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January 10, 2014

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**Re: Comments on Draft EIR for proposed McKinley Village (P08-086)**

Dear Ms Allen:

Friends of the Swainson's Hawk (FOSH) is a local, grassroots, volunteer organization incorporated in 1994 to advocate for preservation of the wildlife and agricultural landscape of Central California that supports the survival of Swainson's Hawk in the wild in California. We are familiar with the activity of Swainson's Hawks in and near the Sutter Landing Park (SLP), and always see Swainson's Hawks at the Park at our annual "Return of the Swainson's Hawk Celebration" held at the SLP each second Saturday morning in April.

The DEIR is inadequate and should be corrected and recirculated for public comment. The following problems in the DEIR need to be corrected.

#### **Value of Foraging Habitat on Site**

The Biological Resources section of the DEIR for McKinley Village appears to give a fair representation of what is known about the nesting activity near the project area. It also identifies the use of the project area as foraging habitat for Swainson's Hawk and other raptors. However the speculative comments about the value and use of the project area by raptors are not supported by evidence. The Biological Assessment is based on a field survey conducted by Dudek's Senior Biologist Kevin Derby on June 13, 2013. A follow-up visit was conducted by Dudek's Senior Biologist Keith Babcock on July 11 to investigate and confirm reports of an active Swainson's hawk (*Buteo swainsoni*) nest in an adjacent neighborhood and to evaluate overall site habitat values with respect to Swainson's hawk and other special-status raptor species potentially occurring on the site. The DEIR describes the site as: "The majority of the site consists of ruderal/disturbed habitat (non-native annual grass species and non-native forbs and/or bare dirt) that is annually mowed and disked in the late spring to early summer months (Figure 5, Vegetation Communities)." (Dudek, Biological Technical Analysis, page 14).

The DEIR's Biological Assessment (Appendix D, page 26) (and DEIR 4.2-32) states the following regarding the quality of the foraging habitat:

"The disturbed/ruderal habitat on the site can provide foraging opportunities for Swainson's hawks, especially during and after annual mowing and disking of the site, which occurs in the late spring to early summer when Swainson's hawks are actively nesting and foraging in the area. However, after mowing/disking occurs, the relative value of this habitat for Swainson's hawk and other raptors likely declines over time as the prey base decreases in numbers due to lack of vegetative cover. Conversely, once the non-native grasses and ruderal vegetation grows back later in the year, the site likely becomes overgrown such that foraging quality again declines until the site is mowed. Consequently, while the site does provide some foraging habitat value to Swainson's hawks, the cyclical nature of management activities on the site likely results in a range of habitat values during the time that Swainson's hawks are in the region (generally April through September), with the highest values expected to occur during and immediately after mowing and disking of the site."

To the contrary, James Estep, in a well-researched study performed by him for the Yolo County NCCP/HCP Joint Powers Agency, *The Influence of Vegetation Structure on Swainson's Hawk Foraging Habitat Suitability in Yolo County*, Estep Environmental Consulting, 2009, found that idle fields are among the best foraging habitats for Swainson's Hawk:

"Idle fields are agricultural fields that have not been planted with a crop. . . . a rather consistent vegetative structure with cover and height changing seasonally but not substantially. Cover remained relatively low throughout the spring and summer (as indicated by the high Lux Quotient values) and the average vegetation height varied from 12 to 27 inches. Seasonal vegetation changes in the study field occurred primarily as a result of changing weed species composition (Plates 51 through 55). Overall, the vegetation structure was much more diverse and variable in this field compared with a more uniform agricultural crop, grasslands, or pastures."

"The pattern in Figure 19 also suggests that prey accessibility was relatively and consistently high during the Swainson's hawk breeding season. Estep (1989) found relatively high rodent abundance in idle fields and habitat use studies have indicated significant use of idle fields by foraging Swainson's hawks (Estep 1989, Babcock 1992, Swolgaard 2008)." (p. 34)

Mr. Estep's study is ATTACHED to our comments. On page 40, idle fields are rated equivalent to irrigated pasture, and annual grasslands (and only slightly lower than alfalfa fields, the top rated foraging habitat). On page 38, Estep acknowledges that height of annual grasslands affects accessibility of prey, but also states that grazing can increase the foraging value. Estep notes as quoted above that idle fields have more complex vegetative structure and typically do not exceed the height of vegetation that would obscure prey. Also in an earlier study, Estep (*Biology, Movements and Habitat Relationships of the Swainson's Hawk in the Central Valley of California, 1986-87*, 1989, p. 41), ATTACHED, noted that "frequently, male Swainson's Hawks would hunt for insects in disced fields first thing in the morning, before hunting larger prey that would be brought back to the nest as provision for the female or as food for the young. In this

instance disced fields seemed to provide a quick and easy source of energy for foraging male Swainson's Hawks during the incubation and nestling periods."

The DEIR also understates the value of the project area as foraging habitat for nearby nesting Swainson's Hawks by asserting that all potential Swainson's Hawk foraging habitat within ten miles is of equal value to SWH nesting near the Project site. The DEIR at 4.2-12 states:

"In an effort to assess this site's relative value to Swainson's hawks in the area, all potential foraging habitats (e.g., agricultural land, open space, open fields) within 10 miles of the known Swainson's hawk nest near the proposed project site were mapped (see Figure 4.2-4). Ten miles is the radius from an active Swainson's hawk nest within which the CDFW recommends considering whether a proposed project will adversely affect suitable foraging habitat and is the approximate maximum flight distance that Swainson's hawk adults will fly from an active nest in search of prey (CDFG 1994). . . . In essence, very little suitable Swainson's hawk foraging habitat occurs within 5 miles of the project site (Figure 4.2-4). The project site represents 0.09% of the total amount of available foraging habitat within the 10-mile assessment area."

The DEIR fails to recognize that urban nesting sites are significantly different than rural nesting sites and that the analysis of available foraging habitat should have focused within 3 to five miles. DEIR fails to acknowledge that the availability of foraging habitat which is close to the nest is far more useful to nesting SWH than foraging habitat that require the parent SWH to travel up to ten miles one-way. As acknowledged in the DEIR, very little suitable Swainson's Hawk foraging habitat occurs within 5 miles of the project site, but the DEIR fails to quantify the proportion of available foraging within five miles that is represented on the project site. It also does not require that the mitigation land be provided within the present area of foraging habitat within five miles.

This is important because "Swainson's hawks have not been found in apparently suitable urban areas in the Central Valley where foraging habitat is unavailable for 5-8 km. . . thus requiring long-distance transport of prey throughout the entire nesting cycle." ("Nest-Site Selection and Reproductive Performance of Urban-Nesting Swainson's Hawks in the Central Valley of California", A. England, J. Estep, W. Holt, *J. Raptor Research* 29 (3): 179-186, 1995, The Raptor Research Foundation, Inc.) This study of urban nest productivity demonstrates that fewer young are fledged from nests in urban settings. (p. 184) It is ATTACHED. Hence the importance of maintaining foraging habitat near the SWH nests affected by the Project-related loss of foraging habitat that will sustain reproduction to maintain the range of the species in the City of Sacramento near the American River Parkway, a wildlife corridor. Mitigation preserving foraging habitat beyond five miles from the project area can not mitigate for the loss of foraging habitat within a mile or two of several urban and American River Parkway nest sites. Mitigation located within ten miles of the project site could reduce the amount of habitat remaining for those nests near the project site to a level which would make one or more nest sites infeasible.

