigation canals operated by Natomas Mutual are required to support the existing agricultural uses within the Basin and will be required to serve Mitigation Lands as the system of reserves develops. Natomas Mutual is a privately held water company that is comprised of landowner stockholders. As TNBC acquires Mitigation Lands within the Basin, it will become a prominent stockholder in Natomas Mutual and can encourage practices that enhance canal maintenance and operations to favor biological values within the Basin. Regardless of its direct role in Natomas Mutual, TNBC will require the delivery of water granted under the water rights associated with mitigation lands that it acquires. As such, the canal system will continue to provide direct linkages to TNBC as long as surface water is used on the reserves.

In addition to serving the Mitigation Lands, Natomas Mutual will likely continue to provide agricultural irrigation water, thus providing further connectivity between the Mitigation Lands and the surrounding agricultural lands within the Basin. Existing drains also will continue to provide connectivity. Regardless of the type of land uses in the Basin, whether agricultural or urban, major flood control channels are required to convey water through the Basin. Figure 17 of the NBHCP identifies drainage channels in the Natomas Basin that are likely to be retained for flood control purposes for both existing agricultural uses and to accommodate Planned Development. Because of the need to provide drainage and flood conveyance, drains can reasonably be expected to remain in the Basin. As depicted on Figure 17 of the NBHCP, major drainage channels provide connectivity between Sutter County and Sacramento County, with direct connection to major Mitigation Lands within Sutter County's northwest portion of the Basin. Additional discussion of connectivity is addressed in Master Response 2 (Connectivity). Also, canals and ditches in the area of

Planned Development are included in the 17,500 acres of Planned Development and therefore loss of canals and ditches is mitigated under the NBHCP.

Response to Comment I5-4

In implementing the NBHCP, TNBC is acquiring and protecting areas known to be occupied by giant garter snakes, as well as creating managed marsh habitat. Several of the Mitigation Lands acquired by TNBC to date support rice fields. Surveys for giant garter snakes in 2002 (Wylie and Martin, 2002) found giant garter snakes on five of the Mitigation Lands: Sills, Bennett South, Lucich North, Lucich South, and Betts-Kismat-Silva. Based on this information, it is evident that areas occupied by giant garter snakes are being preserved under the NBHCP. Also, creation of managed marsh habitat on the Betts-Kismat-Silva property was only recently completed in 2001. Although only two snakes were captured, the presence of snakes on the property soon after completion of managed marsh restoration indicates that it is reasonable to expect giant garter snakes to use habitats created under the NBHCP.

Response to Comment I5-5

The NBHCP recognizes the importance of maintaining connectivity for giant garter snakes. As explained in more detail in Master Response 2 (Connectivity), the NBHCP's commitment to connectivity is further defined in Section IV.C.1.d of the NBHCP. This section provides various mechanisms for maintaining connectivity, and the measures have been further defined in the Final NBHCP (see the Final NBHCP for specific text changes).

As explained in Response to Comment I5-3, drains and canals will continue to be available in the Natomas Basin to provide habitat for snakes and connectivity among Mitigation Lands. In addition to the primary drainage structures identified on Figure 17 of the NBHCP, the one-mile-wide Swainson's Hawk Zone has been excluded from the Sutter County Permit Area. This land will remain undeveloped until Sutter County addresses impacts to listed species. As such, this land is anticipated to remain available for purposes of biological connectivity. In addition to the major canal within the Swainson's Hawk Zone that is identified on Figure 17, there are numerous lesser canals operated by RD 1000 and Natomas Mutual, as well as lesser irrigation canals operated by individual farmers. Some of these other facilities are shown in an update to Figure 17 in the Final NBHCP. Therefore, it is anticipated that this area will continue to provide connectivity between present and future reserves located in Sacramento and Sutter Counties.

Even though canals and drains are expected to remain in the Natomas Basin, the NBHCP has been revised to provide additional assurances that connectivity will be maintained among the Mitigation Lands. As described in Master Response 2 (Connectivity), TNBC will monitor snake populations and identify waterways that are important to maintaining connectivity among the Mitigation Lands. When important waterways are identified, TNBC will regularly attempt to obtain information from the water agencies about any proposals potentially affecting these waterways. If changes are proposed that would require regulatory review or permitting, potential effects to giant garter snake and appropriate mitigation would be identified in the project-specific review. If no regulatory review is necessary but the proposal would potentially adversely affect connectivity among the

Mitigation Lands, TNBC would seek to acquire an easement on a canal or purchase land containing a canal to maintain connectivity.

Revisions addressing connectivity through the East Drainage Canal and the North Drainage Canal within Sutter County's Permit Area also have been added to the Final NBHCP. The revisions include construction of fences along the shared boundary of Authorized Development and the North Drainage Canal and the East Drainage Canal within Sutter County's Permit Area to discourage snakes from entering urban areas and to minimize access by people to the canal. A minimum of 100 feet will be provided from fence to fence and access to the canals shall be limited by gates. At the time of Authorized Development along the North and East Drainage Canals, Sutter County shall consult with the Wildlife Agencies to determine design strategies that would enhance conditions for giant garter snake movement through the North and East Drainage Canals (see the Final NBHCP for specific text changes).

In addition, in acquiring Mitigation Lands, TNBC will seek to consolidate Mitigation Lands into a few large blocks. By providing a few large, consolidated areas of habitat rather than many small and broadly distributed areas, maintenance of connectivity among all Mitigation Lands should be improved.

Response to Comment I5-6

The NBHCP requires acquisition of Mitigation Lands in advance of new Authorized Development (see Section VI.C). Under the 1997 NBHCP, TNBC is required to acquire an initial 400 acres of Mitigation Lands prior to Authorized Development and to convert this land to managed marsh within 5 years. This obligation has been completed. Further, no Urban Development Permits shall be issued after September 30 of each year until TNBC has acquired Mitigation Lands equal to the number of acres necessary to cover the mitigation obligation attached to all prior Authorized Development plus an additional 200 acres of mitigation lands. This requirement ensures that reserves lands are protected prior to Authorized Development. Through this schedule, the NBHCP addresses potential short-term effects by minimizing the delay between removal of potential habitat and development of potential habitat.

Regarding the comment on the time frame for created habitat to develop sufficiently to support a resident population of giant garter snakes, the presence of snakes at the Betts-Kismat-Silva tract indicates that snakes may use newly created habitat within a year. These observations indicate that snakes may be expected to start using created habitat in a relatively short period of time.

In response to the comment on developing replacement habitat, this concern is applicable only to the managed marsh component of the Mitigation Lands. The NBHCP specifies that 50 percent of the Mitigation Lands is to be rice. To meet this requirement, TNBC likely would acquire existing rice fields. Thus, for the rice reserves, there would be no delay between acquisition of the reserve habitat and the provision of functioning habitat.

For the managed marsh component of the Mitigation Lands, there could be up to a 5-year delay between loss of habitat from development and completion of creation of the managed marsh on the reserves. Whether this potential delay would result in a decline in the giant garter snake population is influenced by many factors. A short-term decline would occur

only if snakes displaced by development experienced increased mortality when they tried to move to alternate habitat or if there was no alternate habitat available (i.e., all habitat was occupied at carrying capacity). It is not likely that all potential habitat is occupied at carrying capacity such that any development in suitable habitat would result in a decline in the population. Surveys from the Natomas Basin do not support the assumption that all potential habitat is occupied all the time. The surveys suggest a patchy distribution of snakes (Wylie and Martin, 2002; Wylie and Casazza, 2001; Wylie and Casazza, 2000) with no observations/captures of snakes in some areas of apparently suitable habitat. Although the lack of observation/captures of snakes in a particular area is not conclusive evidence that an area does not support giant garter snakes, the lack of observations indicates no or low use of the area at the time of the survey. Thus, it is reasonable to expect that some snakes displaced by development would be able to find alternate habitat.

The commentor describes a canal relocation project in which snakes did not colonize the relocated canal even though apparently suitable habitat conditions were established and giant garter snakes occupied nearby areas. The commentor assumes that there was a short-term population decline and a period of reduced recruitment because the relocated canal had not been colonized. Given that there was nearby habitat, however, displaced snakes may have not colonized the relocated canal because there was sufficient habitat at the nearby site to support the population. Without information on the population size and distribution, the conclusion in the comment that the population declined with relocation of the canal is speculative.

In addition, the results from the canal relocation apply only to canal relocation and not to active marsh restoration designed with active giant garter snake habitat needs in mind. In the canal relocation project, the relocated canal was not actively restored and managed to provide giant garter snake habitat. In contrast, monitoring at the Colusa National Wildlife Refuge showed use of restored wetlands by giant garter snakes in the first year. Active planting and revegetation carried out as part of the restoration on the Colusa National Wildlife Refuge likely made the restored habitat immediately usable by the snake.

Response to Comment I5-7

The commentor describes the first year following creation of marsh habitat at the Colusa National Wildlife Refuge. Factors other than what are offered in the comment could have contributed to the observed level of use at that refuge in the first year after creation of marsh habitat. First, the only portion of the snake population for which any information is available is the radio-tagged snakes. Untagged snakes could have been using the created habitat and their use of the habitat would not have been known. Second, the created habitat was new additional habitat, not replacement for recently lost occupied habitat. At the time the new habitat was created, the snake population inhabiting nearby areas would have been able to fulfill their life requisites in these other areas. Unless the population exceeded the existing habitat's carrying capacity, snakes would not have needed to colonize the newly created habitat. The apparent lack of establishment of a resident population in the habitat the year after creation could have been because the existing population in the nearby habitat needed to increase before snakes would move into created habitat. The timing of colonization in this situation could be dependent on the rate of population growth of snakes

rather than the rate of habitat development. The commentor does not provide data to distinguish these two possibilities.

With respect to the timing of habitat creation relative to timing of development impacts and colonization of created habitats see Response to Comment I5-6.

Finally, the NBHCP does not state that the created habitats will sustain the giant garter snake population in the Basin indefinitely. Rather, it states that the Mitigation Lands will encourage persistence of giant garter snake in the Basin.

Response to Comment I5-8

Acquisition of Mitigation Lands and the creation of habitat under the NBHCP is intended to occur as soon as possible after the NBHCP is approved. The NBHCP includes a schedule for reserve acquisition and habitat creation. See Response to Comment I5-6 regarding timing of reserve acquisition in relation to the Planned Development, which indicates that replacement habitat would be established within years under the NBHCP, not 50 years from the loss of habitat.

The NBHCP also includes an adaptive management program through which the NBHCP will be adjusted if necessary as a result of: (1) new information resulting from the biological effectiveness monitoring and ongoing research on the Covered Species; (2) new information from future recovery plans that differs from the NBHCP measures; (3) avoidance, minimization, and mitigation measures described in the NBHCP that may need to be revised based on new information; (4) information that indicates that the minimum block size requirements (i.e., 2,500 acres and 400 acres) are not effective; (5) significant land use changes outside of the Mitigation Lands; and (6) uncertainties associated with plan implementation. These factors and potential adjustments to the NBHCP will be evaluated and implemented through the processes described in detail in Section VI.F, including (1) regularly scheduled periodic evaluations of the monitoring data, other new scientific information, and recovery plan information; (2) identifying significant measurable threshold limits for each of the adaptive management objectives that will trigger proposals and solutions requiring a management change, and (3) conducting a review at the Independent Mid-Point Review and Overall Program Review milestones. “These approaches will be used to evaluate the effectiveness of the established habitats on reserve lands and to implement adjustments to the Operating Conservation Program, as necessary, in order to achieve the biological goals and objectives of the Plan, including to address the mitigation requirements for Covered Species.” Thus, whether the reserves are attracting and supporting giant garter snakes will be monitored and adjustments implemented if necessary.

Finally, the commentor notes that a stated overall goal for the NBHCP is to “provide habitat for existing and new viable populations of Covered Species,” and incorrectly interprets this goal as meaning that the goal is to maintain current population levels. The goal is correctly interpreted as providing habitat to contribute to maintain viable populations of species that currently exist in the Basin or that may become established. The NBHCP is consistent with this goal in that it includes creation and long-term management of habitat for giant garter snakes.

Response to Comment I5-9

As discussed in the above responses, Response to Comment I5-10, Master Response 1 (Mitigation Ratio), it is necessary to consider the NBHCP's Operating Conservation Program in its entirety rather than just the mitigation ratio. Although the mitigation ratio in the NBHCP is 0.5:1, the effective ratio is higher because the replacement habitat should be of greater benefit to the snake than the habitat impacted by Planned Development. The commentor states that a mitigation ratio of 2:1 or greater is necessary to "overcome interim population declines". An increased ratio could support a larger population than existed prior to the impact over the long term, but it would not accelerate the return to the pre-impact population levels.

As explained in Response to Comment I5-6, the NBHCP adequately addresses potential short-term population effects by specifying a schedule for acquiring Mitigation Lands and creating habitat, and by requiring mitigation for the entire Permit Areas, not just for areas occupied by the giant garter snakes.

Response to Comment I5-10

The 0.5:1 mitigation ratio is one component of the entire Operating Conservation Program of the NBHCP that includes a suite of avoidance, minimization, and mitigation measures. The 0.5:1 mitigation ratio must be considered in conjunction with all of the NBHCP's conservation measures. Master Response 1 (Mitigation Ratio) provides additional explanation of the integration of the 0.5:1 mitigation ratio with the full complement of conservation measures.

The NBHCP requires acquisition of 0.5 acre for every acre of land developed regardless of the land's habitat value. As a result, the effective ratio of the acreage of reserve land to acreage of suitable habitat impacted is greater than 0.5:1. Planned Development would impact about 8,512 acres of giant garter snake habitat. Under the NBHCP, 6,562.5 acres of the Mitigation Lands would be rice or managed marsh, yielding of mitigation ratio of about 0.75 acre of Mitigation Lands for every acre of potential habitat affected by Planned Development.

Regarding the comment on the creation of habitat, as described in Response to Comment I5-4, several of the Mitigation Lands acquired to date are inhabited by giant garter snakes. Thus, while preservation of giant garter snake populations in place is not required by the NBHCP, it nevertheless appears to be occurring with implementation of the NBHCP.

In this comment and others the commentor suggests that preservation of areas occupied by giant garter snakes is preferable to creating new habitat. Protecting occupied areas in place would not necessarily provide the best conservation strategy for giant garter snakes. In the areas of Planned Development, this approach would result in the creation of islands of occupied habitat surrounded by urban areas. This situation would be adverse to snakes by exposing them to increased mortality from cars, potentially reduced water quality from urban runoff, potentially increased predation, and potential genetic isolation. The Applicants and the Lead Agencies expect the likelihood that snakes will persist in the Natomas Basin over the long term is greater with establishment of Mitigation Lands outside of the areas of Planned Development where these risks are lower and where other habitat is available (e.g., privately-owned rice fields).

Response to Comment I5-11

The commentor is correct that some areas with known occurrences of giant garter snakes would be affected by Planned Development (e.g., Metro Air Park, which is addressed under a separate HCP but included in the NBHCP EIR/EIS analysis to provide a conservative assessment of impacts). Several areas of significant giant garter snake populations, however, will remain. Locations along and west of Powerline Road, portions of the airport bufferlands, and the areas east of state route 99 between Elkhorn Boulevard and the Sacramento/Sutter County line, including Snake Alley, are not in areas of Planned Development. Also, Fisherman's Lake would remain; this area is known to support giant garter snakes.

As described in Response to Comment I5-10, implementation of the NBHCP will result in preservation of areas occupied by giant garter snakes, as evidenced by the Mitigation Lands acquired to date that have occurrences of giant garter snakes in areas of new habitat. Creation of habitat to offset development impacts is a mitigation approach that is commonly used by the Wildlife Agencies. Available information indicates that snakes will use created marsh habitats as evidenced by the use of managed marsh created at the Betts-Kismat-Silva reserve and at the Colusa National Wildlife Refuge.

Response to Comment I5-12

The commentor references Figure 5 of the NBHCP, which depicts riparian, marsh, and open water habitats in the Basin in 1908. The figure does not contain any information on historic locations of giant garter snakes. The commentor assumes that giant garter snakes were present in the southern portion of the Basin. As depicted in Figure 5, habitats in the southern portion of the Basin consisted of riparian scrub-shrub and seasonal open water. Tules that would indicate marsh habitat are not identified as occurring in the southern portion of the Basin. The quality of areas designated as seasonal open water for snakes is uncertain. Giant garter snakes prefer aquatic habitats with abundant aquatic and emergent vegetation. Given its designation as open water, it is unclear whether this habitat would have provided good habitat for snakes, and therefore the comment that snakes were predominantly located in the southern end of the Basin appears unsubstantiated.

Regarding impacts attributable to past development in the Basin, it is important to note that the NBHCP was prepared to support incidental take permits for Planned Development—not past development. The Applicants are not responsible for mitigating past impacts to the species from previous development. With respect to impacts of Authorized Development, the potential for short-term population impacts from loss of occupied habitat is addressed through several means. First, the NBHCP includes avoidance, minimization, and mitigation measures for construction activities that would take place in potential snake habitat. Among the avoidance, minimization, and mitigation measures are seasonal restrictions on construction activities and various actions prior to and during construction to discourage use of construction areas by snakes such that direct impacts are minimized and snakes have an opportunity to move to other areas.

Second, as described in response to Comment I5-6, the NBHCP includes a schedule for acquisition of Mitigation Lands and creation of habitat. TNBC must acquire land in advance of Authorized Development and must maintain at least a 200-acre cushion of Mitigation

Lands. For those lands identified to be used for the managed marsh component of the Mitigation Lands, the marsh must be created within 4 years of acquisition. These requirements minimize the potential temporal lag between habitat impact and habitat creation. Lastly, as described in response to Comment I5-3, the 0.5:1 mitigation ratio applies to all lands developed, not just those with suitable habitat for giant garter snake. As a result, the mitigation ratio of suitable habitat on the Mitigation Lands to suitable habitat that is impacted by development would be higher than 0.5:1.