The DEIR's understatement of the value of the foraging habitat on the Project site undermines the DEIR's finding that Project impacts upon Swainson's Hawk foraging would less than significant with mitigation. The DEIR itself states:

"In essence, very little suitable Swainson's hawk foraging habitat occurs within 5 miles of the project site (Figure 4.2-4).

The potential impact to nesting Swainson's hawks, should active Swainson's hawk nests occur within trees on or immediately adjacent to the site or off-site improvement areas prior to development, as well as the loss of approximately 50 acres of foraging habitat (includes both on and off site) potentially used by nearby active nests known to occur in the project vicinity, is considered a significant impact.  
" (DEIR p. 4.2-33.)

In fact the proposed mitigation would NOT reduce the impact to less than significant because the loss of 50 acres of foraging habitat in combination with other losses that can be anticipated (cumulative impacts) are likely to lead to loss of nesting sites in the American River Parkway corridor due to lack of foraging opportunities within five miles, and therefore a loss of the range of the state listed Swainson's Hawk, unless the mitigation land is located in that corridor (see Figure 4.2-4) which has very limited available forage.

If the Swainson's hawk nesting activity on the lower American River Parkway is eliminated, a very important element of the American River Parkway ecology will have been eliminated. **We note that City Policy ER 2.1.9 Wildlife Corridors requires the City to preserve, protect, and avoid impacts to wildlife corridors. If corridors are adversely affected, damaged habitat shall be replaced with habitat of equivalent value. (DEIR page 4.2-28)**

We ask that Mitigation Measure 4.2-1 be amended to:

1) identify total impact to foraging habitat from the project (direct and indirect), that is including foraging opportunity lost in Sutter Landing Park due to construction of the A Street access road, including fencing along the A Street access road, and other project impacts;

2) require foraging habitat mitigation at a ratio of 1:1 within two miles to ensure preservation of foraging habitat within the American River Parkway corridor within two miles of the project site;

3) any conservation easements to be approved by the CDFW and be compliant with Civil Code §§815-816 and other laws and regulations;

4) maintenance and enforcement of mitigation values to be funded through endowment and agreement with third party non-profit conservation entity approved by CDFW and City and qualified under Civil Code §815.3;

5) the location of the mitigation land shall not have the potential to be surrounded by urban development and shall be part of a larger landscape of lands suitable for wildlife use and expected by the City to be permanently retained as open space.

Suggested changes in Mitigation Measure 4.2-1(b) are provided below.

4.2-1(b)

*Prior to the issuance of grading permits, the project applicant shall provide the City with evidence that the applicant has compensated for the loss of Swainson's hawk foraging habitat. Compensation shall provide suitable foraging habitat and shall be consistent with guidance provided in the 1994 Staff Report Regarding Mitigation for Impacts to Swainson's Hawks in the Central Valley of California (CDFG 1994). Suitable foraging habitat includes fallow land, alfalfa or other low growing crops, as defined in CDFG 1994 and Estep ~~1989~~2007*

*Consistent with the CDFG staff report, habitat shall be provided at the ratio of 1:1 (mitigation:impact). The habitat provided shall be of equal or greater quality than that lost as a result of the proposed project and access road. A detailed description of the location and boundaries and a copy of the proposed*

*easements to be maintained and managed as Swainson's hawk foraging habitat shall be provided by the project applicant. The project applicant shall coordinate with the City's Environmental Services Department to ensure the land meets the City's requirements as well as current California Department of Fish and Wildlife (CDFW) criteria.*

*The project applicant shall record one or more conservation easements consistent with the above standards. The conservation easement(s) shall be executed by the project applicant and a conservation operator and shall satisfy the requirements of applicable state law. The conservation easement(s) shall be reviewed by CDFW prior to the recordation. The conservation easements shall prohibit planting or maintenance of vineyards or orchards, corn, rice, safflower, and other crops inconsistent with the foraging value of the project area. Easements shall be located adjacent to permanently protected open space within the American River Parkway corridor and within two miles of the project area*

*The project applicant shall also ~~prepare~~ obtain approval of the City and CDFW for its ~~Swainson's hawk habitat management and monitoring plan for submittal to the City for approval~~ prior to the issuance of grading permits. The plan shall address, at a minimum, the following: contract with a non-profit conservancy responsible for monitoring and enforcement of the easement; crops and/or habitat types that will be planted and managed on the parcel; rotation and harvest schedule if crops are planted; and monitoring that will occur to ensure that the parcel is managed as Swainson's hawk habitat and to report on the extent to which Swainson's hawks are utilizing the parcel as foraging habitat.*

### **Impacts of Project Traffic on A Street on Wildlife and Open Space at Sutter Landing Park.**

The access road (A Street) traffic will diminish the foraging value of the grassy mound landfill by increasing public disturbance of the wildlife area. The grassy mound has been amply documented in past environmental review to be a source of prey for nesting raptors in the American River Parkway. That impact should be identified and mitigated by the EIR.

The DEIR page 2-1 states:

“The McKinley Village Project (proposed project) consists of the construction and operation of a 328-unit residential development, a neighborhood recreation center, parks, and associated infrastructure on an approximately 48.75-acre site within the East Sacramento Community Plan Area located in the City of Sacramento, California (City). . . . [and]

Existing access to the site is from an unimproved roadway and an existing overpass that spans the Capital City Freeway. The Assessor's Parcel Number (APN) for the project site is 001-0170-028. Other properties that would be used for ingress and egress include the following APNs: extension of 40th Street 001- 0170-025, 001-0170-009, 004-0010-031, 004-0010-002; A Street east of freeway 001-0170- 013, 003-0061-011; Alhambra undercrossing 003-0010-003; and A Street west of freeway 003- 0050-016, 003-0050-014, and 003-0050-012.”

**The DEIR fails to analyze or mitigate for the environmental impacts of the conversion of the A Street from a non-public gated dirt maintenance road to a paved public thoroughfare with pedestrian and bicycle access and landscaping.**

A street is presently a rough dirt roadway running from 28<sup>th</sup> Street across the edge of the City's 28<sup>th</sup> Street Sanitary Landfill to the A Street overpass and onto the project site, where it ends. It is within the fence of the landfill, gated, and closed to the public. Its only apparent use is to provide access for maintenance activities on the landfill, and exclusive access for the Applicant

and its agents to the project site. There is no sign indicating that it is a public road. It may be regulated as part of the landfill closure. No information about this area is disclosed in the DEIR.

The DEIR correctly identifies the A Street upgrade as part of the project. It is improvement of off-site facilities that are necessary for the project. The only reason for grading, paving, and improving A Street is to provide public access to the project site on a paved road. There is no other reason to improve that right of way other than to provide vehicle and pedestrian access to the project site. A Street serves nowhere else other than the City Landfill site.