Response to Comment I5-13

The statement in the Draft EIR/EIS “The most recent giant garter snake survey information (Wylie, 2001) showed that few giant garter snakes were captured relative to previous years, but this does not necessarily mean that the giant garter snake population in the Natomas Basin is in decline” was not intended to downplay the potential that a decline could have occurred. Rather, it was included to educate the reader of the limits to inferring a trend in the population (whether it be it stable, increasing or decreasing trend) based on a few years of capture data. Further, with respect to locations reported in the CNDDDB, the intent of the EIR/EIS is to present the available information on snake locations from the USGS’s Biological Resources Division and CDFG’s CNDDDB. The EIR/EIS did not compare data from these two sources.

The number of snakes captured each year can vary for many reasons other than a change in the population size. The location of surveys and level of effort of surveys can strongly influence the number of captures. Wylie and Casazza (2000) and Wylie (1998) do not report the level of effort (i.e., trap days) thereby precluding a determination of whether survey effort could have contributed to the differences. The survey area was increased between the 1998 and 1999 surveys, so inference on population trends by comparing capture results between these years is not appropriate. Further, Wylie and Casazza (2001) identify 3 possible reasons for the lower captures in 2000 relative to the previous 2 years:

- New field personnel
- Land use changes
- Occurrence of a warm, dry spring and other weather factors

They concluded that “[d]ata from future years will be needed to determine if this is a trend in giant garter snake population decline.” This statement is consistent with the EIR/EIS, which cautions against inferring a population trend based on a few years of capture data.

The NBHCP provides an Operating Conservation Program that is expected to “ensure that direct impacts of Authorized Development upon Covered Species are avoided or minimized to the maximum extent practicable.” The Operating Conservation Program includes avoidance, minimization, and mitigation measures to address potential effects to giant garter snakes from construction activities (Section V.5.a), including restricting activities by season, requiring pre-construction surveys, dewatering aquatic habitat prior to initiation of construction activities, educating construction personnel to identify giant garter snakes, and removing fill or debris that could be used by giant garter snakes as an overwintering site. These measures are the same as those typically required by the USFWS.

Regarding the comment on the need for a better understanding of the demographics of giant garter snakes in the Natomas Basin, issuance of an incidental take permit does not

require comprehensive information on the population demographics for the Covered Species. While consideration of the level of take and impact of take is necessary, the USFWS Handbook allows a habitat-based approach to determining the impact and appropriate mitigation. The HCP Handbook states:

Another approach to consider for HCPs is habitat-based HCPs...in which the presence of a particular species can be assumed based on presence of its habitat type; if that habitat type is then addressed in the HCP and included in the mitigation program, additional distributional studies may not be necessary.

The NBHCP follows a habitat-based approach, which is consistent with the HCP Handbook.

Response to Comment I5-14

The comment provides anecdotal information, observations, and interpretation of potential changes in habitat value for giant garter snakes at various locations in the Natomas Basin. The NBHCP has been prepared to support an application for an incidental take permit. To receive an incidental take permit, an HCP must minimize and mitigate the impact of proposed take to the maximum extent practicable. The NBHCP supports an application for a permit for incidental take of giant garter snakes and other Covered Species that could result from 17,500 acres of Planned Development and other Covered Activities. Although there could have been various changes in habitat quality and the population of giant garter snakes in the Natomas Basin as suggested by the commentor, the NBHCP is not required to provide mitigation for these changes unless they are the result of the Covered Activities. The commentor does not provide information to support that changes in habitat value in the Natomas Basin are the result of the Covered Activities.

Response to Comment I5-15

The NBHCP does not rely exclusively on the preservation of habitat rather than preserving the species *in situ*. While the NBHCP does not require that Mitigation Lands exclusively support giant garter snakes, the NBHCP does require that the ability to support the Covered Species be considered in identifying and acquiring lands. Specifically, the first guideline of the Wetland Reserve Acquisition Criteria/Methodology (Section IV.3.b of the NBHCP) is:

Land has existing or potential wetland habitat values that currently support or can support, with necessary enhancement and restoration, giant garter snakes and other wetland associated Covered Species.

In addition, TNBC has been successful in acquiring Mitigation Lands that currently support giant garter snakes and also in attracting snakes to created habitats. Recent surveys found giant garter snakes on five of the Mitigation Lands: Sills, Bennett South, Lucich North, Lucich South, and Betts-Kismat-Silva. Thus, implementation of the NBHCP is resulting in creation of new habitat and preservation of existing populations.

In this comment and others the commentor states that preserving areas occupied by giant garter snakes is preferable to creating new habitat. In the area of Planned Development, this approach would result in the creation of islands of occupied habitat surrounded by urban areas. This situation would expose snakes to increased mortality from cars, potentially reduced water quality from urban runoff, potentially increased predation, and potential

genetic isolation. The likelihood that snakes will persist in the Natomas Basin over the long term is expected to be greater with establishment of Mitigation Lands outside of the area of Planned Development where these risks are lower and where other habitat is available (e.g., privately-owned rice fields).

The commentator further states that giant garter snakes may not be able to colonize the Mitigation Lands because they depend on a limited set of aquatic transit opportunities. As explained in Master Response 2 (Connectivity), canals and drains will persist in the Natomas Basin and provide aquatic connectivity among the reserves. As evidenced on Figure 17 of the NBHCP, the channels of RD 1000 and Natomas Mutual are extensive throughout the Natomas Basin. The combination of primary drainage channels (drainage channels anticipated to remain through the term of the Permits), secondary drainage channels (which tend to remain unless affected by Planned Development), and other irrigation channels provide substantial connectivity between the Mitigation Lands. Drains identified in Figure 17 will continue to be needed in urban and agricultural areas for flood conveyance. The system of canals identified on Figure 17 is anticipated to remain to serve both Planned Development and also to convey water to the Mitigation Lands.

Connectivity also will be provided in the one-mile-wide Swainson's Hawk Zone that has been excluded from the Sutter County Permit Area. This land will remain undeveloped until such time as Sutter County addresses impacts to listed species. As such, this land is anticipated to remain available for purposes of biological connectivity. In addition to the major canal within the Swainson's Hawk Zone that is identified on Figure 17, there are numerous lesser canals operated by RD 1000 and Natomas Mutual, as well as lesser irrigation canals operated by individual farmers. Some of these other canals are identified in the revised Figure 17 that is included in the Final NBHCP. Therefore, it is anticipated that this area will continue to provide connectivity between present and future reserves located in Sacramento and Sutter Counties.

In addition, in acquiring Mitigation Lands, TNBC will seek to consolidate Mitigation Lands into a few large blocks. By providing a few large, consolidated areas of habitat rather than many small and broadly distributed areas, maintenance of connectivity among all Mitigation Lands should be improved.

As described in Master Response 2 (Connectivity), TNBC will monitor snake populations and identify waterways that are important to maintaining connectivity among the Mitigation Lands. When important waterways are identified, TNBC will regularly attempt to obtain information from the Water Agencies about any proposals potentially affecting these waterways. If changes are proposed that would require regulatory review or permitting, potential effects to giant garter snake and appropriate mitigation would be identified in the project-specific review. If no regulatory review is necessary but the proposal would potentially adversely affect connectivity among the Mitigation Lands, TNBC would seek to acquire an easement on a canal or purchase land containing a canal to maintain connectivity.

As discussed in Response to Comment I5-11, several areas with documented occurrence of giant garter snakes will not be affected by Planned Development, and therefore the NBHCP will not affect populations in these areas that could serve as a source population. Also, some

of the existing Mitigation Lands support giant garter snakes and could serve as a source population. Therefore, source populations will be available to colonize created habitat.

As stated in the comment, habitat that is occupied by giant garter snakes is more valuable than suitable habitat that is not occupied. The comment (1) states that currently occupied habitat should be protected and (2) assumes that created habitat will not be colonized in a timely manner. As described above, TNBC has already acquired Mitigation Lands that support giant garter snakes, thus addressing the commentor's first concern. Second, given the occurrence of snakes in created habitats on the Betts-Kismat-Silva tracts as well as at the Colusa National Wildlife Refuge, it is reasonable to believe that created managed marsh habitat will be colonized by giant garter snakes.

Response to Comment I5-16

The NBHCP has specific criteria for acquisition of Mitigation Lands. These criteria are listed in Section IV.2 of the NBHCP and include requirements that the land (1) be capable of supporting the required habitat types in approximately the percentages specified under the NBHCP, (2) has legal water rights, (3) is capable of supporting appropriate agricultural cultivation, (4) is capable of supporting or being improved to support Covered Species, and (5) is adequately removed from incompatible land uses. Further, with respect to wetland reserve acquisition, land to be acquired must (1) have existing or potential wetland habitat values that currently support or can support giant garter snakes and (2) be hydrologically connected to other blocks through irrigation and drainage systems or other systems to ensure connectivity and opportunity for travel by giant garter snakes between the Mitigation Lands (Section IV.3).

TNBC has been successful in acquiring Mitigation Lands that currently support giant garter snakes and also in attracting snakes to created habitats. Recent surveys found giant garter snakes on five of the Mitigation Lands: Sills, Bennett South, Lucich North, Lucich South, and Betts-Kismat-Silva. Thus, implementation of the NBHCP is resulting in creation of new habitat and preservation of existing populations.

The Draft NBHCP has been revised to clarify connectivity issues and maintenance of canals and drains. As described in Master Response 2 (Connectivity), TNBC will monitor snake populations and identify waterways that are important to maintaining connectivity among the Mitigation Lands. Following identification of important waterways, TNBC will regularly attempt to obtain information from the Water Agencies about any proposals potentially affecting these waterways. If changes to the canals are proposed that would require regulatory review or permitting, potential effects to giant garter snake and appropriate mitigation would be identified in the project-specific review. If no regulatory review is necessary but the proposal would potentially adversely affect connectivity among the Mitigation Lands, TNBC would seek to acquire an easement on a canal or purchase land containing a canal to maintain connectivity.

Response to Comment I5-17

As discussed in the Responses to Comments above and in Master Response 2 (Connectivity), the Draft NBHCP has been revised in response to comments on connectivity for giant garter snakes. As described in more detail in those responses, TNBC will monitor

snake populations and identify waterways that are important to maintaining connectivity among the Mitigation Lands. Following identification of important waterways, TNBC will regularly attempt to obtain information from the Water Agencies about any proposals potentially affecting these waterways. If changes to the canals are proposed that would require regulatory review or permitting, potential effects to giant garter snake and appropriate mitigation would be identified in the project-specific review. If no regulatory review is necessary but the proposal would potentially adversely affect connectivity among the Mitigation Lands, TNBC would seek to acquire an easement on a canal to maintain connectivity.

The commentor specifically identifies the southern portion of the Natomas Basin as an area where adequate connectivity might not persist because of Planned Development. The NBHCP's objective with respect to connectivity is to ensure that Covered Species can move among TNBC's reserves. The reserves will largely, if not entirely, be located outside of areas of Planned Development such that canals and drains outside of areas of these areas likely will be the primary canals and drains providing aquatic connections among the Mitigation Lands.

Lastly, the commentor states that the NBHCP should include measures to address habitat quality in the canals and drains. The Water Agencies maintain the canals and drains in the Natomas Basin. The Water Agencies currently conduct various operation and maintenance activities on the canal and drain system and have done so for many decades. The Water Agencies are expected to continue current operation and maintenance practices. Given the persistence of giant garter snakes in the Basin, it would appear that the operation and maintenance activities are compatible with giant garter snakes. Further, in Comment I5-16, the commentor states "Canals, more than rice, are responsible for sustaining permanent populations of giant garter snakes." Given that snakes currently inhabit the canals and drains, continuation of existing operation and maintenance practices by the Water Agencies can reasonably be expected to perpetuate existing conditions for snakes in the canals and drains. If the Water Agencies propose changes to a canal or drain that would adversely affect a key connectivity corridor, the Final NBHCP contains a mechanism to ensure maintenance of connectivity among the reserves.

Response to Comment I5-18

The NBHCP and EIR/EIS anticipate and evaluate the loss of giant garter snake habitat from 17,500 acres of Planned Development. BRD's observations noted by the commentor applied to fallowing lands located in the area of Planned Development.

Response to Comment I5-19

The commentor references a recommendation from Hansen and Brode (1992) to provide buffers of at least 100 feet between giant garter snake habitat and urban areas, and suggests that the NBHCP should require establishment of buffers along canals and drains. Most of the canals and drains in the Natomas Basin are privately owned; a few are owned by the Water Agencies. For canals that are privately owned, the Water Agencies have an easement with the landowner that allows access for operation and maintenance activities. The widths of the easements vary, but provide some buffering from adjacent land uses without the NBHCP specifically requiring it.

In agricultural areas, the canals and drains will be more than 100 feet from Planned Development. In the Permit Areas, however, the distance between the canal or drain and Planned Development could be less than 100 feet. Within urban areas, the main use of canals and drains by snakes is intended to be as a transit corridor among reserves rather than as core habitat. Despite nearby development, some canals and drains in urban areas would be expected to continue to serve this function.

The commentor states that the NBHCP does not include acquisition of canals and drains as potential mitigation. In response to comments on connectivity, the NBHCP has been revised to allow acquisition of easements or purchase of land along canals if necessary to preserve connectivity among Mitigation Lands in the event that the Water Agencies propose a change that would adversely affect a canal or drain determined to be important for maintaining connectivity (see Master Response 2 [Connectivity]). In addition, many canals and drains are privately owned and could be acquired by TNBC incidentally in connection with acquisition of Mitigation Lands.

Response to Comment I5-20

The commentor reiterates concerns regarding the mitigation ratio, connectivity, and preservation of areas occupied by giant garter snakes. These concerns were addressed in responses to the specific comments.

The commentor then expresses an opinion on the relative merits of the five alternatives included in the EIR/EIS. Comment noted.

Response to Comment I5-21

The commentor has provided clarifications on the taxonomy of the giant garter snake that has been incorporated into Section II.C.2.a of the NBHCP. See the Final NBHCP for specific text changes.

Response to Comment I5-22

References to this species on pages II-32 and VII-41 of the Draft NBHCP have been revised to the correct name of *Scaphiopus hammondi*. See the Final NBHCP for specific text changes.

Letter I6—Daniel B. Hardy

Response to Comment I6-1

Please see Master Response 1 (Mitigation Ratio) that presents the reasons that a 0.5:1 mitigation ratio is appropriate for the NBHCP, including discussion about mitigation ratios in other HCPs.

Response to Comment I6-2

The commentor's opinion is noted. The purpose of allowing out-of-Basin reserves in Area B is to provide another option for acquiring Mitigation Lands. Acquisitions in Area B could help maintain the feasibility of establishing Mitigation Lands by allowing acquisition of potentially lower-cost land, but must be shown to benefit the Covered Species. Section IV.C.2 of the NBHCP provides that acquisition of Mitigation Lands in Area B should not occur where potential Mitigation Lands are available with the Basin and can be feasibly acquired (see p. IV-12 - 13 of the Draft NBHCP). The term "can be feasibly acquired" as used in the NBHCP will be based upon a comparison of land prices in the Basin with those from neighboring areas. This comparison would need to demonstrate that the costs of acquiring the Mitigation Lands within the Natomas Basin would substantially exceed the costs of acquiring Mitigation Lands in Area B. It is important that this opportunity be maintained because there could be occasions in which Mitigation Lands cannot be feasibly acquired within the Natomas Basin.

It should be noted that the revised NBHCP provides less flexibility in providing out-of-Basin mitigation than the 1997 NBHCP. In addition to the Area B allowance, the 1997 HCP allowed up to 30 percent of the habitat reserves to be acquired within 50 miles of the Natomas Basin (Area C). The revised NBHCP is more restrictive by eliminating the Area C allowance.

Letter I7—Burton H. Lauppe

Response to Comment I7-1

The commentor correctly notes that urban development results in the loss of habitat in the Basin. The City and Sutter County are the land use agencies seeking incidental take permits, not Sacramento County. The County Planners do not approve urbanization. In the case of the City of Sacramento, the City Council approves urbanization, and in the case of Sutter County, the Sutter County Board of Supervisors approves urbanization. As Plan Operator and a willing buyer, TNBC purchases land from willing sellers. The Mitigation Fee is established to ensure that adequate fees are collected to buy land at the willing seller's price. Mitigation Lands purchased by TNBC do not generally have land use designations or zoning that allow urbanization and are generally designated and zoned for agriculture. The economic analyses are based on actual land prices for undeveloped land within the Basin as further described in Appendix A of the NBHCP.

Letter I8—Frank McCormack

Response to Comment I8-1

Comment noted.

Letter I9—B. Chris McKenzie

Response to Comment I9-1

The commentor has correctly noted that the value of habitat varies from location to location within the Natomas Basin and that, in some cases, the habitat value of specific properties is currently limited. However, the NBHCP is a basinwide proposal that balances the total impacts resulting from 17,500 acres of Planned Development and that does not discriminate for properties of lesser or greater habitat value. Rather, the NBHCP considers the overall habitat impacts of loss of open space or agricultural lands through conversion to Planned Development and assigns a mitigation ratio of 0.5:1 for all lands within the Permit Areas. Some lands with known species occurrences or higher habitat values are also required to employ site-specific mitigation measures including (in the case of vernal pools, VELB, and some other species) additional compensation. All proponents of Planned Development benefit from the certainty of mitigation to be required and the expedited process for approval of Planned Development as compared to conducting individual consultations with the Wildlife Agencies.

The commentor also correctly notes that similar areas in Placer County and adjacent portions of Sutter County are not subject to similar mitigation requirements. The need for the NBHCP is based in part on the U.S. Army Corps of Engineers' flood control improvements that protect the Basin from flooding and thereby allow Planned Development to occur, as well as the unique importance of the Natomas Basin to the giant garter snake and the Swainson's hawk. The Basin is of particular significance to the giant garter snake as a distinct population of this state and federally listed threatened species exists within the Natomas Basin.

Response to Comment I9-2

The NBHCP allows developers to dedicate land or conservation easements to TNBC in lieu of paying the land acquisition portion of the Mitigation Fee. Such land dedications are, however, subject to conformance with NBHCP acquisition guidelines and approval by TNBC. With regard to the issue of "dramatically differing mitigation fees," one of the benefits of the NBHCP is to provide a standard Mitigation Fee that is applied to all development within the Basin. The Mitigation Fee will only vary over time as costs for acquiring, improving and managing Mitigation Lands vary over time (Section VI.B.2 of the NBHCP).

Response to Comment I9-3

The commentor correctly notes that approximately one-half of the Mitigation Lands are currently anticipated to be in rice and farmed under contracts between TNBC and rice growers. Revenues from such contracts are an integral component of the fee structure that reduces the need for higher Mitigation Fees from developers. As previously noted, farmers may negotiate with TNBC to sell conservation easements on their land and then retain the ability to farm subject to appropriate management practices as established under the NBHCP. The process for selecting farmers to cultivate rice on the Mitigation Lands will be

determined by the TNBC Board based on the financial benefits to TNBC and the ability to meet the conservation objectives of the NBHCP.

Response to Comment I9-4

Section IV.C.1.c of the NBHCP establishes the requirement for buffers within Mitigation Lands to minimize the effects of habitat reserves on adjacent land uses. Further, the NBHCP requires Mitigation Lands to be consolidated into individual reserves of not less than 400 acres in size and at least one reserve of not less than 2,500 acres in size. By consolidating the Mitigation Lands, impacts on adjacent lands will be minimized.

Response to Comment I9-5

The emphasis on rice and managed marsh within the Mitigation Lands results from the significance of the Natomas Basin to the giant garter snake, listed as Threatened by both of the Wildlife Agencies, as well as the Covered Species that benefit from this type of habitat. The NBHCP does not address the habitat needs of quail and pheasant because neither of these species is a state or federal protected species, and because neither is included in the NBHCP as a Covered Species.

Response to Comment I9-6

The NBHCP process has included numerous opportunities for farmer landowners to provide comments and suggestions. The revised NBHCP builds substantially upon the 1997 NBHCP. That document, while ultimately adopted by only the City, was generated through more than six years of dialogues involving environmental organizations, developer interests, local property owners, land use agencies, and wildlife agencies. The revised NBHCP process included numerous opportunities to comment on both the NBHCP and the EIR/EIS.

Response to Comment I9-7

Issuing Incidental Take Permits for 22 Covered Species is expected to streamline the entitlement process for Planned Development within the Natomas Basin. However, by consolidating development, limiting the City and Sutter County's overall development within the Basin, and preserving substantial tracts of land in rice cultivation, the NBHCP will benefit both wildlife species and agricultural interests within the Basin. Without such a plan, development would be more haphazard and less consolidated, and no mechanism for long-term preservation of habitat and agriculture, such as provided by the Mitigation Lands, would exist within the Basin.

Response to Comment I9-8

Comments provided on the Draft NBHCP and the Draft EIR/EIS have been considered and changes incorporated into the documents as determined appropriate (see Sections 2.1 and 2.2 of this Final EIR/EIS and the Final NBHCP for specific text changes). All parties commenting on the NBHCP will receive notification when the Final EIR/EIS is completed and the NBHCP has been revised. Additional opportunities for public comment include a schedule for action by the Sutter County Board of Supervisors and the City Council of the City of Sacramento to adopt the NBHCP. Meetings will be open to the public. Following *Federal Register* publication of the EIS, a 30-day cooling-off period will occur.

Letter I10—Jud Monroe and Dean Carrier

Response to Comment I10-1

Comment noted. Please refer to the individual responses below, and to Master Response 3 (Joint Vision) and Master Response 4 (Cumulative Impacts).

Response to Comment I10-2

The cumulative impacts analysis is adequate for the reasons presented in Master Response 4 (Cumulative Impacts). Also see the remaining responses to this comment letter.

Response to Comment I10-3

The Proposed Action assessed in the Draft EIR/EIS addresses urban development of 17,500 acres. This comment is a general introductory conclusion that is addressed in the remaining responses to this comment letter. For responses relevant to cumulative impacts, also see Master Response 4 (Cumulative Impacts).

Response to Comment I10-4

As discussed in Master Response 4 (Cumulative Impacts), the criteria cited in the EIR/EIS are in conformance with and based upon the criteria provided in the CEQA Guidelines and in NEPA for identifying cumulative actions. The commentor correctly quotes NEPA regarding cumulative impacts but does not provide additional quotes from CEQA Guidelines relevant to the EIR/EIS approach to cumulative impacts (see discussion of CEQA in Master Response 4 [Cumulative Impacts]). The cumulative impacts analysis was conducted in accordance with CEQA and NEPA as explained in Master Response 4 (Cumulative Impacts).

Response to Comment I10-5

As discussed in Response to Comment I10-4 and Master Response 4 (Cumulative Impacts), the EIR/EIS defines cumulative actions in accordance with NEPA and CEQA. The Lead Agencies have determined that the Joint Vision is speculative and therefore not a reasonably foreseeable future action. See Master Responses 3 (Joint Vision) and 4 (Cumulative Impacts).

Response to Comment I10-6

It would be speculative to assume the level of development indicated by the commentor would occur in excess of 17,500 acres for the reasons presented in Master Response 3 (Joint Vision). As discussed in Response to Comment I10-5, speculative actions do not require consideration in the cumulative impacts analysis. Also see Master Response 3 (Joint Vision) and Master Response 4 (Cumulative Impacts).

Response to Comment I10-7

Any future unknown development actions would require independent environmental review under applicable environmental guidelines and regulations. As discussed in the EIR/EIS (Section 4.1.2.3),

Several other long-term projects have the potential to occur in the Natomas Basin at some unidentified future date. These projects, if they occur, would not be included in the 17,500 acres of planned development evaluated as part of the Proposed Action unless the HCP is amended and the ITPs amended, or a new conservation strategy is developed for that additional development. Data sufficient to conduct a detailed assessment of the cumulative impacts in this EIR/EIS are not currently available because the environmental review process for these actions has not been initiated, existing environmental review is limited and does not provide sufficient detail to assess impacts, or applications for the actions have not been filed. If and when these proposals become projects subject to environmental review, separate compliance under CEQA, NEPA, CESA, and ESA (including its take provisions) will be conducted, where applicable.

Because of the speculative nature of development in excess of 17,500 acres (see Master Response 3 [Joint Vision]), it is infeasible to determine at this time “consistent guidelines” for mitigating the impacts of future development, as suggested in the comment, because the level of effects of such development are unknown.

Response to Comment I10-8

The NBHCP addresses impacts relevant to the Covered Activities, including the 17,500 acres of Planned Development in the City and Sutter County. The Wildlife Agencies cannot impose mitigation measures on future unknown development by projects that have yet to be initiated in the Basin. See Master Responses 3 (Joint Vision) and 4 (Cumulative Impacts).

Response to Comment I10-9

See Master Responses 3 (Joint Vision) and 4 (Cumulative Impacts).

Response to Comment I10-10

This statement in the Definitions section is included to confirm that the NBHCP was prepared to address the effects of the Covered Activities, including Planned Development of up to 17,500 acres. See Master Responses 3 (Joint Vision) and 4 (Cumulative Impacts).

Response to Comment I10-11

See Master Responses 3 (Joint Vision) and 4 (Cumulative Impacts).

Response to Comment I10-12

The quoted section of the NBHCP is included to provide a mechanism for other parties to join the NBHCP through an amendment process that entails detailed and specific environmental review and permit issuance prior to any action being conducted. Such action does not specifically relate to other development, and should not be interpreted as any

approval or contemplation of development in excess of 17,500 acres. See Responses to Comments I10-10 and I10-11. See Master Responses 3 (Joint Vision) and 4 (Cumulative Impacts).

Response to Comment I10-13

The NBHCP and the Draft EIR/EIS indicate the potential for other future unidentified development projects to be proposed in Natomas Basin outside of the Permit Areas and within the unincorporated areas of Sacramento County. For example, pages I-5 - I-6 of the NBHCP explain that development on lands proposed in the future for annexation into the City would constitute a departure from the NBHCP conservation strategy and would trigger a reevaluation of the Plan, potential amendments and/or revisions to the Plan and Permits, and possible suspension or revocation of the permits in the event such reevaluations, amendment and/or revisions did not occur. Similarly, on pages 4-7 - 4-9, the Draft EIR/EIS identifies potential long-term projects that may occur in the Basin at some unidentified future date. While the NBHCP and EIR/EIS identify these potential future development efforts, data sufficient to conduct a detailed assessment of cumulative impacts attributable to such future development efforts currently are not available. Consistent with the NBHCP, the EIR/EIS explains that any future specific proposals related to annexation and development of additional lands beyond the 17,500 acres of Planned Development in the Basin would be subject to future planning efforts, technical analyses, CEQA review, and local approvals. Moreover, any lands proposed for development would trigger a new effects analysis and/or reevaluation of the NBHCP as described under the NBHCP (see Response to Comment I10-7 and Master Responses 3 [Joint Vision] and 4 [Cumulative Impacts]).

Response to Comment I10-14

It is important to note the distinction between acknowledging in the NBHCP that additional permittees may seek to join the NBHCP at some future time and the potential for these actions to actually occur. The NBHCP is a regional conservation plan for the Natomas Basin. As such, Sacramento County was invited to participate in the NBHCP. Although the County declined participation in the NBHCP at this time for unincorporated areas other than the Metro Air Park project, the NBHCP identifies Sacramento County as a “Potential Permittee” in the event the County considers new projects for which it will require incidental take authorization. Section I.B.5.a of the NBHCP describes the process for the County if it considers new projects within the unincorporated portions of the Basin (see p. I-11 of the Draft NBHCP). At the time the Draft NBHCP and EIR/EIS were released for public comment, information regarding other County projects was limited to the information contained on pages 4-8 -4-9 of the Draft EIR/EIS. While the potential exists for expansion of the airport and continued attempts by developers to seek entitlements for projects outside of the County’s Urban Services Boundary and the City’s Sphere of Influence, insufficient information was available to conduct a detailed evaluation of the environmental effects of such development. Consequently, as the NBHCP and Draft EIR/EIS explain, County participation in the NBHCP will require an amendment to the NBHCP or a new conservation strategy, and future development projects will be required to undergo planning, technical studies and further environmental review prior to approval.

With respect to take coverage for agricultural activities, pages I-11 - I-12 of the Draft NBHCP clarified that Natomas Basin farmers are not considered Permittees because they are not

participating in the NBHCP. It is possible that in the future agricultural interests could seek incidental take authorizations for ongoing agricultural activities either in reliance on the NBHCP or by preparing a separate HCP application specific to such activities. The NBHCP and EIR/EIS, as well as the supporting effects analyses, take into consideration the ongoing agricultural activities occurring in the Basin. Also see Master Responses 3 (Cumulative Impacts) and 4 (Joint Vision).

Response to Comment I10-15

Consistent with ESA guidance regarding HCP preparation, the NBHCP and related incidental take permits cover the take resulting from the underlying Authorized Development. That is, the NBHCP and take permits do not authorize development projects themselves; the NBHCP and take permits authorize the take resulting from development in the Basin which the local land use agencies previously approved. As further explained in Master Responses 3 (Joint Vision) and 4 (Cumulative Impacts), development of only up to 17,500 acres have been authorized in the Natomas Basin. As such, the NBHCP and associated Incidental Take Permits only cover the incidental take associated with 17,500 acres of development.

Details regarding other development efforts referenced by the commentor and suggestions that development beyond 17,500 acres may occur remain speculative at this time. The commentor is referred to Master Response 3 (Joint Vision) and Master Response 4 (Cumulative Impacts) for a discussion of the potential for other development to occur in the Basin.

Response to Comment I10-16

The discussion on page 1-17 acknowledges the potential for agricultural uses to be replaced with a combination of urban and agricultural uses over the life of the 50-year permits. However, the effectiveness of the NBHCP conservation strategy in mitigating for the effects due to incidental take associated with 17,500 acres of development is based on the assumption that the NBHCP only covers 17,500 acres of development. Additional development occurring in the Natomas Basin beyond 17,500 acres and/or outside the City and Sutter County's Permit Areas would trigger a new or amended conservation strategy as described in Master Responses 3 (Joint Vision) and 4 (Cumulative Impacts), and as further described in the Responses to Comments I10-7 and I10-17.

Response to Comment I10-17

The commentor is referred to the Master Responses 3 (Joint Vision) and 4 (Cumulative Impacts). The NBHCP consistently indicates that any development beyond 17,500 acres or outside the City's and Sutter County's Permit Areas would constitute a significant departure from the Plan's Operating Conservation Program and would trigger a reevaluation of the Plan, potential amendments and/or revisions to the Plan and Permits, a new conservation strategy for that development, and possible suspension or revocation of the City or Sutter County's Permits, as may be appropriate, if the City or Sutter County were to violate such limitations without completing such reevaluation, amendment, or revision. These requirements apply whether the City or Sutter County consider additional development beyond 17,500 acres, or whether Sacramento County development is

proposed. Further clarifications to the text in Chapter I of the NBHCP and Chapter 4 of the EIR/EIS are proposed to clarify consistently the necessary requirements in order for additional development to proceed beyond the 17,500 acres. See the Final EIR/EIS for text edits to the NBHCP, and Section 2.1 of this Final EIR/EIS for text edits to the EIR/EIS.

Response to Comment I10-18

The cumulative impacts analysis is based on evaluation of projects that meet the CEQ Regulations (NEPA) and the CEQA guidelines. As discussed in Master Response 4 (Cumulative Impacts), the threshold criteria for consideration of a project in cumulative analysis is based on these guidelines and regulations.

The EIR/EIS does not evaluate only the conservation strategy discussed in the NBHCP. Numerous sections of the EIR/EIS, including Chapters 1, 2, and 4 and Appendix C, discuss the underlying Planned Development of 17,500 acres. See the other responses to this Comment Letter and Master Response 4 (Cumulative Impacts).

Response to Comment I10-19

The commentor is referred to Master Responses 3 (Joint Vision) and 4 (Cumulative Impacts) for an overall response on Cumulative and Joint Vision issues. Additionally, the commentor is referred to Response to Comment O1-23.

The commentor states that, even without specific plans for development, development will occur within the approximately 25,000-acre area between the City and Sutter County as the direct result of the activities permitted under the NBHCP. The commentor suggests that industrial and commercial development would result in significant job creation, which in turn would mean that the Joint Vision “will probably focus development east of Lone Tree Road, [and] it is entirely reasonable to assume that there will be housing developed in the area between Lone Tree Road and the eastern boundary of the Natomas Basin to house workers at the MAP Project facilities and Sutter ICR.” The commentor fails to provide any evidence for this assertion. In fact, the area referenced in the commentor’s letter is outside the City’s existing SOI and County Urban Service Boundary and, as such, development is prohibited in this area under adopted plans and policies. If this area were considered for development, future planning and environmental analyses must be conducted to determine whether or not the City’s SOI should be expanded in this location.

In addition to the prohibitions on development in this area in accordance with the planning documents described above, any potential land use planning decisions would not be a direct result of the NBHCP. The City, Sacramento County, and Sutter County previously decided to allow only 17,500 acres of development in the Natomas Basin, and this precipitated the need for significant flood control improvements, which in turn resulted in the requirement to prepare the NBHCP. The NBHCP does not assume that the unincorporated area of Sacramento County will be developed because there are land use plans and policies in place which prohibit the development of this area until such unknown time as a comprehensive annexation program is adopted. Rather, as stated above in the Response to Comment O1-23, the NBHCP states that *if* future urban development were to occur, it would constitute a significant departure from the Plan’s Operating Conservation Program and would trigger a

reevaluation of the Plan, potential amendments and/or revisions to the Plan and Permits, and possible suspension or revocation of the City's Permits.

While the North Natomas Community Plan describes the mix of land uses acceptable within the North Natomas portion of the NBHCP, this plan does not speculate on the type and extent of development that could occur if the City's SOI were to be expanded to some unknown location within Northwestern Sacramento County. The mix of land uses could differ from those approved as part of the North Natomas Community Plan because the Joint Vision MOU would establish certain land use planning and open space principles that would need to be considered in planning this area, and the existing land use constraints and opportunities differ from those in the North Natomas area.

Response to Comment I10-20

The EIR/EIS states that development could be proposed at some future date and that additional and separate environmental and permitting review would be required before that could occur. In addition, as noted below in Response to Comment O10-21, the EIR/EIS acknowledges in Section 4.1.2 that future development beyond 17,500 acres would be likely to result in impacts (including take to the Covered Species) beyond the levels discussed in the NBHCP and EIR/EIS. This would trigger a reevaluation of the Plan, potential amendments and/or revisions to the Plan and Permits, a separate HCP, and/or possible suspension or revocation of the City's Permits. See Responses to Comments I10-1 through I10-19, as well as Master Responses 3 (Joint Vision) and 4 (Cumulative Impacts).

Response to Comment I10-21

The EIR/EIS evaluates cumulative impacts of past, present and reasonably foreseeable development as described in Section 4.1.2. The commentor is referred to the Response to Comment I10-7, I10, 17, and I10-19 and Master Responses 3 (Joint Vision) and 4 (Cumulative Impacts) for a discussion regarding the treatment of cumulative impacts in the NBHCP and EIR/EIS.