CEQA therefore requires that all impacts related to the upgrade and public use of A Street to access the project site must be fully disclosed and analyzed by this EIR, and mitigation measures required as a part of this project. The A Street upgrade, and opening of A Street to traffic and to the public, cannot be treated as a separate project.

Neither the Biological Resources Section nor the Transportation and Circulation Section of the EIR address the impacts of changes to be made to A Street or the impact project traffic and the public entering and exiting the Project via A Street in Sutter Landing Park, other than analysis of changes in local off-site traffic impacts. Impacts on park users and on the wildlife values, and specifically raptor foraging on the adjacent grassy landfill mound, should be identified and mitigated.

Figures 4.7-8 and 4.7-9 show that over half the inbound and outbound project traffic are expected to use this access corridor. At page 4.9-51, the increase in traffic on 28th exiting the project area is estimated at 1100 trips. This appears to be the estimate for vehicle use of the A Street access which is now closed to the public.

A Street is presently behind a fence, a locked gate, and a sign that says "no trespassing." What will be the impacts of more than 1100 vehicles per day and unidentified number of pedestrians and bicyclists, using this corridor within a City park, and next to a wildlife foraging area that is also a closed and capped old landfill containing who-knows-what?

The County of Sacramento Solid Waste Department commented on the A Street access in its NOP Comment letter dated June 25, 2013, quoted below:

3) According to the NOP, access to the project site would be provided from A Street and 28<sup>th</sup> Street, as well as from 40<sup>th</sup> Street. Apparently the A/28<sup>th</sup> Street access would be routed through the 28<sup>th</sup> Street Landfill. Currently, the road through the landfill that connects 28<sup>th</sup> Street to the A Street Bridge has locked gates at both ends for site security purposes. Site security for landfills is required by 27CCR, sections 20530 and 21135. As such:

- The applicant should demonstrate how access to the project site through the landfill would be accomplished without compromising landfill site security or impeding landfill maintenance and operations.
- The applicant should also demonstrate how traffic would be routed through the landfill in a manner that ensures the safety of the drivers and their occupants. If pedestrian traffic is also intended, pedestrian safety should also be demonstrated.

We could not find any response to County's concerns in the DEIR, which completely ignored this issue. We suggest that there be a mitigation measure that would require the project Applicant to install fencing along both sides of the A Street access road adequate to prevent members of the public from entering the landfill site, and with gates appropriately placed to allow access to the landfill for maintenance and inspection.

The only documentation provided in the DEIR regarding the A Street access is a report (Appendix F) stating that the bridge is not a significant historic structure. Though the project depends upon the A Street access, no description of the A Street improvements to be constructed is included in the project description and impacts of construction are not disclosed nor mitigated.

**Does the City intend to segment environmental analysis of the A Street access road from the project itself? The separation of environmental review of the impacts of the A Street improvements from the McKinley project would be contrary to CEQA because the A Street access is integral to the project.**

Various NOP comments raised questions about the A Street extension that remain unaddressed; impacts are not identified and mitigated. For example Kate Stryker submitted the following comment letter which we share and raise again as a question and comment on the DEIR (which is quoted below):

**Issues of concern for A Street access plan.**

- **There needs to be complete disclosure of what lies beneath the surface of the proposed A Street access and adjacent land.** Is it even feasible to construct the expected roadway (how many lanes including vehicles, bike and pedestrian) in this location? What will be the impact of landfill settling over time on the proposed transportation facility?
- It appears that the access via A Street would be on land zoned and in the General Plan as Park land. It is on land under regulation by the State as a closed landfill. What landfill closure regulations apply to the A Street access? Is such access consistent with the City's permit for the landfill closure?

Other commenters also raised issues about the A Street access road and its environmental impacts that were not addressed in the DEIR. For example, Ellen Threscot, made the following NOP comment quoted below (with which we agree and incorporate as a DEIR comment):

The proposed access point at A Street will create adverse impacts to Swainson's Hawk and potentially other species of concern. These hawks regularly forage on the former landfill adjacent to A Street, and they nest nearby. The streetlights, headlights, car and truck noise, and exhaust will degrade the adjacent habitat and deter the hawks from using this area. These impacts must be considered when analyzing the potential alternatives for project access routes.

**We note that City Policy ER 2.1.9 Wildlife Corridors requires the City to preserve, protect, and avoid impacts to wildlife corridors. If corridors are adversely affected, damaged habitat shall be replaced with habitat of equivalent value. (DEIR page 4.2-28)** The DEIR however does not identify adverse effects to wildlife in Sutter Landing Park due to the project and its A Street access and therefore is inconsistent with this policy. This inconsistency is not identified in the DEIR. Save the American River Association, in its letter commenting on the NOP raised a number of similar questions about impact of the project on the Sutter Landing Park and the American River Parkway which were not addressed in the DEIR.

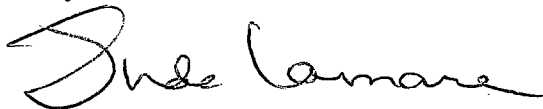
Public Resources Code §21092.1 and CEQA Guideline §15088.5 require that the deficiencies pointed out above and in letters submitted by others be corrected and a revised DEIR be recirculated for public review and comment.

What entity will pay for the cost of constructing the A Street access road and associated infrastructure: the Project? Or the City? If these costs are paid by the City, will the Project reimburse City for its costs of constructing the A Street access road? What is the mechanism which assures that the City is reimbursed for all of its costs of constructing the A Street access road?

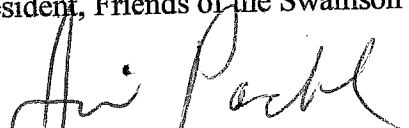
### **Conclusion**

Thank you for the opportunity to comment on this project.

Sincerely



Judith Lamare,  
President, Friends of the Swainson's Hawk

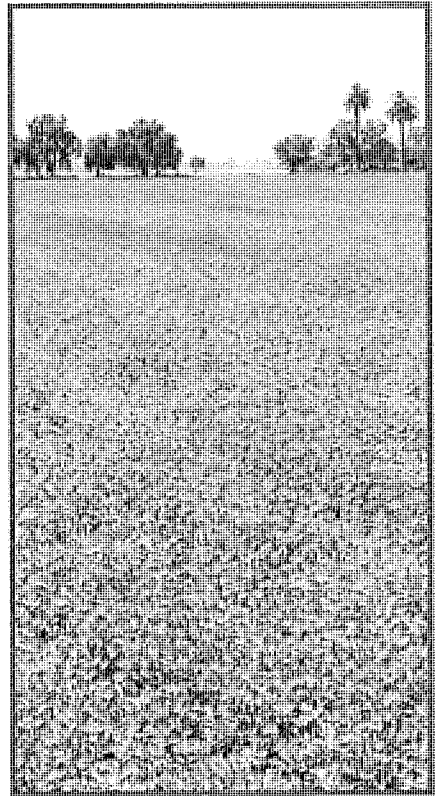


James P. Pachl  
Legal Counsel, Friends of the Swainson's hawk



# The Influence of Vegetation Structure on Swainson's Hawk (*Buteo swainsoni*) Foraging Habitat Suitability in Yolo County, California

February 2009



*Prepared for:*

**Technology Associates**  
International Corporation

Yolo Natural  
Heritage Program

*and:*



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**ESTEP**  
  
*Environmental  
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# **The Influence of Vegetation Structure on Swainson's Hawk Foraging Habitat Suitability in Yolo County**

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February 2009

## Executive Summary

In Yolo County, and throughout the Central Valley, Swainson's hawks are largely dependent on agricultural landscapes for foraging habitat. The value of individual cover types has become an important issue in the management of this species in agricultural areas. Foraging value is primarily a function of prey abundance – the quantity of potential rodent prey in a field – and the accessibility of the prey to foraging hawks. Accessibility is largely a function of the vegetation structure and the ability of a foraging hawk to navigate through vegetation in order to capture prey. In an agricultural landscape, foraging habitat is highly dynamic as vegetation grows and is harvested. Swainson's hawks respond with fluctuating home range size and configuration throughout the breeding season as the foraging landscape changes over time. In Yolo County, the landscape consists of a variety of seasonally cultivated crops with different planting, growth, and harvesting regimes, along with a patchwork of perennial and semi-perennial cover types such as alfalfa, irrigated pasture, and annual grasslands.

This study was designed to investigate the vegetation changes in different agricultural cover types in Yolo County throughout the Swainson's hawk breeding season in order to evaluate prey accessibility, under the assumption that prey accessibility increases with decreasing vegetative cover. The data presented in this report provide some insight into the change in vegetation structure of agricultural cover types used by foraging Swainson's hawks in Yolo County. These data can be used to evaluate the foraging value of individual cover types based on the accessibility of rodent prey to Swainson's hawks and other aerial predators.

Eighteen study fields with 13 different cover types were selected to measure the change in vegetation structure throughout the Swainson's hawk breeding season. Using vegetation height and light penetration (as a surrogate for vegetation cover) measurements, data were plotted as a graphical representation of the change in prey accessibility over time in each cover type. The data indicate that some perennial cover types, such as alfalfa hay and irrigated pasture retain consistently high prey accessibility throughout the breeding season, and most annually cultivated cover types exhibit significant changes in accessibility due to their planting, growth, and harvest regimes. However, some annually cultivated types remain moderately accessible most of the growing season and provide high foraging value during harvest as vegetation is removed when rodent prey populations are greatest.

The mosaic of perennial and annually cultivated cover types in Yolo County creates an agricultural landscape that provides consistently high value due to the season-long availability of some perennial cover types and the seasonal pulse of high value foraging opportunities provided by some seasonally cultivated cover types. The data presented here, particularly when supplemented with data on prey populations and habitat use data from observational studies can assist in the development of management strategies that provide high value Swainson's hawk foraging habitat and retain agricultural productivity in Yolo County.

# Introduction

## Background

In Yolo County, and throughout the Central Valley, Swainson's hawks rely primarily on agricultural lands for foraging habitat. While there is some use of annual grasslands (the cover type that probably most resembles historic foraging habitat conditions), around the periphery of the Central Valley, the majority of Swainson's hawks nest in the interior of the valley where irrigated croplands dominate the landscape. With the diversity of annually rotated field and row crops together with the variety of perennial crops (e.g., orchards, vineyards, alfalfa hay) that occur in the Central Valley, determining which cover types are available as Swainson's hawk foraging habitat and their relative value is important in the management of this state-threatened species.

Yolo County's Natural Heritage Program (NHP) has been actively developing a conservation strategy for the Swainson's hawk in conjunction with the development of its Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP). Through implementation of an interim fee program prior to completion of the HCP/NCCP and ultimately through implementation of the HCP/NCCP, the NHP offsets development-related land use impacts in the county through acquisition and management of conservation lands. Conservation is achieved through management of suitable habitat values on compensation lands in perpetuity.

As part of the development of this conservation strategy and to provide distribution and abundance data through which future monitoring would be based, the NHP funded a 2007 baseline survey of nesting Swainson's hawks in Yolo County (Estep 2008). To further investigate the relative values of different agricultural cover types that could be used in a preserve management strategy, the NHP also funded this study that evaluates the structural changes in crop vegetation over time and the relationship to Swainson's hawk use of agricultural habitats.

## Purpose

The agricultural landscape in Yolo County is a dynamic, highly manipulated system with continual growth and harvest of a variety of agricultural crop types. The Swainson's hawk is an aerial predator in that it hunts almost entirely from the wing. It relies on keen eyesight to detect small rodent prey, and maneuverability and stealth to surprise and capture prey. The Swainson's hawk is an open country soaring hawk that hunts opportunistically across a large landscape (Estep 1989, Babcock 1992, England et al. 1997). This requires it to rapidly assess the relative foraging value of different cover types before committing to more actively searching individual fields for prey. As with most wildlife species, it will generally focus on the most available food resource based on its ability to be successful. For example, the vertical structure and cover of a mature orchard or vineyard may be a cue to a foraging Swainson's hawk that prey may not be sufficiently available and thus these types of agricultural cover types are avoided;

whereas fields with low vegetative profile or fields that are actively being harvested may be a cue that abundant rodent prey may be more available and thus these fields are more likely to be selected for foraging.

The effect of vegetative cover on foraging site selection by Swainson's hawks was addressed by Bechard (1982) in eastern Washington where he suggested that differences in vegetative cover may be more important in site selection than prey abundance. He further suggested that models of foraging site selection that correlate estimates of prey biomass with data on observed foraging habitat use be adjusted for vegetative cover. Janes (1985) constructed a simple model that addressed the relationship between raptor foraging behavior and vegetation characteristics to demonstrate how these factors influence the accessibility of prey.