The EIR/EIS acknowledges in Section 4.1.2 that future development beyond 17,500 acres likely would result in impacts, including take, to the Covered Species beyond the levels discussed in the Plan and EIR/EIS, and would trigger a reevaluation of the Plan, potential amendments and/or revisions to the Plan and Permits, a separate HCP, and/or possible suspension or revocation of the City's Permits. Similarly, page VII-61 of the NBHCP states that if farming were to cease and an excessive proportion of the Basin were to be urbanized, resulting in extensive losses of rice lands and other snake habitats, the giant garter snake population might decline to the point of extirpation. While the NBHCP and EIR/EIS recognize that development could occur in the Natomas Basin outside of the Permit Area, at this time, as well as when the draft documents were released for public review, sufficient information for the Lead Agencies to be able to conduct a complete review of the potential effects that could occur if such development were to proceed was and remains unavailable.

With respect to the NBHCP's biological goals and objectives, extensive technical analyses and environmental review demonstrate that the NBHCP conservation strategy would remain effective for a total of 17,500 acres of Planned Development if the baseline conditions (i.e., 3,854 acres of existing urban development and approximately 29,000 acres of non-urban

development) do not undergo significant land use changes. Because the effects of further development in the Basin are unknown, the NBHCP requires that additional planning, environmental review and technical analyses be conducted if additional development is proposed in order to determine the effect of such development on the effectiveness of the NBHCP.

The NBHCP and EIR/EIS describe the potential cumulative impacts due to development of up to 21,354 acres of past, present and reasonably foreseeable development in the Basin. As the Tech Memo and EIR/EIS describe, the NBHCP conservation strategy will be effective in mitigating the effects of incidental take associated with development up to 21,354 acres. This analysis took into consideration how development of up to 23,000 acres would affect the proposed conservation strategy's ability to comply with the NBHCP biological goals and objectives. As part of the Joint Vision process, the City, Sacramento County, and Wildlife Agencies will evaluate the effects of any additional urban development in the Basin on the NBHCP's conservation strategy in terms of the NBHCP's ability to continue to meet the biological goals and objectives articulated on pages I-14 - I-16 of the Draft NBHCP. Because information regarding the type, location, amount and extent of any further development in the Basin is unknown, the Lead Agencies are unable to ascertain how such future development would affect the biological goals and objects referenced by the commentor.

Response to Comment I10-22

The commentor is referred to the Response to Comment I10-19 and Master Responses 3 (Joint Vision) and 4 (Cumulative Impacts) for a discussion regarding the treatment of cumulative impacts in the NBHCP and EIR/EIS.

Section 9 of the federal ESA prohibits the take of a species. It does not, as noted in the comment, state that "take" must result in the death of an individual of a species, nor does the USFWS's definition of "harm" in the definition of "take" require death of an individual of a species. The definition of harm in 50 C.F.R. 17.3 is "an act which actually kills or injures wildlife." Such an act may include significant habitat modification or degradation that actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering. That definition was upheld by the United States Supreme Court in *Sweet Home Chapter of Communities for a Great Oregon v. Babbitt*, 1 F.3d 1 (D.C. Cir. 1993), *rev'd on other grounds*, 515 U.S. 687 (1995). We disagree with the commentor's unsupported assertion that development beyond 17,500 acres in the Natomas Basin would be unlikely to result in take of the giant garter snake and other Covered Species that rely on that habitat for various life cycle needs. For example, if the proposed ITPs are approved most of the lands remaining outside of the proposed Permit Areas will be potential snake habitat (see NBHCP, Figures 9-11), especially north and east of the airport. Most of the lands outside of the proposed Permit Areas are cultivated rice fields, which are suitable habitat for the snake. In addition, the snake has been observed throughout the Basin (based on NBHCP Figure 12 and USFWS records) and is likely located throughout the areas not included as Planned Development. Those lands that are not suitable snake habitat are likely used by the Swainson's hawk for foraging habitat. Additionally, any future development that might not directly affect Covered Species will likely indirectly affect Covered Species. For example, residential development would likely lead to predation on Covered Species by domestic animals, especially cats. Other indirect effects would likely

occur. Although the development may occur on lands not inhabited by Covered Species (which is unlikely, given the extensive use of the Basin by Covered Species), it would likely indirectly affect surrounding lands. Clearly, future development will likely result in direct and indirect effects to Covered Species. The NBHCP acknowledges that future development beyond 17,500 acres likely would result in impacts, including take, to the Covered Species beyond the levels discussed in the plan and EIR/EIS, and would trigger a reevaluation of the Plan, potential amendments and/or revisions to the Plan and Permits, a separate HCP, and possible suspension or revocation of the City's Permits.

Response to Comment I10-23

The commentor suggests that the failure of the EIR/EIS to address cumulative impacts of development may also affect future implementation of the NBHCP commitments. The commentor believes that these future cumulative impacts should be addressed in the NBHCP EIR/EIS. The commentor also believes that the No Surprises Policy prohibits the reevaluation of permit requirements and limits the USFWS's ability to seek additional mitigation beyond the mitigation included in the NBHCP.

The commentor is referred to Master Responses 3 (Joint Vision) and 4 (Cumulative Impacts). Also see Responses to Comments O1-23 and I10-17 and the associated text revisions clarifying the NBHCP and EIR/EIS treatment of cumulative impacts. Both the NBHCP and EIR/EIS describe the potential for future development to be proposed within the Basin. Both the NBHCP and Draft EIR/EIS state that future annexation proposals and related development of lands outside of the 17,500-acre Permit Areas may contribute to cumulative impacts to the resources within the Natomas Basin (see NBHCP, p. I-5 - I-6; Draft EIR/EIS, p. 4-8). Because specific development projects have not been proposed and land use planning efforts, technical analyses, and environmental review efforts have not commenced, insufficient information is available to determine the types of effects that could occur. Consequently, the NBHCP and Draft EIR/EIS explained that any future annexation proposals and/or development proposals are subject to further planning efforts, technical analyses, CEQA review, and local approvals, as well as any applicable state and federal permitting requirements. As both the NBHCP and Draft EIR/EIS conclude, the NBHCP conservation strategy is effective in mitigating for cumulative development of up to 17,500 acres, and it is not designed to mitigate for any effects of incidental take beyond 17,500 acres.

The USFWS No Surprises Rule provides, in part, that “[a]dditional conservation and mitigation measures will not involve the commitment of additional land, water or financial compensation or restrictions on the use of land, water, or other natural resources otherwise available for development or use under the original terms of the conservation plan, without the consent of the Permittee” (50 C.F.R. § 17.22(b)(5)(iii) and 17.32(b)(5)(iii)). Although the commentor is correct in noting that the No Surprises Rule limits changes in the amount of land or funding required, there is no mention in the comment of the fact that the Rule limits such changes to those in excess of the commitments provided for in the operating conservation program. Modification to the NBHCP beyond the scope of changes defined in the NBHCP is prohibited under the No Surprises Rule without the consent of the Permittees. Changes to the NBHCP that are within the parameters set forth in Chapter VI of

the NBHCP, however, are part of the NBHCP's Operating Conservation Program, and thus are not in addressed under the No Surprises Rule.

The NBHCP takes into consideration changes in response to Adaptive Management. One of the changes that could trigger adjustments through Adaptive Management would be significant land use changes outside of the reserve system (see NBHCP Section VI.F.1, p. VI-22 as revised in the Final NBHCP and Final EIR/EIS). Thus, a substantial change from undeveloped lands to developed urban lands outside of a reserve site would be the type of land use change that the NBHCP would respond to through the Adaptive Management process. Although no changes to the NBHCP will be required through the Adaptive Management process that result in an increase in the amount of land required as mitigation, sufficient funding must be made available to fund the costs associated with revisions to the NBHCP resulting from the Adaptive Management program. Thus, through the Adaptive Management program, the Permittees will be responsible for funding and adjusting reserve practices as necessary in response to significant changes in land use conditions outside of a reserve site.

Moreover, the NBHCP states that further development outside of the Permit Areas and/or beyond 17,500 acres of development would constitute a significant departure from the Plan's Operating Conservation Program and would trigger a new effects analysis, potential amendments and/or revisions to the Plan and Permits, a separate conservation strategy and issuance incidental take permits for that additional development, or potential revocation or suspension of the City or Sutter County's Permit, as may be appropriate (see e.g., NBHCP, p. I-5). In this regard, Permittees or Potential Permittees proposing such additional development would be responsible for funding and implementing any mitigation requirements necessary to offset the effects associated with incidental take due to that additional development. Such mitigation requirements may include mitigation necessary to offset any adverse individual or cumulative effects on the effectiveness of the NBHCP's conservation strategy. By acknowledging the possibility of future development and defining a process to address the effects of future development either through the NBHCP Adaptive Management and/or an amended or separate conservation strategy, the USFWS has not concluded that development in the Basin beyond 17,500 acres or outside of the Permit Areas is "unforeseen" or an "extraordinary circumstance."

For the reasons stated in Section 1.3 of the Final EIR/EIS, the Lead Agencies have concluded that the EIR/EIS is not subject to recirculation. Contrary to the commentor's assertion, the EIR/EIS did not omit any discussion of cumulative impacts, nor did it conclude that such future unknown impacts would be insignificant. That is, the Draft EIR/EIS evaluated the impacts associated with development of a total of 17,500 acres of urban development in the Basin, based on past, present, and reasonably foreseeable development. Sufficient information is not available to evaluate the specific cumulative impacts of possible development beyond 17,500 acres. Nonetheless, the Draft EIR/EIS stated that future development could contribute to cumulative impacts to the resources within the Natomas Basin (see Draft NBHCP, p. I-5 - I-6; Draft EIR/EIS, p. 4-8). At this time, the type and extent of such cumulative impacts is speculative because the amount, extent, and location of any further development in the Basin is unknown. While it is anticipated that development in the Basin may be proposed, insufficient information is available regarding actual specific development proposals, impacts associated with such development, or the extent of any

mitigation requirements associated with future development efforts. Consequently, the Draft EIR/EIS does not conclude that cumulative impacts are insignificant; rather, the Draft EIR/EIS states that any further development in the Basin must conduct further planning and environmental analyses and develop a separate conservation strategy or amend the NBHCP conservation strategy to accommodate any such additional development.

Response to Comment I10-24

The commentor is referred to Master Responses 3 (Joint Vision) and 4 (Cumulative Impacts), and to the Response to Comment I10-17 above regarding the purported inconsistencies between the NBHCP and the EIR/EIS.

Consistent with the commentor's request and as further explained in Master Response 4 (Cumulative Impacts), the EIR/EIS identified and analyzed the cumulative impacts of past, present, and foreseeable future development, and the NBHCP conservation strategy has been developed to provide adequate mitigation for these effects (see Chapter 4 of the EIR/EIS, the Biological Resources Technical Memo, and Chapter VII of the NBHCP). With respect to development that exceeds 17,500 acres, however, it is not the USFWS's responsibility to calculate the level and type of development that could in the future be considered by the City, Sacramento County, or Sutter County. In addition, neither the City, Sutter County, nor Sacramento County has approved any additional development that exceeds the 17,500 acres in the Basin. If this were to occur, it would necessitate that the City, Sutter County, and Sacramento County revise the NBHCP to seek take authorizations for additional urban development. The commentor is referred to Master Response 4 (Cumulative Impacts) regarding the difficulties in evaluating possible future airport expansion and light rail, and residential and commercial development east of Lone Tree Road.

It is acknowledged that certain benefits may be associated with establishing consistent mitigation standards for incidental take associated with development within the Natomas Basin as explained on page 3-14 of the HCP Handbook and as referenced in Comment I10-24. Consistent with the HCP Handbook, the consistent mitigation standards proposed under the NBHCP have been determined to be effective in mitigating up to 17,500 acres of development within the Permit Areas, as this development has been planned for more than a decade and identified in adopted City and Sutter County General Plans, community plans, and specific plans. By contrast, development beyond 17,500 acres is not contemplated in any adopted land use plans for the Basin. Thus, it is unknown whether the NBHCP will be effective in mitigating for development beyond 17,500 acres and outside the Permit Areas, because specific information regarding the nature, extent, amount and location of development remains unknown until the City, Sutter County, and Sacramento County complete further planning, technical analyses, and environmental review. Moreover, it is anticipated that further development in the Basin likely would be subject to a higher mitigation standard than the NBHCP because of the habitat that would be impacted, the presence of NBHCP Mitigation Lands, and other environmental constraints (e.g., flooding, etc.) which could necessitate additional mitigation. Consequently, the Permittees and Wildlife Agencies do not believe that applying the mitigation standards of the NBHCP to future development in the Joint Vision area or other areas outside the Permit Areas

necessarily will comply with ESA and CESA requirements or mitigate any future significant impacts to a less than significant level under NEPA and CEQA.

Letter I11—Perry Farms

Response to Comment I11-1

The biological justification for the 1-mile Swainson's Hawk Zone is that: (1) the majority of nesting trees are along the Sacramento River; and (2) although during migration Swainson's hawks fly to Central and South America, during fledging of young, the hawks require foraging habitat in close proximity to the nest. Woodbridge (1991, cited in England et al., 1997) found that reproductive success of Swainson's hawks declined as the distance they had to travel to forage increased. Thus, providing habitat near nest sites is important to maintaining reproductive success. One mile is used to define the area within close proximity to a nest.

In a review of Figure 13 of the NBHCP, the majority of nests are not in the northern part of Sacramento County. For clarification, Figure 13 of the NBHCP shows the Swainson's Hawk Zone incorrectly; the Zone does not encircle the Natomas Basin. The Swainson's Hawk Zone is located along the western side of the Natomas Basin, starting at the inward toe of the levee of the Sacramento River and eastward one mile. The Swainson's Hawk Zone goes south to Interstate 80. The Swainson's Hawk Zone does not include the portion south of I-80 because that area was urbanized prior to the 1997 NBHCP as well as the revised NBHCP. Figure 13 in the Final NBHCP has been corrected to include an accurate depiction of the Swainson's Hawk Zone. See also Figure 3-5 of the EIR/EIS.

Response to Comment I11-2

The commentor inquires what consideration was given to the Yolo Bypass in Yolo County in development of the Swainson's Hawk Zone. In response, page II-18 of the Draft NBHCP states:

The Sacramento River location affords the hawk relatively easy access to foraging uplands on either side of the river including substantial open space and reserve lands located in Yolo County. Relative to the Natomas Basin HCP area specifically, information indicates that nesting sites and foraging activity occur throughout the Basin (Estep, 2001), again depending on the presence of suitable trees in proximity to upland foraging areas. As such, part of the NBHCP Conservation Strategy is to both preserve to the extent practicable habitat within the Swainson's Hawk Zone adjacent to the Sacramento River and also to enhance and expand Swainson's hawk habitat through provision of suitable trees and groves in proximity to upland foraging reserves.

The primary reason for the designation of the Swainson's Hawk Zone is the concentration of active nest sites along the Sacramento River in the Natomas Basin. The NBHCP acknowledges that these nests are in proximity to the open areas and reserves in Yolo County; however, because those areas are outside of the NBHCP plan area, they are not counted as Mitigation Lands. Nevertheless, lands in Yolo County are recognized as contributing foraging habitat opportunities to Swainson's hawks nesting in the Natomas Basin.

Response to Comment I11-3

The 1997 NBHCP called for a 1-mile Swainson's Hawk Zone for the same purpose described in I11-1 so that foraging opportunities would be available for hawks in close proximity to nests while the fledglings are young (p. IV-26 of the 1997 NBHCP). The reference to hawks flying 18 miles to forage was found in the 1997 NBHCP but the reference to flying 10 miles was not.

With regard to development along Garden Highway, the NBHCP was prepared to address the effects of Planned Development, not mitigate effects of prior development. The nesting trees located along the river are by definition outside the Natomas Basin because they grow in the area between the river and the inward toe of the levee along the Sacramento River (the western boundary of the Basin).

Response to Comment I11-4

No requirements would be imposed on private farmers regarding the crops they could grow or the agricultural practices that they could employ. Rice provides limited foraging opportunities for hawks. Corn and safflower are not preferred for foraging because the tall plants impede access to prey and prey abundance is low (Estep, 1989). Wheat is used infrequently and predominantly during harvest operations (Estep, 1989). Additional responses relevant to the function and value of various crops as foraging for Swainson's hawks are in the responses to comment letters O1, O2, and O4, and in the Addendum to the Biological Resources Technical Memo (Appendix K of the Final NBHCP).

Response to Comment I11-5

The concept of the Swainson's Hawk Zone was developed over approximately the last 10 years in consideration of Planned Development in the City, Sutter County, and Metro Air Park. Given that time horizon, the site conditions supporting the Swainson's Hawk Zone are generally those that existed in the 1990s (and for the most part continue to exist today). These conditions are characterized by a high concentration of nesting birds along the Sacramento River with abundant foraging habitat directly to the east. In a regulatory context, development of the NBHCP is a result of the potential for the Covered Activities to result in take of Covered Species. "Take," although defined differently by the USFWS and CDFG, does not consider historical habitat conditions. The Applicants recognize that site conditions were different prior to the development of the levee system, but that does not obviate the need to evaluate the potential for take in the context of existing conditions.

Response to Comment I11-6

For clarification, the giant garter snake is listed as Threatened under both the ESA and CESA. The Swainson's hawk is listed (Threatened) only under CESA. For the reasons described in the above response, there is a biological basis for identifying a Swainson's Hawk Zone in the NBHCP (extensive foraging habitat adjacent to widely used nesting areas). Available information is not sufficient to specifically identify similarly important areas for giant garter snakes. Surveys for giant garter snakes have intensified in the Natomas Basin in the recent years but the entire Basin has not been comprehensively surveyed for giant garter snakes. Documented high concentrations of the giant garter snake are known from several areas (e.g., east side of Metro Air Park, east of S.R. 99 between

Elkhorn Boulevard and Elverta Road). These areas, however, were subject to extensive surveying by the USGS and others, and would be expected to show a high concentration of snakes relative to unsurveyed areas. It is widely believed that giant garter snakes inhabit most of the rice fields and canals/drains in the Natomas Basin, and all of those areas are potential habitat. Accordingly, the Applicants have not identified a primary zone for the giant garter snake.