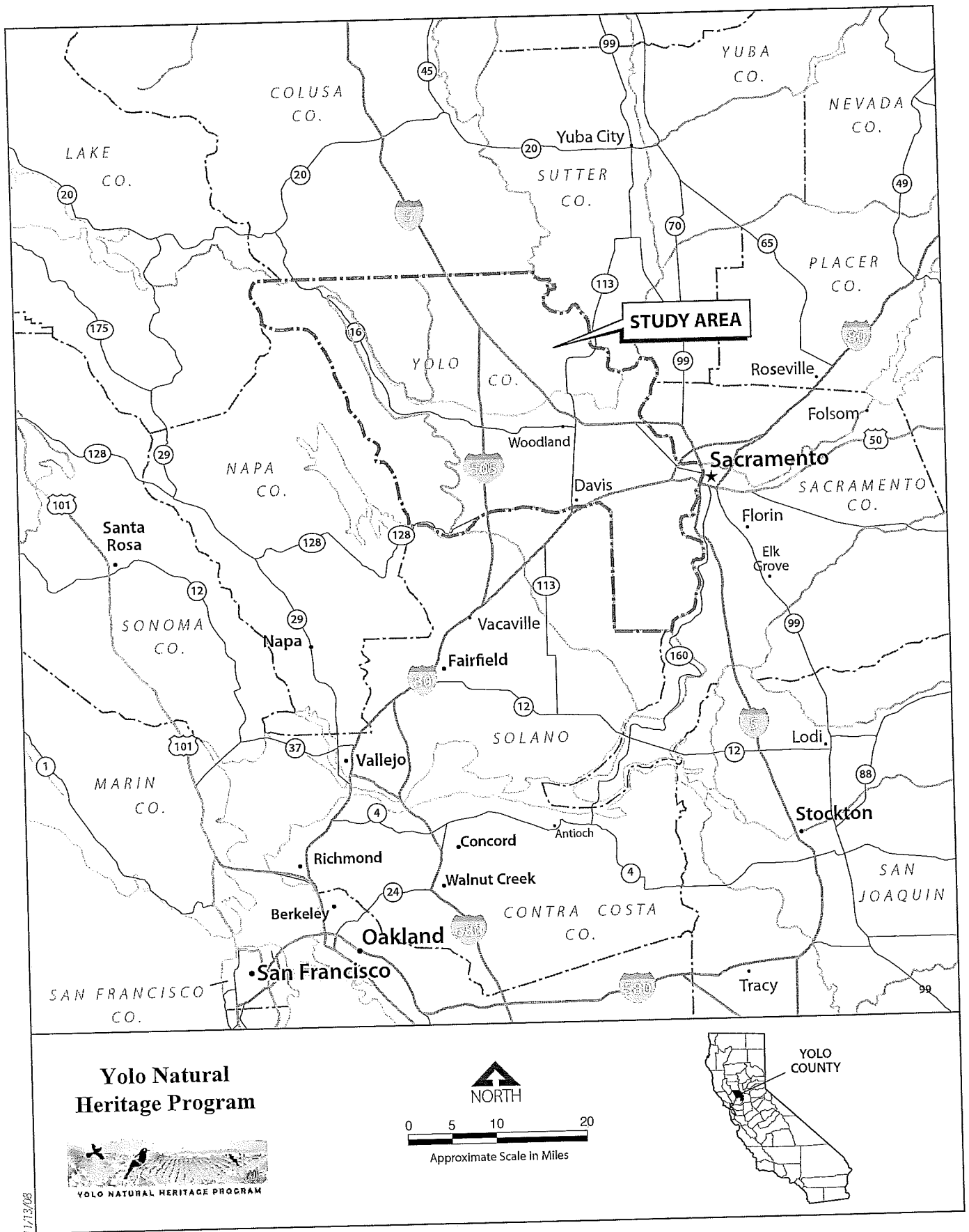
Two primary factors dictate the availability of a particular field as foraging habitat, 1) prey abundance, and 2) prey accessibility (patch size is also an important factor that is not addressed here). For purposes of this study, prey abundance refers to differences in population sizes of small rodents, primarily California vole (*Microtus californicus*) but also including deer mouse (*Peromyscus maniculatus*), house mouse (*Mus musculus*), western harvest mouse (*Reithrodontomys megalotis*), and pocket gopher (*Thomomys bottae*), in different agricultural cover types (Refer to Estep 1989 for data on prey species, relative abundance of prey in agricultural fields, and diet composition). Prey accessibility refers to the ability of a Swainson's hawk to visually detect prey and then negotiate through the vegetation to capture prey. This is in part a function of the extent of vegetative cover that can preclude or reduce visibility or prevent accessibility to the prey.

This study focuses on evaluating differences in prey accessibility in different agricultural cover types throughout the Swainson's hawk breeding season (mid-March to mid-September). Accessibility is defined here in terms of two components of vegetation structure, the extent of vegetative cover and vegetation height, both of which could together or individually reduce the visibility of prey and/or reduce the opportunity to successfully capture prey.

Thus, the scope of this study addresses only the prey accessibility component of foraging habitat suitability. Previous or other ongoing studies on prey abundance and/or habitat use in agricultural habitats (Estep 1989, Babcock 1992, Swolgaard 2008, Anderson et al. *in preparation*) are also used in the discussion of vegetation structure, but no statistical correlations are made. However, the data presented here can be correlated with observational habitat use data collected in Yolo County in 2008, the results of which may be included in Anderson et al. *in preparation*.

### **Location and Description**

The study was conducted in Yolo County (Figure 1) within the boundaries of the 2007 baseline survey (Estep 2008) (Figure 2), but was further refined based on the location of the ongoing foraging habitat use study (Anderson et al. *in preparation*) (See Methods).