Response to Comment I11-7

The commentor asks what authority exists to not allow any development in the Swainson's Hawk Zone. Under CESA, take of listed species is prohibited unless authorized through a Section 2081 incidental take permit issued by CDFG. To issue such a permit, CDFG must find that take of listed species is incidental to an otherwise lawful activity and that the authorized take shall be minimized and fully mitigated. Cal. Fish & Game § 2081(b). Similarly, inclusion of the Swainson's hawk as a Covered Species in a federal incidental take permit requires that the species be considered as "listed" and that take of Swainson's hawk to be minimized and mitigated to the maximum extent practicable--16 U.S.C. 1539(a)(2)(B)(ii). The NBHCP reflects that direct mortality or injury from Covered Activities is expected to be minimal; however, take is expected to indirectly occur through habitat alternation. The NBHCP employs multiple strategies to mitigate take that could occur from the removal of nest trees through (1) avoidance, which includes policies such as the Swainson's Hawk Zone, and (2) compensation, which includes policies related to nest tree planting and upland reserves.

The ESA and CESA are not land use regulation statutes; they regulate take of listed species. By contrast, the Land Use Agencies regulate land use to meet the requirements of the ESA and CESA. The NBHCP proposes to restrict development in the Swainson's Hawk Zone to meet, in part, the requirements of the ESA and CESA to avoid, minimize, and mitigate for the take of Swainson's hawk in the Swainson's Hawk Zone and the rest of the Natomas Basin that could result from Planned Development. The restrictions on development in the Swainson's Hawk Zone proposed by the City and Sutter County are within their respective police powers to regulate land use within their respective jurisdictions. Consequently, the City and Sutter County may lawfully restrict development within the Swainson's Hawk Zone.

The commentor is referred to Response to Comment I11-7 for a discussion of the authority regulating development in the hawk zone. Although the permittees are proposing avoidance, minimization, and mitigation measures to reduce the potential for incidental take of Swainson's hawk, development within a 252-acre portion of the Swainson's Hawk Zone located in the City's Permit Area could result in the potential for incidental take of individual Swainson's hawks as described on pages VII-11 to VII-18 of the Draft NBHCP. Similarly, the loss of foraging habitat in Sutter County could result the potential for incidental take of Swainson's hawks (see Draft NBHCP, pp. VII-11 to VII-18). As described in the NBHCP, take authorization by CDFG under CESA is governed by Section 2081 of the Fish and Game Code and regulations set forth in Title 14 of the California Code of Regulations, Section 783.0 *et seq.* Take authorization may be granted by CDFG only where certain conditions are met in accordance with CESA as described in the NBHCP (see e.g., Draft NBHCP, p. I-28). Consequently, the City is applying for a modification of its existing

Section 2081 permit and Sutter County is applying for a new Section 2081 permit in order to ensure that the Covered Activities within the City and Sutter County's Permit Areas receive incidental take authorization for the take of State-listed species.

Response to Comment I11-8

The Settlement Agreement did not establish the 1-mile-wide open space area along the Sacramento River. As noted below in the Response to Comment I11-9, the 1997 NBHCP designated the one-mile-wide Swainson's Hawk Zone. The Settlement Agreement provides that as part of the City's evaluation of areas that in the future may be included within a LAFCO-approved sphere of influence and ultimately annexed to the City, the City will confirm its interest in creating a 1-mile-wide Swainson's hawk open space corridor along the Sacramento River. The commentor is referred to Master Response 3 (Joint Vision). As stated in the NBHCP, the City and Sutter County, with a few exceptions, are committed to prohibiting any development in the Swainson's Hawk Zone, irrespective of whether or not this zone is formally designated as open space (see Section V.A.5.b.1 of the NBHCP).

Response to Comment I11-9

Neither the Applicants nor the Lead Agencies are aware of the source of information relied upon by the attorney for the Friends of the Swainson's Hawks for comments expressed in May 2001. It is possible that the Friends of the Swainson's Hawks could have relied upon the fact that the 1997 NBHCP previously designated a one-mile-wide Swainson's Hawk Zone.

The NBHCP was prepared by the City and Sutter County with the technical assistance of the Wildlife Agencies; however, until the plan was completed and submitted to the USFWS as part of the City's and Sutter County's applications for incidental take permits, its precise contents were not released to the public. USFWS released information regarding the NBHCP and the incidental take permit applications to the public through the public review and participation procedures established in the USFWS's ESA regulations contained in Title 50 of the Code of Federal Regulations, its NEPA regulations, and the federal Administrative Procedures Act. However, creation of a one-mile-wide Swainson's Hawk Zone was provided for in the 1997 NBHCP and addressed in the Settlement Agreement; therefore, it is not surprising that members of the public referred to it prior to release of the revised NBHCP.

Response to Comment I11-10

Neither the ESA nor CESA grant land use planning authority to the state or federal governments. The Supreme Court recently affirmed in the *Solid Waste Agency of N. Cook County v. U.S. Army Corps of Engineers et al.*, 121 S. Ct. 675, 684 (2001) ("SWANCC") decision that regulation of land use is a function performed by local land use agencies.

The Swainson's Hawk Zone is proposed by the Land Use Agencies to be protected under the NBHCP as part of the Operating Conservation Program for the protection of Swainson's hawks. The NBHCP does not designate critical habitat within the meaning of the ESA. The Swainson's hawk is not a federally listed endangered or threatened species. As such, the USFWS has not promulgated any regulations designating critical habitat for this species.

Response to Comment I11-11

See Response to Comment I11-10.

Response to Comment I11-12

The commentor correctly notes that the 1997 NBHCP was upheld in the Sacramento County Superior Court for purposes of the State's issuance of a Section 2081 Permit to the City. The 1997 NBHCP included a Swainson's Hawk Zone that was defined as a corridor beginning at the Sacramento River levee, extending eastward for one mile, and running from the intersection of the Sacramento River and Natomas Cross Canal in the north of the plan area to the intersection of the Sacramento River and the American River in the south (1997 NBHCP, p. IV-26). The revised NBHCP refines the Swainson's Hawk Zone to further clarify the relationship between this zone and the location of Planned Development.

The City's current 2081 Permit is based upon the 1997 NBHCP. The NBHCP was also submitted to the USFWS in support of the City's application for an incidental take permit under the ESA. In *National Wildlife Federation, et. al. v. Secretary of the Interior Bruce Babbitt*, the district court invalidated the City's federal incidental take permit. Since the NBHCP is being revised and updated, in part, to meet the requirements of the ESA as described in the NBHCP, the City is proposing to seek approval from CDFG to modify the existing 2081 Permit. The proposed modification is intended to update the City's 2081 Permit in order for the permit to reflect the revised terms of the NBHCP and the corresponding Implementation Agreement.

Letter I12—Remy, Thomas, and Moose

Response to Comment I12-1

The NBHCP is based on the premise that all lands within the areas of Planned Development have relatively equal habitat value for purposes of mitigation. The NBHCP further includes species-specific mitigation measures based on the impacts specific to the types of habitat to be affected by Planned Development. Additionally, based on the biological analysis of impacts related to Planned Development, specific policies are included in the NBHCP for management of the Mitigation Lands that address impacts specific to the land use and habitat types impacted by Planned Development. Thus, the same analysis and mitigation approach cannot necessarily be used for higher levels of development (than those included as Planned Development in the NBHCP) with a different footprint of development, and hence, different impacts.

Response to Comment I12-2

The commentor is correct that one of the underlying principles for establishing the mitigation ratio at 0.5:1 is that the habitat value of the Mitigation Lands will exceed the habitat value of the area subject to Planned Development. It is not correct, however, that the same principle can be used to justify the same mitigation ratio on an even larger area of development. The premise that the development area can be enlarged while still retaining the same mitigation ratio does not consider the following factors:

- The large block reserve sites that benefit the Covered Species become increasingly difficult to acquire as the development area increases;
- The economies of scale necessary to succeed in rice farming and other agricultural activities proposed as appropriate activities of TNBC become too small to provide quality habitat; and
- The impacts of a larger development area are more difficult to mitigate than a smaller development area because of the larger sizes of infrastructure necessary to serve a large area.

The analysis completed in the EIR/EIS indicates that the mitigation ratio of 0.5:1 is expected to be appropriate for 17,500 or fewer acres of Planned Development. Any request to amend the NBHCP or propose a separate HCP must evaluate the impacts of the increased development area and propose a mitigation ratio that mitigates the impacts. Specific questions of biological impacts and mitigation needs associated with development beyond 17,500 acres is premature given the speculative nature of potential additional development, which is addressed in more detail in Master Response 3 (Joint Vision).

Response to Comment I12-3

The NBHCP sets forth an Operating Conservation Program to mitigate impacts of Planned Development of 17,500 acres. For clarification, the only annexation area included in the City's Permit Area for 8,050 acres of Authorized Development is the "Panhandle" area that is (1) mostly developed, (2) part of the North Natomas Community Plan area, and (3)

between two incorporated, developed areas of the City. If or when the City approves an annexation that is not addressed in the NBHCP, the area to be annexed must comply with all state and federal regulations, including CEQA, NEPA, CESA, and ESA.

Response to Comment I12-4

The West Lakeside project is discussed under Master Response 4 (Cumulative Impacts), including its status relative to the General Plan Amendment and Comprehensive Annexation Program. In addition, also see Master Response 3 (Joint Vision) and I12-6 below.

Response to Comment I12-5

The NBHCP does not cap the number of acres that can be developed, and the Land Use Agencies have not abdicated their land use authority (see Response to Comment I13-11 for additional information). Also see Master Response 3 (Joint Vision) for a discussion of how future annexations would be considered consistent with federal, state, and local laws.

Response to Comment I12-6

The West Lakeside project is located outside the City limits, north of Del Paso Road and on the east side of the portion of the West Drain known as Fisherman's Lake. Because the area is not a part of the North Natomas Community Plan area and therefore not subject to the requirements of the NNCP, it is not known what the relationship of the project area and the agricultural buffer is to be at this time. However, it is expected that a similar relationship would exist between the project area and Fisherman's Lake as the urban project area south of Del Paso Road and Fisherman's Lake when/ if the West Lakeside area is annexed into the City.

In an Inter Office Memo dated May 30, 2002, William Carnazzo, Chief Assistant City Attorney, completed a document search of all relevant North Natomas documents related to the width of the agricultural buffer along the western side of the North Natomas Community Plan area, including Fisherman's Lake. In his memo, Mr. Carnazzo concluded that "the governing documents are the various editions of the community plan, where references to the westerly buffer width consistently specify 200 feet." One of the obligations of the 2001 Settlement Agreement related to the 1997 NBHCP federal litigation required the City to initiate a North Natomas Financing Plan amendment to widen the westerly agricultural buffer from 200 feet to 250 feet "to be consistent with the Mitigation Monitoring Plan of the NNCP." Such an amendment of the Financing Plan was completed in June 2002. The other conclusion reached by Mr. Carnazzo's memo is that the agricultural buffer starts at the City limits (the western edge of the Permit Area), approximately the centerline of Fisherman's Lake. References to the 250-foot-wide buffer in the NBHCP and EIR/EIS will be clarified to be consistent with the opinion of the Chief Assistant City Attorney.

Response to Comment I12-7

The 1997 NBHCP established a one-mile Swainson's Hawk Zone along the Sacramento River (p. IV-26 of the 1997 NBHCP). The 1997 NBHCP was drafted with the anticipation that Sacramento County would also be using the HCP as the basis upon which to seek an incidental take permit. The County did not seek such a permit in 1997, nor has it indicated it is seeking take coverage outside the MAP area.

In the Draft NBHCP, the Swainson's Hawk Zone was clarified to indicate that the zone is one mile wide along the Sacramento River, with a southern boundary of Interstate 80 and a northern boundary of the Cross Canal. Specifically, the areas within the City's Permit Area were excluded from the Swainson's Hawk Zone. Also, Sutter County agreed to remove the Swainson's Hawk Zone within Sutter County from their Permit Area through a future General Plan Amendment. The Incidental Take Permit for Sutter County will specifically not include the Swainson's Hawk Zone in their Permit Area. The NBHCP will be further clarified to identify that the western edge of the Swainson's Hawk Zone is the Natomas Basin boundary (i.e., the inward toe of the levee along the Sacramento River).

Letter I13—Law Offices of Gregory Thatch

Response to Comment I13-1

The Applicants revised the NBHCP to address five key considerations: (1) the *National Wildlife Federation, et. al. v. Secretary of the Interior Bruce Babbitt* (August 15, 2000) 128 F. Supp. 2d 1274 decision (*NWF v. Babbitt*), (2) new and modified federal and state regulatory requirements governing the incidental take of listed species, (3) refinements in biological information collected in the Natomas Basin, (4) mitigation requirements resulting from the CEQA process; and (5) the participation of Sutter County as a permittee.

As described in Section I.H of the NBHCP, the Applicants revised the NBHCP to remedy the defects identified in the *NWF v. Babbitt* decision. Judge Levi's decision contained certain guiding principles regarding the preparation of an adequate HCP and effective conservation strategy. Key revisions contained in the NBHCP thus are intended to ensure that the Operating Conservation Program would meet the requirements outlined in *NWF v. Babbitt* and provide for the implementation of a successful HCP in support of the USFWS's Section 10(a) permit issuance criteria.

In addition, in the interim since the USFWS approved the 1997 NBHCP and issued a Section 10(a) permit to the City, the USFWS has adopted certain new or modified federal regulatory and policy guidance. Of particular significance, the USFWS promulgated its No Surprises Rule and issued the "Five Point Policy" regarding the expanded use and integration of five components of the Habitat Conservation Planning program. The components of this program include: (1) biological goals, (2) adaptive management, (3) monitoring, (4) permit duration and (5) public participation. These components are discussed in Section 1.5.1.4 of the EIR/EIS. Similarly, CDFG has adopted new or modified State regulatory requirements that govern the incidental take of State-listed species (e.g., Section 2081 permit regulations). Consequently, certain revisions have been proposed to the to meet current regulatory requirements and policy guidance.

Additionally, through the CEQA and NEPA process, the City, Sutter County, and USFWS clarified mitigation requirements that would be required to mitigate for the significant environmental impacts of the Covered Activities. In some cases, because these mitigation requirements are not proposed in the NBHCP (e.g., mitigation for the loss of non-listed, non-covered species), the EIS/EIR identified additional mitigation measures that will be implemented by the City or Sutter County, as may be appropriate, in accordance with their respective underlying authorities.

Finally, Sutter County is proposing to rely upon the NBHCP to obtain incidental take coverage for Covered Activities within Sutter County's Permit Area. Consequently, additional conservation measures are included in the NBHCP to address the participation of an additional permittee. Similarly, in the event the Water Agencies choose to participate, the NBHCP includes additional conservation measures designed to avoid, minimize, and mitigate for the effects of the Water Agencies' Covered Activities. The NBHCP also was revised to include specific provisions ensuring the effectiveness of the NBHCP in the event one permittee chooses to seek incidental take coverage under the NBHCP or multiple permittees participate in the NBHCP.

Responses to the commentor's specific concerns regarding the changes to the NBHCP are addressed in the remaining responses below.

Response to Comment I13-2

This comment raises concerns about recovery plans and cost obligations.

Incorporation of Recovery Plan Measures in NBHCP

The commentor states that the NBHCP requires automatic implementation of any mitigation measures specified in recovery plans. The NBHCP, however, provides that recommendations made pursuant to future recovery plans may be implemented only as part of the NBHCP where such changes are supported by monitoring results or new scientific information and when such recommendations:

- Relate to the physical management of Mitigation Lands;
- Would improve the effectiveness of the NBHCP's Operating Conservation Program by identifying relevant new information, approaches, techniques, or species protection needs;
- Can be implemented within the Plan Area;
- Fit within the overall intent and framework of and are consistent with the NBHCP's biological goals and objectives, and would not exceed the established Mitigation Ratio of the Plan; and
- Will not substantially sacrifice habitat values for Covered Species not addressed by the Recovery Plan. (See NBHCP, pages VI-24 through VI-26.)

Additionally, pursuant to Sections 4.9.2 and 4.9.3 of the Implementation Agreement, the Wildlife Agencies, as may be appropriate, will be required to provide written notification supported by documented evidence and technical analysis indicating that the NBHCP Operating Conservation Program should be modified to incorporate recommended measures from an adopted recovery plan. In this regard, the NBHCP does not require automatic implementation of any measures specified in a recovery plan. However, the inclusion in the NBHCP of provisions that allow for adjustment of the Plan's Adaptive Management program in response to relevant new information about the needs of the Covered Species, including, under the conditions enumerated above, relevant recommendations of recovery plans, is entirely appropriate and will ensure that the bases for such Adaptive Management adjustments are grounded in the best available science.

Funding for Recovery Measures

The commentor's belief that the federal government is responsible for the costs of a recovery plan is noted. Recovery plans are required to be developed under Section 4 of the ESA to provide a road map to federal, state, local, and private entities that engage in activities that affect listed species regarding measures important for the stabilization and eventual recovery of listed species. Recovery plans do not have any regulatory effect nor do they impose any costs on government or private entities. USFWS policy as stated in the HCP Handbook provides that first and foremost, mitigation in an HCP is required to mitigate for the impacts of take resulting from habitat lost through the covered activities by establishing

suitable habitat for the species in perpetuity, if possible. However, contrary to the commentor's suggestion, there is no necessary demarcation between actions that mitigate for the impacts of take and actions that implement recommendations in a recovery plan. Establishment of secure, permanent preserves managed to benefit listed species are often primary mitigation measures included in HCPs, as they are in the NBHCP, and are often among the primary recovery actions outlined in recovery plans. The inclusion in the NBHCP of provisions to enable adjustment of management of the Mitigation Lands in response to guidance provided in recovery plans developed for the Covered Species will increase the likelihood that the mitigation provided in the NBHCP will be effective to meet the Plan's goals and objectives.

Finally, we note that the HCP Handbook provides that, in some cases, it is acceptable for an HCP to provide funding "to state or federal agencies to implement recovery actions within critical habitat, to restore degraded habitat, to address anthropogenic influences, and for conservation actions on larger, more secure populations of the affected species on public lands. In some cases, matching federal/private funding has been developed under HCPs for such purposes" (see HCP Handbook, p. 3-23). Thus, USFWS policy allows for habitat conservation plans to provide a mechanism for funding recovery measures.

Applicability of Recovery Measures in Section 10(a) Findings

In considering the issuance of a Section 10(a) Permit, the USFWS must find that: (1) to the maximum extent practicable, the permittee has minimized and mitigated for the impacts of incidental take; (2) adequate funding is provided for the conservation plan and that the plan specifies procedures to deal with unforeseen circumstances; (3) the taking will not appreciably reduce the likelihood of survival and recovery of the species in the wild; and (4) conservation measures required by the USFWS will be met (50 C.F.R. §§ 17.22(b)(2), 17.32). Additionally, in considering the duration of a permit, the USFWS considers the duration of the planned activities, as well as the possible positive and negative effects associated with the permits on listed species, including the extent to which the conservation plan will enhance the habitat and increase the long-term survivability of the species (50 C.F.R. § 17.32(b)(5)). The USFWS HCP Handbook provides that the USFWS should encourage applicants to develop HCPs that produce a net positive effect for the species or contribute to recovery plan objectives. The Handbook also provides that the USFWS should assess the extent to which an HCP's mitigation program is consistent with recovery plans, and in cases where such plans have not been adopted, the USFWS should use its best judgment to encourage the development of HCPs that would aid in species' recovery (see HCP Handbook, p. 3-20).

Consistent with the Section 10(a) permit issuance criteria, the USFWS is required to find that the proposed incidental take will not appreciably reduce the likelihood of survival and recovery of the species in the wild. The NBHCP has been developed to ensure that the initial avoidance, mitigation, and minimization measures are sufficiently vigorous and will successfully avoid jeopardizing the Covered Species. Although the Applicants and USFWS have continued to develop significant scientific information since 1997 regarding the status of the Covered Species and effectiveness of the Mitigation Lands, some uncertainty exists regarding the long-term effects of the conservation strategy primarily due to the elusive nature of the giant garter snake. Because of this uncertainty, the NBHCP conservation strategy is based on an extensive program of adaptive management and monitoring as

further described in Chapters IV and VI of the NBHCP. Consistent with the USFWS HCP Handbook guidance and the Five-Point Policy, adaptive management provisions are intended to allow for changes in the NBHCP's mitigation strategies that may be necessary to reach the NBHCP's biological goals and objectives, and to ensure the likelihood of survival and recovery of the species in the wild (HCP Handbook, p. 3-24). The NBHCP allows for adjustments in the mitigation strategy through the adaptive provisions to ensure that the NBHCP continues to compensate for the effects of Planned Development and to meet the required results of the Plan.

One aspect of the NBHCP's Adaptive Management program is to provide for the implementation of recommended measures identified in a recovery plan as supported by documented evidence. The Land Use Agencies and USFWS have determined that the adaptive management provisions of the NBHCP are an important component of the Operating Conservation Program. As the HCP Handbook encourages, the NBHCP provides flexibility to incorporate the recovery plan measures so as to aid in species recovery and to maintain consistency with future adopted recovery plans.

The NBHCP requires the landowners to fund the costs of the Operating Conservation Program, which is designed to ensure, in part, that the Covered Activities do not appreciably reduce the likelihood of the survival and recovery of listed species. The NBHCP's Operating Conservation Program consists of the payment of Mitigation Fees to fund the costs of acquiring, preserving, restoring, and enhancing the Mitigation Lands. Because the NBHCP Operating Conservation Program is based on implementation of an adaptive management program that may be modified to incorporate recommended measures contained in a recovery plan, the Mitigation Fee may be used to fund adjustments to the NBHCP resulting from recovery plan recommendations that meet the criteria identified in Chapter VI and summarized above. While the Applicants and the Wildlife Agencies are receptive to and may use grants or other federal and state awards to fund adjustments to the NBHCP which are proposed in the future to incorporate recommended recovery measures, the NBHCP does not rely on such funding in order to meet its assured funding requirements.

Response to Comment I13-3

The 1997 NBHCP included an adaptive management program and provisions for NBHCP revisions resulting from any future USFWS Giant Garter Snake Recovery Plan or CDFG Swainson's Hawk Recovery Plan (see e.g., 1997 NBHCP, p. IV-37 - IV-38). The 1997 NBHCP also authorized adjustments in the amount of the Mitigation Fee necessary to fund certain NBHCP adaptive management provisions and revisions due to recovery plan adoption (see e.g., 1997 NBHCP, p. IV-33). The revised NBHCP retains these provisions and further refines them to eliminate the fee cap and to clarify the scope of revisions that may be made to the NBHCP in response to adaptive management, recovery plan adoption, and monitoring (see e.g., VI-25 through VI-27). The revisions contained in the revised NBHCP are consistent with and respond to Judge Levi's decision.

The revised NBHCP conservation strategy is proposed to avoid, minimize, and mitigate the impacts to Covered Species resulting from the Covered Activities. Chapter V of the NBHCP has been revised to clarify that the measures for species that might occur or only rarely occur in the Natomas Basin apply only in the event that Planned Development results in the

potential for incidental take of such Covered Species. Refer to Responses to Comments I13-63 through I13-79 for the species-specific language changes to Chapter 5 of the NBHCP.

Response to Comment I13-4

The NBHCP includes appropriate measures to monitor the presence and viability of Covered Species within the Mitigation Lands. Monitoring of species within the Mitigation Lands is a key component in guiding the management practices upon the reserves and in directing adaptive management if the Operating Conservation Program requires adjustments. The NBHCP requires that monitoring of species occur within the Basin but outside of the Mitigation Lands to provide a comparison of species distribution and to evaluate the success of habitat enhancement upon the reserves.

Comments on the costs of the monitoring program suggest a misunderstanding of the Fee Analysis prepared for the NBHCP. The Fee Analysis is a complex analysis that establishes the necessary cash flow to implement the NBHCP and to maintain TNBC reserves in perpetuity. In response to this comment, EPS has reviewed the Fee Analysis and determined that \$757.70 of the \$10,027 Mitigation Fee applied to each acre of development would be directed to monitoring costs. This equals 7.6 percent of the Mitigation Fee required under the NBHCP.

It is recognized that while monitoring is valuable in guiding management of Mitigation Lands, such information does not in itself improve habitat values. While the NBHCP establishes a basic framework for monitoring operations, there is both the requirement and the opportunity to refine the monitoring program after Incidental Take Permits are issued under the NBHCP. Such adjustments to the Monitoring Program would ensure maximum benefit from collected Mitigation Fees.

Response to Comment I13-5

The revised NBHCP clarifies the activities included in the Adaptive Management program and refines the description of the NBHCP Adaptive Management activities to be consistent with the Five Point Policy, which became effective after the USFWS issued the City's Incidental Take Permit in 1997. The definition of adaptive management was not revised to be broad and open-ended such that any feature of the NBHCP could be modified as an adaptive management change. In fact, the 1997 NBHCP's original adaptive management provisions are further clarified in the revised NBHCP to refine the conditions triggering revisions to the NBHCP (as called for in the Five Point Policy) and to identify the process by which such changes may be required.

NBHCP Adaptive Management Provisions

The adaptive management provisions contained in Section VI.F of the revised NBHCP are similar to the provisions contained in Section VI.E of the 1997 NBHCP. The 1997 NBHCP identified four adaptive management modifications including: (1) new information resulting from ongoing research on the giant garter snake or other Covered Species; (2) recovery strategies under the future Giant Garter Snake Recovery Plan or CDFG Swainson's Hawk Recovery Plan; (3) certain mitigation measures described in the NBHCP that may need to be revised due to the NBHCP monitoring program; and (4) the 2,500-acre and 400-acre minimum habitat block size requirements. As the 1997 NBHCP noted, each of

these situations could result in new information, new approaches, or new recovery or conservation standards that would need to be incorporated into the NBHCP (see 1997 NBHCP, p. IV-41). Similarly, the revised NBHCP retains the four Adaptive Management modifications contained in the 1997 NBHCP and adds three specific conditions: (1) recovery strategies due to adoption of Covered Species recovery plans; (2) significant land use changes outside of the reserve system; and (3) uncertainties associated with Plan implementation. Moreover, the revised NBHCP clarifies the approaches that will be used to evaluate the effectiveness of the Mitigation Lands and to implement adjustments to the Operating Conservation Program as further described on page VI-22 of the Draft NBHCP.

Relationship to No Surprises Rule

The USFWS No Surprises Rule provides, in part, that: “Additional conservation and mitigation measures will not involve the commitment of additional land, water or financial compensation or restrictions on the use of land, water, or other natural resources otherwise available for development or use under the original terms of the conservation plan, without the consent of the Permittee” (50 C.F.R. § 17.22(b)(5)(iii) and 17.32(b)(5)(iii)). While the commentor is correct in noting that the No Surprises Rule limits changes in the amount of land or funding required, the Rule limits such changes to those in excess of the commitments provided for in the Operating Conservation Program.

The No Surprises Policy clearly applies to the NBHCP as described in Section VI.K of the NBHCP. For the reasons described above in Response to Comment I13-2, the USFWS and the Land Use Agencies have included the adaptive management provisions in the Operating Conservation Program. As such, the NBHCP defines the scope of the revisions to the NBHCP that may result from the adaptive management program. Modification to the NBHCP beyond the scope of changes defined in the Plan is prohibited under the No Surprises Rule without the consent of the permittees. However, changes to the NBHCP, within the parameters set forth in Chapter VI of the NBHCP, are part of the NBHCP’s Operating Conservation Program and thus do not fall within the ambit of the No Surprises Rule. The NBHCP must provide that adequate funding will be available to implement future adaptive management revisions to the NBHCP.

Although no changes to the NBHCP will be required through the adaptive management process that result in an increase in the amount of required Mitigation Land, sufficient funding must be made available to fund the costs associated with the revisions to the adaptive management program. Consistent with Judge Levi’s decision, the NBHCP was revised to eliminate the fee cap contained in the 1997 NBHCP in order to ensure adequate funding will be available to implement the NBHCP’s adaptive management provisions. Thus, it is acknowledged that the Mitigation Fee may increase over time in order to fund the adaptive management and other mitigation measures contemplated by the NBHCP. Nonetheless, the addition of the three specific conditions identified above, in conjunction with the revised NBHCP’s clarifications to the approach in implementing adaptive management, appropriately bound the range of modifications which may occur under the NBHCP consistent with the USFWS’s No Surprises Rule.

Response to Comment I13-6

The commentor is referred to Response to Comment I13-22 regarding the Area B land acquisition process. The text on NBHCP pages IV-12 - IV-13 has been revised to clarify that a potential acquisition site located within Area B must only be suitable for use by one or more, but not all, of the 22 Covered Species (see the Final NBHCP for specific text changes).

The purpose of allowing out-of-Basin reserves in Area B is to provide another option for acquiring Mitigation Lands. Acquisitions in Area B could help maintain the feasibility of establishing Mitigation Lands by allowing acquisition of potentially lower-cost land, but must be shown to benefit the Covered Species. Chapter IV, Section 4.C.2 of the NBHCP provides that acquisition of Mitigation Lands in Area B should not occur where potential Mitigation Land is available with the Basin and can be feasibly acquired (see pages IV-12 - 13). The term “can be feasibly acquired” as used in the NBHCP will be based upon a comparison of land prices in the Basin with those from neighboring areas. This comparison would need to demonstrate that the costs of acquiring the Mitigation Lands within the Natomas Basin would substantially exceed the costs of acquiring Mitigation Lands in Area B. The text on page IV-13 of the NBHCP has been revised to provide this clarification (see the Final NBHCP for specific text edits). Although the *NWF v. Babbitt* decision did not require a specific clarification of the term “feasibly acquired,” the NBHCP incorporates this provision in order to clarify when out-of-Basin Mitigation Lands may be acquired under the NBHCP in order to ensure that the NBHCP meets the Section 10(a) permit issuance criteria. As stated earlier in Response to Comment I13-1, changes to the NBHCP are not limited to those specifically identified by Judge Levi.

Response to Comment I13-7

The nest tree mitigation measure was developed in consultation with the USFWS and CDFG to address temporal loss of nesting trees for the Swainson’s hawk. The Swainson’s hawk uses the Natomas Basin for nesting and overwinters in South America. Therefore, the creation of suitable nest habitat is important to the success of the species because breeding and nesting are the primary use of the Natomas Basin habitat by the bird.

Additionally, the hawk prefers larger, mature nest trees in riparian systems or in small tree clusters. Although the decline of nest sites alone may not be responsible for the decline of the hawk population, the decline of nest sites in proximity to foraging areas is a concern. Therefore, the Applicants and the Wildlife Agencies agreed that the replacement trees should be planted on TNBC upland areas in order to establish new nesting habitat in proximity to upland foraging areas.

Given the importance of nesting habitat to the hawk, it is important that the nest tree replacement program ensure that a variety of species (some fast-growing) be planted to replace loss of mature trees and that measures be included to avoid the creation of even-aged stands that grow and decline at the same time. Therefore, a 100 percent survival rate ensures that if some of the replacement trees or clusters of trees do not survive, these trees will be replaced. Over time this will result in nesting trees of different maturity and avoid development of even-aged stands of nest trees.

It is also true that TNBC does plant trees to enhance cover for a variety of species. Both tree cover and vegetative cover are incorporated into the TNBC Site Specific Management Plans.

The nest tree replacement requirement includes specific species preferred by the hawk for nesting as opposed to plantings for general cover.

Regarding the CDFG Swainson's Hawk *Staff Report*, the Applicants consulted these guidelines but is not necessarily bound by these (see also Comment G3-22).

Response to Comment I13-8

The Lead Agencies agree that the Water Agencies will have no obligations under the NBHCP until they file applications to become Permittees. This is clear in Sections 1.1.1 (see footnote at the bottom of page 1) and 1.2.1 of the EIR/EIS. This is also discussed in Sections I.B.2.c and I.B.2.d of the NBHCP. It is not necessary to expand the discussion in the NBHCP because the current language is adequate and it is apparent that the Water Agencies will have no obligations until they sign the Implementing Agreement and receive Incidental Take Permits.

Response to Comment I13-10

The Applicants concur that this section of the NBHCP should be revised to clarify that (1) those CEQA mitigation measures applicable to a given development are applied by the City, and (2) the same practice would be used by Sutter County. The reference to CEQA mitigation measures is not an additional requirement of the NBHCP, but rather an explanatory statement to assist the reader in understanding that through the combined CEQA and HCP mitigation process a full range of development impacts will be addressed. See the Final NBHCP for specific text changes.

Response to Comment I13-9

As stated on page D-2, the term "Conserved Habitat Areas" includes Mitigation Lands acquired by TNBC as mitigation under the NBHCP. It is acknowledged that the NBHCP also uses the term Mitigation Lands, as defined in the NBHCP on page D-2, or "system of reserves" as defined on page D-7. Mitigation Lands mean Conserved Habitat Areas for the purposes of the USFWS's ESA regulations. To eliminate any confusion, the term "Conserved Habitat Areas" is deleted from the definitions section of the NBHCP.

Response to Comment I13-11

The commentor believes that the NBHCP inappropriately attempts to regulate or restrict the City's control over local land use decisions and suggests that the NBHCP provides that annexations of land automatically constitutes a "take." However, the NBHCP does not attempt to regulate or restrict the City's control over local land use decisions and its sovereignty. Furthermore, the last paragraph on pages I-5 and I-6 of the Draft NBHCP is not intended to constrain the City's ability to annex *any* land into the City limits; the intent is to limit landowners' ability to seek coverage under this NBHCP for new development outside of the City's Permit Area and beyond the 17,500 acres of the Planned Development. The NBHCP sets forth the commitments that the City and Sutter County intend to implement through the exercise of their respective land use authorities (see Implementation Agreement, Section 6.5). The IA further clarifies the Land Use Agencies' land use authority. Specifically, Section 6.5 of the IA states that "[n]othing in the NBHCP or in the IA shall be interpreted or operate in a manner that expressly or impliedly (sic) diminishes or restricts

the local land use authority of the CITY and SUTTER.” Moreover, Section 7.3 of the IA states that the adoption and amendment of general plans, specific plans, community plans, zoning ordinances and other similar ordinances and approval of land use entitlements are matters within the sole discretion of the Land Use Agencies.

The intent of the provisions on pages I-5 and I-6 of the NBHCP is to indicate that the NBHCP does not provide incidental take authorization for future development of lands outside of the City’s Permit Area. Future development of land outside of the City’s Permit Area, including proposed annexation, will be subject to further planning and environmental analyses prior to any approval. While we concur that the annexation of land does not constitute incidental take of species *per se* or that annexation automatically will result in urban development, the NBHCP includes the limitation on annexation in order to ensure that additional lands not currently included within the City’s Permit Area are not annexed to the City with the expectation that the NBHCP provides coverage for incidental take associated with development on these lands. Additionally, landowners generally seek annexation in order to facilitate urban development, so it is not unreasonable to conclude that such annexation requests, if granted, will in the future result in potential urban development. In fact, annexation proposals generally are subject to environmental review under CEQA because an annexation constitutes a discretionary action which may result in physical effects on the environment (see e.g., *Bozung v. LAFCO* (1975) 13 Cal. 3d 263). The text in Section I.B.2 of the NBHCP is revised to further clarify the limitation on incidental take coverage for lands currently located outside of the City of Sacramento city limits. See the Final NBHCP for specific text changes.