**Figure 1**  
Regional Location Map

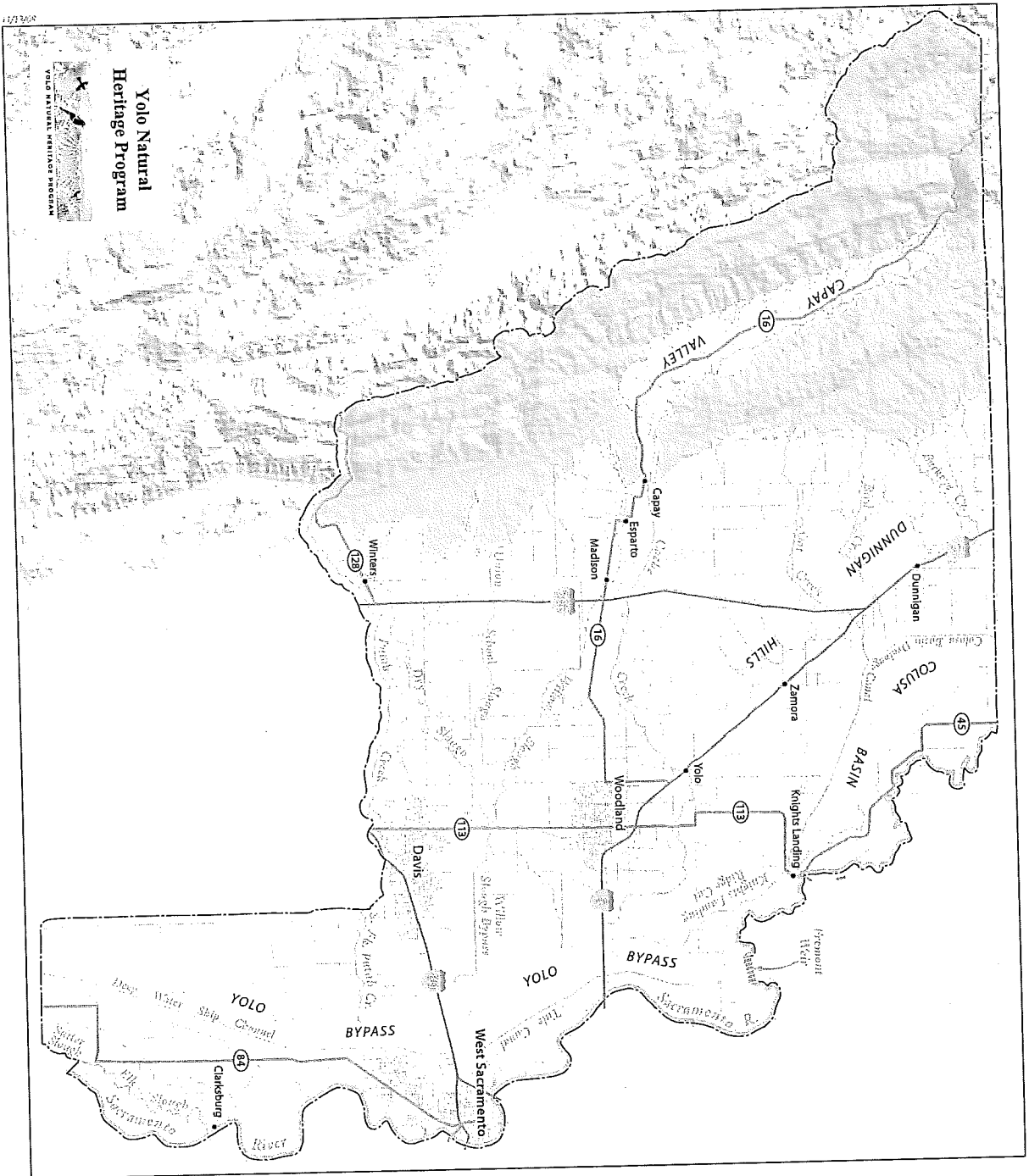



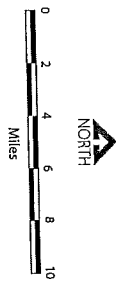


Figure 2  
Study Area Map

- LEGEND**
-  Yolo County Boundary
  -  Study Area Boundary
  -  Outside Study Area



Technology Associates  
1875 North Capistrano

Date: Jan 21, 2008

Refer to Estep (2008) for a complete description of the study area.

Yolo County is a diverse matrix of agricultural types including a variety of row and grain crops, hay crops, orchards and vineyards, and dryland and irrigated pasturelands. Table 1 represents the total harvested acres of agricultural crops and land uses within the study area in 2007, the most recently available data (Yolo County 2008). It indicates the relative abundance of the major crops and combines the crops with smaller amounts of harvested acreage into several miscellaneous categories. In 2007, approximately 80% of the study area, which includes virtually all of the lowland irrigated cropland in Yolo County, was under active agricultural production. Remaining areas included urban areas, wetlands, idle lands, and other uses.

Table 1 indicates that dry pasture (grazed annual grassland) was the dominant land use in the study area; however, it was restricted to the western edge of the valley and the Dunnigan Hills. The majority of the irrigated cropland acreage (57.6% of the total land use) included six crop types: alfalfa, tomatoes, rice, wheat, orchards, and sunflower. The remaining 26% of the land use was comprised of a wide variety of field and vegetable crop types, vineyards, seed crops, and nursery products.

**Table 1. Relative abundance of agricultural cover types in the Study Area in 2007**

Crop Type	Acres	Percent of Total
Dry Pasture	63,606	16.2
Alfalfa Hay	53,959	13.8
Tomatoes	42,149	10.8
Rice	36,600	9.3
Wheat	35,613	9.1
Orchard	29,352	7.4
Sunflower	28,143	7.2
Misc. Field Crops**	26,029	6.6
Vineyard	11,898	3.0
Irr. Pasture	11,661	3.0
Field Corn	11,596	3.0
Grain Hay*	11,168	2.9
Other Seed Crops	9,545	2.4
Safflower	9,033	2.3
Organic Vegetable Crops	5,932	1.5
Misc. Vegetable Crops***	3,561	0.9
Melons	1,256	0.3
Nursery Products	492	0.1
<b>Total</b>	<b>391,593</b>	<b>100</b>

\* includes barley, oat, ryegrass, sudangrass, and volunteer hay

\*\* includes barley, dry beans, screenings, sorghum grain, and stubble.

\*\*\*includes cabbage, cantaloupes, corn, cucumbers, lettuce, melons, peppers, pumpkins, squash, sweet corn, tomatoes, watermelon, and other truck crops

Table 2 represents the change in agricultural crops and land uses in Yolo County between 1997 and 2007. Overall, the agricultural landscape has remained fairly constant over time and several major crop types have been a significant part of the agricultural landscape in Yolo County for many decades, including tomatoes, wheat, alfalfa, and field corn. However, there have been some notable changes in the percentages of harvested



Table 2. Acreages of Agricultural Crops and Land Uses in Yolo County between 1997 and 2007.

Crop Type	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Dry Pasture	144,950	136,368	119,533	124,258	126,510	130,411	133,965	147,098	136,806	122,775	135,775
Wheat	54,836	39,014	33,832	43,144	43,774	33,076	56,227	44,098	34,647	20,976	35,613
Tomatoes	49,200	56,600	67,114	48,575	48,575	42,812	38,274	45,129	42,232	37,026	42,149
Field Corn	36,915	18,518	13,513	28,125	18,308	9,195	6,495	9,523	4,238	2,452	11,596
Alfalfa Hay	33,983	42,430	43,024	38,720	45,885	53,231	55,914	52,904	45,776	59,269	53,959
Safflower	27,040	24,278	29,545	24,558	27,650	20,765	20,674	9,991	12,955	10,176	9,033
Rice	25,800	17,816	24,483	36,229	28,717	32,446	37,303	45,655	34,670	29,997	36,600
Misc. field	20,925	21,273	23,358	29,331	29,191	28,701	33,029	33,962	54,226	30,416	26,029
Other seed	18,464	16,768	14,782	14,331	12,214	13,247	11,414	13,102	13,191	12,481	9,545
Orchard	18,368	18,039	17,023	18,889	18,056	18,478	19,364	19,313	21,777	22,988	29,352
Irr. Pasture	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000
Vineyard	6,833	8,410	8,704	9,496	10,242	9,699	10,334	9,909	8,464	10,156	11,898
Oat Hay	6,018	8,802	7,340	7,566	7,826	13,466	10,958	7,383	7,855	*	*
Sunflower	5,679	5,831	10,381	4,377	4,540	3,372	9,294	13,403	13,615	16,623	28,143
Melons	5,324	2,333	4,575	4,342	3,364	3,613	4,005	2,585	1,949	1,778	1,256
Sugar Beets	4,526	1,570	1,871	1,029	0	0	0	0	0	0	0
Cotton	4,418	2,857	1,956	4,160	3,600	4,052	**	**	**	**	**
Misc. veg	1,800	1,440	1,286	2,730	1,955	1,761	1,669	1,443	1,205	3,044	3,561
Organic veg	1,556	2,425	2,830	3,335	6,253	5,405	4,692	4,998	4,515	6,003	5,932
Nursery crops	524	293	406	440	584	502	515	489	505	571	492

\* In 2006, oat hay was included under 'grain hay', which included barley, ryegrass, sudangrass, and volunteer hay. Prior to 2006, these other 'grain hay' types were included under Miscellaneous (with the exception of sudangrass, which was identified separately from 2000 to 2002), making it difficult to detect trends in these other hay crops using this data set (miscellaneous also included other types such as soybeans, sorghum grain, and dry beans). Thus, for purposes of evaluating crop trends, oat hay and alfalfa hay are the only hay crops addressed individually in this assessment.