The NBHCP generally provides for Mitigation Land acquisition by TNBC. TNBC may legally purchase and sell land, lease land for revenue, and hold title to conservation easements. However, as a non-governmental entity, TNBC does not have authority to condemn property (see NBHCP, p. IV-4). Moreover, the City does not intend to acquire Mitigation Lands through the exercise of its condemnation powers.

Response to Comment I13-12

The intent of the NBHCP is to require TNBC to adjust its habitat reserve management measures in a manner consistent with applicable recommended recovery plan measures, and not to require that TNBC implement all species recovery plan measures in the Basin. As the commentor has requested, the text in the fourth sentence of the second paragraph of Section I.B.3.a of the NBHCP has been revised. See the Final NBHCP for specific text edits.

Response to Comment I13-13

The text in Section I.D of the NBHCP is intended to provide a general overview of the Operating Conservation Program. In response to the commentor’s request that this text be revised to reflect the agreement regarding the change in managed marsh due to recovery plan adoption, the commentor is referred to Section VI.H.2 of the NBHCP for a more complete description of the potential changes in the NBHCP’s managed marsh component. The text referred to by the commentor on page I-18 of the NBHCP has been revised . See the Final NBHCP for specific text changes.

Response to Comment I13-14

As described in Section VI.F of the NBHCP, the adaptive management provisions provide a process to allow the NBHCP's Operating Conservation Program to be adjusted during the life of the permits in order to ensure that the most up-to-date information is being utilized, and that the Plan's biological goals and objectives are being achieved. The NBHCP identifies specific situations in which new information, new approaches, and new recovery or conservation standards would need to be incorporated into the NBHCP. The purpose of the adaptive management provisions is not to require new mitigation premised on new biological ideas.

The text in the last paragraph of Section I.D of the NBHCP has been revised to be consistent with the text in Section VI.F. See the Final NBHCP for specific text changes.

Response to Comment I13-15

The commentator requests two text changes to Subsection (3), page I-19 of the NBHCP. The Applicants decline these changes. First, the trigger for the conversion of rice lands to managed marsh is contingent on the adoption of the Giant Garter Snake Recovery Plan or other new scientific information in order to have an effective adaptive management plan for the NBHCP. New scientific information, for example, might include the monitoring results of the TNBC reserves. Thus, because the NBHCP must include reasonable adaptive management provisions for the protection of species over a 50-year period, the trigger for increase in managed marsh was expanded. This is consistent with the USFWS Habitat Conservation Planning and Incidental Take Permit Processing Handbook. Chapter 3, Section 3, Subsection (g) of the Handbook states:

For some species, not all of the scientific information needed to develop comprehensive long-term conservation strategies to conserve species may be available at the time of HCP development. Where these data gaps occur, not all of the questions regarding the long-term effects of implementing these HCPs can be answered. When significant uncertainty exists, it can be addressed through the incorporation and implementation of adaptive management measures in the HCP.

Regarding the request to specify "privately" owned fields and canals, the Applicants note that until such time as other public and quasi-public agencies adopt an HCP, the Applicants cannot limit the definition of fields and canals in this context.

Response to Comment I13-16

Table 1-2 notes the Five Point Policy as one of the significant influences in the revisions to the NBHCP, since the USFWS must review the requirements of the Five Point Policy addendum prior to issuance of Incidental Take Permits. Published in June 2000, the Five Point Policy addresses a range of topics, including biological goals and objectives, adaptive management, monitoring, permit duration, and public participation. As such, modifications to the NBHCP that respond to the Five Point Policy addendum occur throughout the document. In response to this comment a new definition is added to address the Five Point Policy. See the Final NBHCP for specific text changes.

Response to Comment I13-17

The text on p. I-28 of the Draft NBHCP does not indicate that “the new NBHCP will incorporate *any* [emphasis added] mitigation measures recommended in future recovery plans...” In fact, the text on page I-28 states that “the NBHCP provides for inclusion, *as appropriate and within the limitations set forth in Chapter VI* [emphasis added], of measures recommended in future recovery plans...” Section VI.F identifies seven types of revisions that may be made to the NBHCP and three approaches that will be used in implementing these revisions. Additionally, the NBHCP requires the establishment of management thresholds and periodic evaluations in determining the Plan’s implementation status and success in achieving its biological goals and objectives. Moreover, changes due to recovery plan adoption only will be implemented if such changes are supported by monitoring results from the Plan Area or by new peer-reviewed scientific information, and only if the recovery plan recommendations comply with the limitations specified in Section VI.H of the NBHCP. Consequently, the NBHCP does not provide for the inclusion of any and all new measures in the future and the Plan remains subject to the USFWS No Surprises Rule as addressed in the Response to Comment I13-5.

Response to Comment I13-18

The Applicants concur that take coverage for areas outside of the Permit Areas must be subject to either an amendment of the NBHCP and related permits or a new HCP and permits. Thus, the last sentence in the third paragraph of Section I-K of the NBHCP has been amended. See the Final NBHCP for specific text changes.

Response to Comment I13-19

The comment notes that decomposition of rice stubble by flooding is one method of removing rice stubble. This is clarified on page III-4 of the Draft NBHCP, which states:

The residual rice straw in the fields after harvesting is typically burned, plowed under, or flooded. Flooding to dispose of rice straw is becoming more prevalent as the practice of burning rice straw is being phased out due to air quality prohibitions. In addition to rotting the rice stubble, flooded rice fields provide wetland habitat for ducks, geese and other migratory waterfowl.

Response to Comment I13-20

Section IV.F.1 of the 1997 NBHCP first established the following monitoring requirement: “General multi-species inventories shall be conducted throughout the NBHCP plan area a minimum of once every five years throughout the term of the permits.” The revised NBHCP maintains this obligation with the addition of monitoring selected sites outside TNBC reserves but within the Basin to provide control information to aid in evaluating the success of reserve management. The comment regarding the cost of the five-year monitoring program is not accurate. The monitoring effort to be conducted every five years includes the standard annual monitoring efforts plus additional reporting and evaluation that is estimated will cost \$55,000 for each five-year monitoring effort, or \$550,000 over the life of the NBHCP’s 50-year ITPs.

Response to Comment I13-21

The commentor has correctly noted that item 7 on page IV-6 of the Draft NBHCP suggests that detailed monitoring data will be collected throughout the Natomas Basin. It is the Applicants' intent that selected sites within the Basin that are outside the TNBC reserves will be monitored to provide a comparison between Covered Species occurrences in the overall Basin and within TNBC reserves. Section IV.C.1.a(7) of the NBHCP has been revised. See the Final NBHCP for specific text changes.

Response to Comment I13-22

Section IV.C.2.b of the NBHCP has been clarified to provide more guidance on "feasibly acquired" and to ensure a balance between lands acquired in Area B and those in the Natomas Basin. See the Final NBHCP for specific text changes.

Response to Comment I13-23

The Applicants want to make sure that each of the Mitigation Lands could be designed to optimize the existing habitat on-site and would therefore not be required to be developed with the percentages of 25 percent managed marsh, 50 percent rice, and 25 percent upland habitat. The commentor is suggesting eliminating a sentence that in his view requires each reserve site to be developed with the same habitat percentage of 25/50/25. The text cited in the comment has been revised. See the Final NBHCP for the specific text change.

Response to Comment I13-24

The term "adequately removed" is consistent with the referenced Section IV.C.2.a. The NBHCP provides both setback criteria and buffering criteria. The setback criteria is intended to provide physical separation between Mitigation Lands and urbanized areas unless unique circumstances merit acquisition of a reserve in close proximity to developed areas.

Response to Comment I13-25

The commentor requests that the proportion of managed marsh be adjusted only if required by adoption of a future Giant Garter Snake Recovery Plan. As described on pages VI-22 and VI-23 of the Draft NBHCP, the Adaptive Management provisions provide a process to allow the NBHCP's Operating Conservation Program to be adjusted during the life of the permits in order to ensure that the most up-to-date information is being utilized, and that the Plan's biological goals and objectives are being achieved. Section VI.L.3 of the NBHCP summarizes specific situations in which new information, new approaches, or new recovery or conservation standards would need to be incorporated into the NBHCP, either through revision or amendment.

As described above in the Response to Comment I13-2, the inclusion in the NBHCP of provisions that allow for adjustment of the adaptive management program in response to relevant new information about the needs of the Covered Species, including peer-reviewed scientific information and monitoring data, is entirely appropriate and will ensure that the bases for such adaptive management adjustments are grounded in the best available science.

Response to Comment I13-26

For the California tiger salamander, the western spadefoot toad, vernal pool species, and other covered plant species, it is possible that pre-construction surveys may identify the presence of these species, although at this time, there are few identified occurrences of these species in the Natomas Basin. Thus, the land use agencies require pre-construction surveys and mitigation measures for these species (see pp. V-15 - V-16 of the Draft NBHCP). In addition, pages V-24 - V-27 of the Draft NBHCP include TNBC's full mitigation requirements for the California tiger salamander, the western spadefoot toad, vernal pool species, and other covered plant species. This section builds on the 1997 NBHCP, which "directed the TNBC to consult with the TAC, species researchers and experts periodically during implementation of the Plan to determine what, if any, additional conservation opportunities for the species might exist within the Plan's proposed reserve system" and further stated "such opportunities might include, but are not limited to, establishment of habitats suitable for the species within the reserve system and if appropriate re-introduction of species into the Basin" (see pp. IV-35 - IV-37 of the 1997 NBHCP).

The Applicants agree that the method of creating new opportunities for these species should be part of TNBC's Site Specific Planning Process, and should be accomplished in conjunction with creation of suitable mitigation for habitat types of species known to be present and directly or indirectly affected by Planned Development in the Basin. To this end, the text of the full mitigation measure in Chapter V of the NBHCP has been amended. See the Final NBHCP for specific text changes.

Response to Comment I13-27

The commentor has correctly noted that each of the Mitigation Lands will provide habitat for a portion of the Covered Species, but rarely would a single reserve provide habitat for all Covered Species. In fact, as noted, very few reserves will be situated as to allow preservation or restoration of large, high terrace vernal pool habitats requiring Sacramento Orcutt grass and slender Orcutt grass. The fourth paragraph of Section IV.D.1.b of the NBHCP has been revised. See the Final NBHCP for specific text changes.

Response to Comment I13-28

TNBC is not an authorized USFWS Conservation Bank and it is not intended that the Mitigation Lands serve such purpose. Mitigation Lands acquired by TNBC are specifically related to mitigation of habitat impacts from Planned Development, and are not intended to mitigate impacts of other development. For this reason, the option to mitigate through the USFWS bank program using their mitigation ratios is a separate option from mitigation through agreement with TNBC.

Response to Comment I13-29

The requirement for biological surveys to be performed by a qualified biologist approved by the USFWS is standard operating procedure for the USFWS, and this language is routinely inserted in HCPs. The USFWS does not have an "officially adopted regulation" requiring this, but asserts the need for this language to remain in the NBHCP to ensure the scientific credibility and quality of NBHCP implementation.

Response to Comment I13-30

See Response to Comment I13-6 regarding the biological justification for tree mitigation measures. Regarding “double dipping” to require developers to mitigate for specific nest trees as well as pay mitigation fees, the Applicants note that the mitigation fee covers mitigation for “landscape” level habitat effects, whereas the mitigation measures included in the NBHCP also address site-specific avoidance, minimization, and mitigation measures. In some cases, it may be feasible to avoid a nest tree through site planning. In other cases, this may not be feasible, and site-specific minimization and mitigation measures may be required. The NBHCP includes site-specific mitigation measures for all 22 Covered Species that must be implemented in conjunction with payment of the Habitat Mitigation Fee.

Response to Comment I13-31

Similar to the Swainson’s hawk nest tree mitigation requirement, the NBHCP includes site-specific mitigation measures for VELB in addition to the payment of Habitat Mitigation Fees. The revised VELB mitigation measures are consistent with the current (1999) USFWS VELB Guidelines. The most recent guidelines were published July 9, 1999, whereas the 1997 NBHCP was based on earlier guidelines. The NBHCP, therefore, uses the most recent information and biological guidelines for mitigation.

Response to Comment I13-32

The commentator correctly notes that the NBHCP requires that TNBC redesign upland reserves, as necessary, to meet Swainson’s hawk recovery plan goals. However, CDFG must adopt, among others, certain findings in authorizing the incidental take of Swainson’s hawks, including: (1) the impacts of authorized take shall be minimized and fully mitigated and the measures are roughly proportional in extent to the impact; (2) the permit is consistent with any regulations adopted by CDFG with respect to the incidental taking of State-listed threatened or endangered species; (3) the applicant shall ensure adequate funding to implement the mitigation measures and to monitor compliance and effectiveness; and (4) issuance of the permit would not jeopardize the continued existence of the species (Fish & Game Code § 2081). For the reasons set forth in the NBHCP, the Biological Resources Technical Memo and Addendum (Appendices H and K of the Final NBHCP), and the EIR/EIS, the NBHCP’s provisions authorizing TNBC to implement adjustments in the management of upland reserves in response to recovery plan adoption are important components in ensuring that the impacts on Swainson’s hawk will be minimized and fully mitigated.

The obligation to fund species recovery is not limited to CDFG. Pursuant to Fish & Game Code Sections 2109 and 2111, CDFG’s recovery strategy for a State-listed species is required to represent an equitable apportionment of both public and private and regulatory and nonregulatory obligations. Thus, CDFG and private interests appropriately may bear the costs of species recovery for the Swainson’s hawk. The Applicants nonetheless are required to demonstrate that adequate funding will be available to implement the mitigation included in the NBHCP’s Operating Conservation Program. The Operating Conservation Program includes provisions for adaptive management and adjustments in the management of upland reserves in a manner consistent with the recommended measures that may be included in a future adopted Swainson’s hawk recovery plan. Because these adjustments in

the management of Mitigation Lands are contemplated within the NBHCP's Operating Conservation Program, the Applicants are proposing to adopt Mitigation Fees that are adequate to cover the costs of these management measures.

Response to Comment I13-33

For the California tiger salamander, the western spadefoot toad, vernal pool species, and other covered plant species, it is possible that preconstruction surveys could identify the presence of these species, although at this time, there are few identified occurrences of these species in the Natomas Basin. Thus, the Land Use Agencies would require preconstruction surveys and mitigation measures for these species (see pp. V-15 - V-16 of the Draft NBHCP). In addition, pages V-24 - V-27 of the Draft NBHCP include TNBC's full mitigation requirements for the California tiger salamander, the western spadefoot toad, vernal pool species, and other covered plant species. This section builds on the 1997 NBHCP which "directed the TNBC to consult with the TAC, species researchers and experts periodically during implementation of the Plan to determine what, if any, additional conservation opportunities for the species might exist within the Plan's proposed reserve system" and further stated "such opportunities might include, but are not limited to, establishment of habitats suitable for the species within the reserve system and if appropriate re-introduction of species into the Basin" (see pp. IV-35 - IV-37 of the 1997 NBHCP).

The Applicants agree that the method of creating new opportunities for these species should be part of TNBC's Site Specific Planning Process, and should be accomplished in conjunction with creation of suitable mitigation for habitat types of species known to be present and directly or indirectly affected by Planned Development in the Basin. To this end, the text of the full mitigation measure in Chapter V of the NBHCP has been amended. See the Final NBHCP for specific text changes.

Response to Comment I13-34

In response to this comment (see also above Response to Comment I13-33 regarding the California tiger salamander) text clarifications are proposed for TNBC's western spadefoot toad mitigation measure. Proposed text changes to Section V.B.4.1 of the NBHCP are presented in the Final NBHCP.

Response to Comment I13-35

See Responses to Comments I13-33 and I13-34.

Response to Comment I13-36

The commentor correctly notes that the provisions in Section VI.B.2 of the NBHCP authorize increases in the Mitigation Fee to account for NBHCP revisions due to changes in the managed marsh component, monitoring results, new information, or recovery plan adoption. However, the ability to increase the Mitigation Fee for such revisions is limited by the requirements of the NBHCP (Sections VI.E. and VI.F). These requirements are described in Sections VI.E (Monitoring of the NBHCP) and VI.F (Adaptive Management) of the NBHCP. The text referred to by the commentor in Section VI.B.2 of the NBHCP has been revised to clarify that the limitations contained in Section VI.H (Program Adaptation for Recovery Plans) also apply. See the Final NBHCP for specific text changes.

As noted above in the Response to Comment I13-5, the revised NBHCP retains the provision in 1997 NBHCP which authorizes revisions to the NBHCP based on new information and monitoring results. As such, these provisions are not new to the revised NBHCP. Nonetheless, in accordance with the *NWF v. Babbitt* decision, the NBHCP was revised to eliminate the cap on Mitigation Fee in order to demonstrate that the Mitigation Fee adequately funds the costs of the program adaptations and revisions to the NBHCP included in the Operating Conservation Program.

The NBHCP does not allow unlimited fee increases. Rather, the NBHCP states on pages VI-6 and VI-7 that the fees may be adjusted to account for all additional monetary obligations that may be required to fully implement the land acquisition, ongoing or permanent management (including restoration and enhancement), monitoring, database maintenance, adaptive management, recovery plans, changed circumstances, and any other requirements of the NBHCP and IA, subject to the limitations described in Section VI.K.1 (“Applicability of the ‘No Surprises’ Protections”). This text has been further clarified to reference the applicable NBHCP sections. See the Final NBHCP for specific text changes.

The commentor is referred to the Responses to Comment I13-2 and I13-32 regarding the NBHCP’s treatment of revisions to the NBHCP resulting from future recovery plan adoption.