\*\* cotton was included under miscellaneous from 2003 to 2007.

acres of several crops, even within the last 10 years (Table 2). Among these include a decrease in corn and safflower; an increase in alfalfa, sunflower, orchards, vineyards, and rice; and the elimination of sugar beets.

## **Methods**

The following process was used to measure changes in prey accessibility based on vegetation structure in a variety of agricultural cover types during the Swainson's hawk breeding season.

### **Selection of Study Area**

The study area was located in Yolo County, within the study area as defined by the 2007 baseline Swainson's hawk survey (Estep 2008) (Figure 2). The study was conducted in coordination with a concurrent Swainson's hawk foraging habitat use study (Anderson et al. in progress), which established six survey routes within the 2007 baseline survey area. To the extent it was possible given the availability of appropriate fields and access permission to fields, the study area is thus further defined by these survey route corridors, which extend 400-feet on both sides of roadways.

### **Selection of Study Fields**

The fields were selected based on their general location and access permission from landowners. To the extent possible, study fields were selected along one or more of the established foraging study area routes. Thus, many of the study fields will be among those included in the foraging habitat use study area. Among the fields that were along the foraging study area routes and for which access was granted, study fields were randomly selected from the total available along the foraging study area routes using a blind process of number selection within each cover type. In cases where fields could not be selected along the foraging habitat study routes, the only rule that was applied to the selection of fields was that they were within the 2007 baseline survey area.

A total of 18 fields were selected representing 13 different cover types (Figures A-1 through A-5 in Appendix A). The cover types were also representative of many of the most common cover types and agricultural crops in Yolo County. In several cases, two fields of the same crop type were selected because of their relative abundance and in most cases the potential for differences in crop variety (e.g., sunflower) and timing of management practices. The fields sampled and the date of sampling is presented in Table 3. All fields were at least 50 acres in size and were part of a large contiguous agricultural landscape.

### **Sampling Procedures**

Sampling procedures were modified from Bechard (1982). A line transect was established within each field. Transects were 100 meters in length each with 10 data

collection points spaced at 10-meter intervals. The start point of each transect was randomly selected by establishing a numbered grid across the field and selecting a grid cell through a random number generator. The start point was the center of the cell. The end point was determined through a coin toss to determine whether the transect is in a north-south or east-west orientation. Data were collected at each of the ten data collection points along the transect once every two weeks between April 11 and September 19 for a total of 10 transect surveys for each field, equating to a total of 180 transect surveys and 1,800 data points.

Two measurements were taken at each data collection point.

1. Vegetation height – measured with a standard tape measure, and
2. Light penetration as a surrogate for vegetation cover by measuring the amount of visible incident radiation that penetrates the plant canopy to ground level. These measurements were taken using a Sper Scientific 840020 Light Meter Lux/FC.

At each data collection point, two light measurements were taken, one at breast height (or above the vegetation) and one at ground level. All samples were taken between 1000 and 1400 hrs.

The unit of measurement used to determine differences in light penetration through the vegetation is the Lux, defined as the measure of the *apparent* intensity of light hitting or passing through a surface. Lux readings were taken at breast height (or above the vegetation) and at ground level at each data collection point. The relationship  $\text{Lux (ground level)}/\text{Lux (above vegetation)}$  is referred to for purposes of this report as the Lux Quotient. The Lux Quotient was thus the measure of the difference of light penetration between the point above the vegetation and below the vegetation at ground level. This relationship corrects for differences in ambient light resulting from cloud cover, time of day, and other causes. The Lux Quotient was averaged across each transect and then used to plot the change in light penetration in each field during the breeding season as vegetation grew and then was harvested. Height measurements were plotted with the Lux Quotient measurements to illustrate the relationship between vegetation height and visibility through the vegetative cover.

Vegetation data were also generally correlated with Swainson's hawk activity patterns (e.g. arrival, reproduction, migration, etc.) to evaluate the seasonal availability of each cover type to foraging Swainson's hawks. Swainson's hawks arrive in Yolo County from early March to early April. Breeding pairs immediately begin constructing new nests or repairing old ones. Eggs are usually laid in April and incubation continues until mid-May when young begin to hatch. The nestling period typically continues through early to mid-July when young begin to fledge. After fledging, young remain near the nest and are dependent on the adults for about four weeks, after which they permanently leave the breeding territory (Anderson et al. *in progress*). By mid-August, breeding territories are no longer defended and Swainson's hawks begin to form communal groups. These groups begin their fall migration from late August to mid-September (Figure 3).

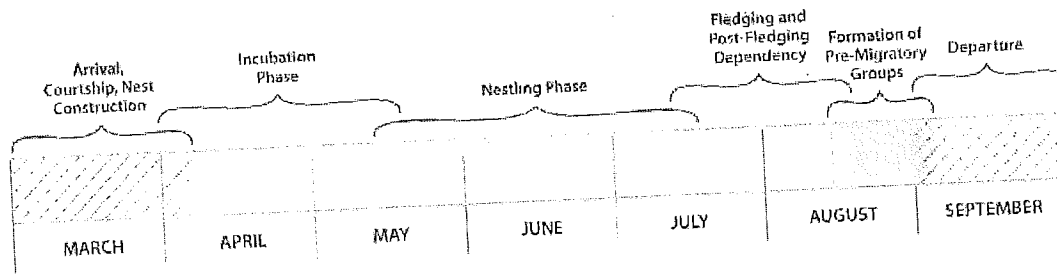


Figure 3  
General Representation of Swainson's Hawk Breeding Cycle  
in the Central Valley

## Results

The results are presented in a series of graphs that indicate the change in cover and height values over time, and suggest the change in prey accessibility over time for each of the cover types sampled. Lux Quotients for all cover types and all survey dates are presented in Table 3. Note that a low Lux Quotient indicates lower light penetration (or greater vegetative cover) and a high Lux Quotient indicates higher light penetration (or less vegetative cover). So, a decreasing Lux Quotient indicates vegetation growth, and an increasing Lux Quotient indicates a management activity (e.g., mowing, harvesting) or deteriorating vegetation (as with corn or sunflower late in the season) that has reduced vegetative cover. A Lux Quotient of '1.0' indicates no difference between light penetration at breast level and at ground level, which suggests a field that has been harvested and all vegetation has been removed. Representative photographs are also provided for each of the cover types indicating the change in vegetation structure at specific sampling dates.

In general, the results are fairly intuitive in that as vegetation cover increases over time as crops mature, light penetration decreases. This is followed by a sharp increase in light penetration as crops are harvested. The following addresses each of the 18 fields in the order they are presented in Table 3.