Response to Comment I13-37

Revisions are proposed to the text of the first sentence of the second paragraph in Section VI.D of the NBHCP. See the Final NBHCP for specific text revisions.

Response to Comment I13-38

The commentor correctly notes that it is not the role of TNBC to monitor the other NBHCP Permittees to determine their compliance with NBHCP provisions. While the determination of adequate compliance with NBHCP provisions is the responsibility of the Wildlife Agencies, monitoring compliance and compiling reports on compliance with provisions of the NBHCP remain an obligation of the Permittees. As such, Section VI.E.1 of the NBHCP has been revised. See the Final NBHCP for specific text changes.

Response to Comment I13-39

Annual basinwide monitoring as described in Section VI.E.2.a of the NBHCP is limited to giant garter snakes and Swainson’s hawks. While not clearly described as basinwide monitoring in the 1997 NBHCP, basinwide monitoring of these two species throughout the Natomas Basin has been funded by TNBC on an annual basis since 1997.

Some level of monitoring of Covered Species at locations within the Basin but outside TNBC reserves is required to evaluate the viability of Natomas Basin populations of Covered Species. Such information is required to evaluate the overall success and effectiveness of TNBC reserve management practices.

While \$757.70 of the \$10,027 mitigation fee applied to each acre of development would be directed to monitoring costs (Appendix A of the Draft NBHCP), a substantial portion of this cost was previously expended under the 1997 NBHCP. The comment that increased monitoring has resulted in the an increase in O&M Administration and O&M Endowment

from \$3,055 to \$4,750 is not accurate; additional changes to the estimates of NBHCP implementation have also contributed to the increase in estimated implementation costs.

Response to Comment I13-40

Section VI.E.2, Design of Biological Effectiveness Monitoring Program, does not establish additional monitoring requirements. Rather, it provides guidance for the development of a comprehensive Biological Monitoring Program that is to be prepared within two years of issuance of Permits under the NBHCP. A table has been added to the NBHCP to clarify TNBC's total monitoring obligations.

Response to Comment I13-41

The requested deletion of the references to the NBHCP TAC and the Wildlife Agencies from the referenced section will not be made. Although the monitoring programs will be adopted by the TNBC Board, the NBHCP TAC and the Wildlife Agencies will participate in the development of monitoring programs, and therefore the inclusion of the reference to the NBHCP TAC and the Wildlife Agencies is appropriate. The requested deletion of the reference to the basinwide Biological Effectiveness Monitoring Program will not be made because there is both an overall Biological Monitoring Program and individual Site Specific Biological Effectiveness Monitoring Programs that will be adopted for individual Mitigation Lands.

Response to Comment I13-42

As noted in previous responses to comments, information on giant garter snake presence within the Basin but outside of the Mitigation Lands is required to analyze the success of TNBC's reserve management practices. In addition to guiding reserve management, monitoring outside of reserves will provide crucial data on the viability of the Natomas Basin population of giant garter snake. With regard to monitoring upon private lands, text has been added to Section VI.E.3.d of the NBHCP. See the Final NBHCP for specific text changes.

Response to Comment I13-43

As noted in previous responses to comments, it is necessary to monitor Swainson's hawk populations within the Basin but outside of the Mitigation Lands to evaluate the viability of the species within the Basin. Given the distribution of Swainson's hawk nests primarily along the Sacramento River, it is not anticipated that Mitigation Lands will contain numerous mature nesting trees to support Swainson's hawks until newly planted trees have matured. While monitoring of Swainson's hawks foraging upon the Mitigation Lands will assist in guiding reserve management practices, evaluating the viability of hawk populations within the Basin will require analysis of nesting sites. With regard to access to private lands, Section VI.E.3.d of the NBHCP addressing Swainson's hawk monitoring has been revised. See the Final NBHCP for specific text changes.

Response to Comment I13-44

As noted in previous responses to comments, it is necessary to conduct limited surveys within the Basin on land outside of the Mitigation Lands in order to evaluate the success of

TNBC's reserve management practices. Additionally, in the case of avian species, such surveys will increase the likelihood of species detection, which in turn would allow TNBC to modify management practices to maximize habitat values for species that are present in the Basin.

Response to Comment I13-45

The comment that TNBC monitoring efforts for rarely occurring species should focus on TNBC reserves is correct. If these species were found to be present in the Basin, however, then it would be appropriate for TNBC to monitor locations of known populations. Revisions have been made to "Rarely Occurring Species" text in Section VI.E.3.d of the NBHCP. See the Final NBHCP for specific text changes.

Response to Comment I13-46

The comments regarding the NBHCP's adaptive management and recovery plan provisions are noted, and the commentor is referred to the Responses to Comments I13-2, I13-17, I13-32, and I13-37. Revisions are proposed to the text of the second paragraph in Section VI.F.1 of the NBHCP. See the Final NBHCP for specific text changes.

Response to Comment I13-47

As described in the Responses to Comments I13-2, I13-17, I13-32, and I13-37 and on pages VI-22 - VI-27 of the Draft NBHCP, adaptive management changes identified in the NBHCP do not include every mitigation measure contained in new recovery plans. The NBHCP includes within its Operating Conservation Program adaptive management, monitoring, and revisions to the NBHCP that may be needed due to adoption of future recovery strategies in order to ensure that the NBHCP meets its biological goals and objectives and supports the Wildlife Agencies' findings. To further clarify the approaches to adaptive management, subsection (1) on page VI-23 of the Draft NBHCP has been revised. See the Final NBHCP for specific text changes.

Response to Comment I13-48

As described in Responses to Comments I13-2, I13-17, I13-32, and I13-37 and on pages VI-22 through VI-27 of the Draft NBHCP, adaptive management changes identified in the NBHCP do not include every measure contained in new recovery plans. Consistent with the No Surprises Policy, the NBHCP's adaptive management program is part of the NBHCP's Operating Conservation Program. That is, implementation of an Adaptive Management program is required by the NBHCP's terms and conditions, and the NBHCP allows for certain specified revisions to the Plan through this process. Because these revisions are contemplated by the NBHCP, they would not be considered "unforeseen circumstances" within the meaning of the No Surprises Rule.

As described in Section VI.K of the NBHCP, the NBHCP provides that no changes to the Plan will be required through the Adaptive Management process that result in an increase in the amount of land required as mitigation. Consistent with Judge Levi's decision, however, the NBHCP was revised to eliminate the fee cap contained in the 1997 NBHCP in order to ensure that adequate funding would be available to implement the NBHCP, including its adaptive management provisions. Thus, it is acknowledged that the Mitigation

Fee may increase over time in order to fund the adaptive management and other provisions of the NBHCP. Nonetheless, the revised NBHCP clarifies the approach in implementing revisions to the NBHCP through adaptive management in order to ensure that the modifications are limited in their effect and are consistent with the USFWS No Surprises Rule.

The first sentence of the second paragraph of Section VI.H.1 of the NBHCP has been revised to further clarify adaptive management revisions due to recovery plan adoption and to be consistent with the text contained in the fourth paragraph of Section VI.H.2 of the NBHCP. See the Final NBHCP for specific text changes.

Response to Comment I13-49

See Response to Comment I13-16 regarding the trigger for additional reserves to be managed marsh.

Response to Comment I13-50

See Response to Comment to I13-16 regarding the trigger for additional reserves to be managed marsh.

Response to Comment I13-51

When and if a Swainson's Hawk Recovery Plan is promulgated, the adaptive management section of the NBHCP would make appropriate modifications as indicated in Responses to Comments I13-2 and I13-47.

Response to Comment I13-52

The NBHCP Independent Mid-Point Reviews provide an opportunity for the Wildlife Agencies and Land Use Agencies to review the status of the NBHCP conservation strategy as described on page VI-29 of the Draft NBHCP. The text on page VI-29 of the Draft NBHCP describes the process which the USFWS must follow to support an increase in managed marsh. The managed marsh component may be revised either in response to (1) monitoring results from the Basin collected up until the Independent Mid-Point Reviews, (2) adoption of a recovery plan information, or (3) peer-revised new scientific information if one of these triggers demonstrates that adjustments in the managed marsh component are necessary. The Independent Mid-Point Reviews provide for such adjustments, consistent with the adaptive management provisions, in order to ensure that adjustments in the managed marsh component on Mitigation Lands are supported by scientific evidence. Additionally, the Independent Mid-Point Reviews are designed to provide a mechanism by which the overall conservation strategy may be adjusted in the event only one Land Use Agency participates or if both Land Use Agencies participate. If scientific data demonstrate that the ongoing managed marsh-to-uplands habitat on the Mitigation Lands meets the NBHCP's biological goals and objectives, then the NBHCP does not require an increase in the managed marsh component even after recovery plan adoption. For these reasons, the second paragraph on page VI-29 of the Draft NBHCP is retained.

Response to Comment I13-53

The commentor states that the only terms of the NBHCP not subject to revisions by the USFWS are the 0.5:1 Mitigation Ratio, the 75 percent cap on the percentage of managed marsh, and the acquisition of up to 20 percent of the Mitigation Lands in Area B. The NBHCP Operating Conservation Program includes adaptive management. As described above in the Responses to Comments I13-2 and I13-5, however, the NBHCP identifies the allowable revisions to the NBHCP which may arise due to adaptive management. Consistent with the HCP Handbook, the NBHCP has attempted to define any mitigation range of adjustments that might be required as a result of the proposed adaptive management measures. The NBHCP sets forth a mechanism to determine the magnitude of the change in management measures based upon the results of monitoring. It is anticipated that the monitoring program will establish thresholds that will be used to determine the level of deviation from the desired condition. In this regard, the NBHCP anticipates that the greatest potential shift in conservation strategies anticipated to result from a future Giant Garter Snake Recovery Plan would consist of the transition from rice cultivation to managed marsh. The commentor's proposed change is not consistent with the adaptive management component of the NBHCP and is not accepted.

Response to Comment I13-54

We concur that the term "net loss" misrepresents the impact of City's development to the giant garter snake. The text has been changed to note this correction. See the Final NBHCP for specific text changes.

As noted by the commentor, if the City were the sole jurisdiction participating in the NBHCP, then a net increase in giant garter snake habitat would result from implementation of the NBHCP. The NBHCP is, however, a multi-jurisdictional plan. Therefore, impacts are first assessed for the Natomas Basin overall, as a result of the combined Planned Development of the City, Sutter County, and Metro Air Park. The NBHCP mitigation strategy is based on the maximum feasible mitigation to address impacts to the Basin overall as a result of Planned Development. The nexus is therefore between the overall impacts resulting from Planned Development in both the City and Sutter County, and the maximum feasible mitigation. Just as the City assists in mitigation for the giant garter snake, Sutter County assists in mitigation for the Swainson's hawk even though the County's individual impact to the hawk is less than the City's individual impact.

Thus, Chapter VII, Take Levels and Impacts of the Plan, summarizes *overall impacts and specific impacts by jurisdiction* in order to comply with Judge Levi's ruling to address the "severability" of the NBHCP. In the event the City should be the only participant under the NBHCP, the types of habitat created by the mitigation program would be revised to reflect the specific impacts of the City exclusively. This process is explained in more detail on pages V1-36 - 38 of the Draft NBHCP.

Response to Comment I13-55

See Response to Comment I13-7 regarding nesting tree mitigation.

Response to Comment I13-56

Technical corrections and typographical errors identified are included in the amended text (see the Final NBHCP for specific text changes.)

Response to Comment I13-57

Editorial corrections accepted. See the Final NBHCP for specific text changes.

Response to Comment I13-58

Although no known nest sites have been identified in the Basin, the white faced ibis is now a frequent winter visitor to the Basin. Over the 50-year term of the NBHCP, nesting sites may be established if suitable habitat exists. The NBHCP notes that the ibis prefers to nest in large emergent marshes, which are extremely limited in the Natomas Basin. Therefore, the NBHCP states that “potential nesting habitat is very limited.”

Response to Comment I13-59

Comment noted and the NBHCP text has been changed. See the Final NBHCP for specific text changes.

Response to Comment I13-60

Comment noted and the NBHCP text has been changed. See the Final NBHCP for specific text changes.

Response to Comment I13-61

The commentor notes that because the bank swallow nests in vertical cliffs and riverbanks, it is not reasonable to expect the species to use riparian habitats created by TNBC. Further, the commentor notes that since there are no identified nesting areas in the Natomas Basin, the mitigation measures and associated text regarding impacts should be changed.

Page II-30 (Biological Data) of the Draft NBHCP notes that the State’s nesting population of bank swallows is currently concentrated on the banks of Central Valley streams. In addition, approximately 75 percent of the current breeding population occurs along the banks of the Sacramento and Feather Rivers. The Applicants concur that Planned Development is not expected to have impacts to nesting sites because the interior of the Natomas Basin does not support suitable nesting habitat for these species. However, the Basin does provide foraging habitat in proximity to nesting areas along the rivers. For this reason, Planned Development may directly impact foraging areas and indirectly impact nesting areas. Relative to the suitability of Mitigation Lands to support this species, it is important to note that TNBC is encouraged to purchase lands within the Swainson’s Hawk Zone adjacent to the Sacramento River, and that TNBC is additionally authorized to purchase lands on the waterside of the levees in the Natomas Basin. For these reasons, it may be possible that some of the Mitigation Lands could serve as suitable foraging and river bank nesting sites for the species.

The commentor is also concerned that the NBHCP mitigation measure for the bank swallow includes TNBC’s use of approved recovery plans for the species. The commentor is concerned that the permittees should not be financially responsible for recovery.

The commentor raises an important issue since the purpose of an HCP is to mitigate the impacts of development, not to compensate for impacts unrelated to the authorized development. To this end, pages VI-25 and VI-26 of the Draft NBHCP explain the relationship of recovery plans to HCP obligations.

Response to Comment I13-62

See Response to Comment I13-61.

Response to Comment I13-63

For the California tiger salamander, the western spadefoot toad, vernal pool species, and other covered plant species, it is possible that pre-construction surveys may identify the presence of these species, although at this time there are few identified occurrences of these species in the Natomas Basin. Thus, the land use agencies require pre-construction surveys and mitigation measures for these species (see pp. V-15 - V-16). In addition, pages V-24 - V-27 include TNBC's full mitigation requirements for the California tiger salamander, the western spadefoot toad, vernal pool species, and other covered plant species. This section builds on the 1997 NBHCP, which "directed the TNBC to consult with the TAC, species researchers and experts periodically during implementation of the Plan to determine what, if any, additional conservation opportunities for the species might exist within the Plan's proposed reserve system" and further stated "such opportunities might include, but are not limited to, establishment of habitats suitable for the species within the reserve system and if appropriate re-introduction of species into the Basin" (see pp. IV-35 - IV-37 of the 1997 NBHCP).

The Applicants agree that the method of creating new opportunities for these species should be part of TNBC's Site Specific Planning Process, and should be accomplished in conjunction with creation of suitable mitigation for habitat types of species known to be present and directly or indirectly impacted by Planned Development in the Basin. To this end, the text of the full mitigation measure in Chapter V has been amended. See the Final NBHCP for specific text changes.

Response to Comment I13-64

In response to this comment (see also above Response to Comment I13-63 regarding the California tiger salamander) text clarifications are proposed for TNBC's western spadefoot toad mitigation measure. Proposed text changes are presented in the Final NBHCP.

Response to Comment I13-65

Comments I13-65, I13-66, and I13-67 refer to requested text changes to the summary of mitigation measures included in Chapter VII of the NBHCP for vernal pool shrimp. Proposed text changes to clarify the implementation of this measure have been made. See the Final NBHCP for specific text changes.

Response to Comment I13-66

See Response to Comment I13-65.

Response to Comment I13-67

See Response to Comment I13-65.

Response to Comment I13-68

The commentor requests text changes to the summary of mitigation measures included in Chapter VII of the NBHCP for the delta tule pea. Proposed text changes to clarify the implementation of these measures have been made to the main mitigation measure in Chapter V. See the Final NBHCP for specific text changes.

Response to Comment I13-69

See Response to Comment I13-68.

Response to Comment I13-70

Sanford's arrowhead inhabits ponds, ditches, vernal pools, sloughs, and other slow moving waters. Therefore, the NBHCP references to "ponds and unmaintained agricultural ditches" are not an inconsistent description of the type of habitat used by Sanford's arrowhead (see also p. II-38 of the Draft NBHCP, Biological Data).

Response to Comment I13-71

The commentor requests text changes to the summary of mitigation measures included in Chapter VII for Sanford's arrowhead. Proposed text changes to clarify the implementation these measure have been made to the main mitigation measure in Chapter V. See the Final NBHCP for specific text changes.

Response to Comment I13-72

The typographical error pointed out by the commentor has been corrected. See the Final NBHCP for specific text changes.

Response to Comment I13-73

Comments I13-73 - I13-79 refer to requested text changes to the summary of mitigation measures included in Chapter VII for the other covered plant species. Proposed text changes to clarify the implementation of this measure have been made to the main mitigation measure in Chapter V. See the Final NBHCP for specific text changes.

Response to Comment I13-74

See Response to Comment I13-73.

Response to Comment I13-75

See Response to Comment I13-73.

Response to Comment I13-76

See Response to Comment I13-73.

Response to Comment I13-77

See Response to Comment I13-73.

Response to Comment I13-78

See Response to Comment I13-73.

Response to Comment I13-79

See Response to Comment I13-73.

Response to Comment I13-80

The commentor's remarks concerning the rationale for allowing out-of-Basin Mitigation Land acquisition are noted and the text of the third paragraph of Section VII.G of the NBHCP has been revised. See the Final NBHCP for specific text changes.

Response to Comment I13-81

The commentor is referred to Master Response 1 (Mitigation Ratio). The commentor's remarks concerning the adequacy of the Mitigation Ratio are noted. The fourth paragraph of Section VII.I.1 of the NBHCP has been revised. See the Final NBHCP for specific text changes.

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