Keep in mind that these data represent only one factor, prey accessibility, which determines overall foraging habitat suitability. However, existing data on habitat use and prey abundance primarily from Estep (1989), Babcock (1992), Swolgaard (2008), and Anderson et al. (*in preparation*) are used to make general correlations between these factors at different periods of vegetation development. For example, during the early spring when some crops are initially planted, vegetation cover is low and thus accessibility as indicated by the Lux Quotient value is high. However, prey abundance is likely also low during this period due to the lack of vegetation and field preparation activities. So, the actual foraging use of a field during this period may be low. Similarly, following harvest (and following the point at which prey abundance is greatest and

**Table 3. Lux Quotients.**

Field No.	Cover Type	Date Sampled																		
		4/11	4/15	5/3	5/7	5/14	5/23	5/27	6/7	6/10	6/21	6/24	6/28	7/19	7/20	8/7	8/8	8/22	9/5	9/19
1	Wheat	0.06		0.29			0.13		0.17		0.81			1.02		1.00		1.00	1.00	1.00
2	Wheat		0.18	0.24			0.12		0.14		0.21			0.99		1.00		1.00	1.00	1.00
3	Tomatoes		1.00	0.94			0.58		0.15		0.06			0.28		0.36		0.71	0.99	1.00
4	Tomatoes				0.96				0.27		0.21			0.27		0.38		0.29	0.92	0.94
5	Alfalfa	0.90		0.12			0.75		0.38		0.88			0.10		0.31		0.52	0.53	0.01
6	Alfalfa		0.51	0.83			0.18		0.77		0.26			0.35		0.75		0.31	0.67	0.40
7	Sunflower	1.00		0.91			0.36		0.28					0.04		0.22		0.50	0.77	0.96
8	Sunflower		1.00		0.97			0.44		0.11		0.11		0.07			0.41	0.49	0.89	1.00
9	Safflower		0.40		0.18			0.02		0.06			0.05	0.04	0.06			0.04	0.96	1.00
10	Safflower		0.50		0.40			0.32		0.15			0.25	0.29	0.21			0.51	0.97	1.00
11	Corn		1.00	0.60			0.18		0.02				0.11		0.04			0.07	0.26	0.97
12	Garlic	0.62					0.25		0.53		0.76			0.04		1.00		1.00	1.00	1.00
13	Peppers		1.00	1.00			1.00		0.77		0.48			0.27		0.27		0.31	0.34	1.00
14	Orchard		0.94		0.85			0.66		0.67				0.46			0.37	0.35	0.61	0.48
15	Vineyard		0.59	0.55				0.50		0.48				0.37			0.33	0.42	0.52	0.45
16	Idle	0.59		0.65			0.49		0.57				0.60		0.70			0.66	0.62	0.53
17	Irr.pasture	0.81				0.90		0.66		0.70				0.50			0.65	0.60	0.76	0.64
18	Grassland	0.55			0.56			0.62		0.48		0.43		0.49			0.59	0.61	0.55	0.62

accessibility is high due to removal of vegetation), the field may then be disked and prepared for future planting, and thus prey abundance may again be at a low point while accessibility is maximized due to lack of vegetation.

These distinctions between prey abundance, habitat use, and cover are generally made for each cover type; however, no statistical correlations or adjustments are made here. However, these data may be correlated with habitat use data in Anderson et al. (*in preparation*).

## **Wheat**

Wheat is one of the most common crop types in Yolo County comprising over 9 percent of the agricultural landscape in 2007 (Table 1). It has declined in abundance over the last ten years (Table 2), but has been part of the typical crop rotation in the county for many decades (Yolo County 2002). Wheat is planted in the late fall or early winter, and is usually harvested in June. It forms a relatively uniform cover of dense grass-like vegetation that reaches a maximum height of between 35 and 40 inches. It is initially harvested to stubble, followed by disking that removes all remaining vegetation.

Two wheat fields were selected for this study. Figures 4 and 5 indicate the change in light penetration (Lux Quotient) and height of vegetation between mid-April and mid-September. When Swainson's hawks arrive into the Central Valley in the early spring, wheat is already approaching its maximum height and cover as indicated by the low Lux Quotient values in mid-April on Figures 4 and 5. The pattern in these figures is indicative of a crop type that is planted in the fall or winter and is approaching its peak vegetation cover not long after Swainson's hawks arrive on the breeding grounds, and then is harvested relatively early in the breeding season, as indicated by the sharp increase in the Lux Quotient and decrease in vegetation height in mid- to late-June. Plates 1 through 5 show a portion of the sequence of growth and harvest for wheat field number 1 as indicated by the change in values in Figures 4 and 5.

This pattern also suggests that prey accessibility is substantially reduced in wheat fields from the beginning of the breeding season up until harvest. In Figures 4 and 5, and in all subsequent figures, the sharp increase in the Lux Quotient and decrease in the vegetation height indicates that cover has been reduced due to harvesting. Where the two lines intersect indicates the approximate time the field was harvested. For most fields, from this point on there is little to no cover in the field as indicated by a Lux Quotient at or nearly 1.0 for the remainder of the season. This is therefore the period when prey accessibility is highest due to the lack of cover. However, while rodent populations may remain relatively consistent in wheat stubble, once fields are disked and accessibility is highest, prey populations are likely at their lowest. In Estep (1989), rodent populations were lower in wheat fields compared with several other crop types and capture frequency decreased substantially following disking of fields. So for many crop types including wheat, the period of harvest and immediately following harvest is probably the most favorable period for foraging Swainson's hawks. For wheat fields, this period is generally during the month of June (Figures 4 and 5).

Figure 4. Vegetation data for Wheat Field #1.

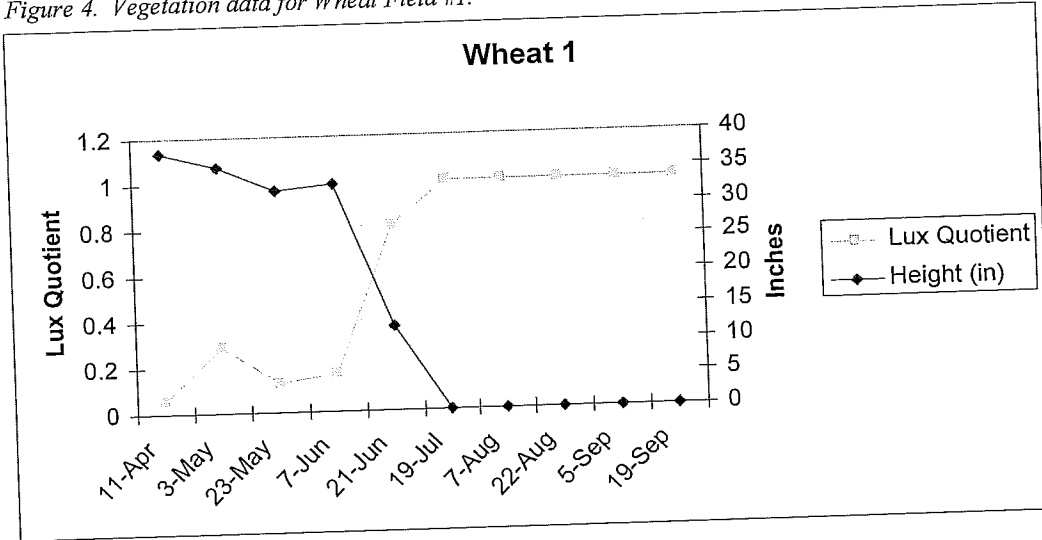
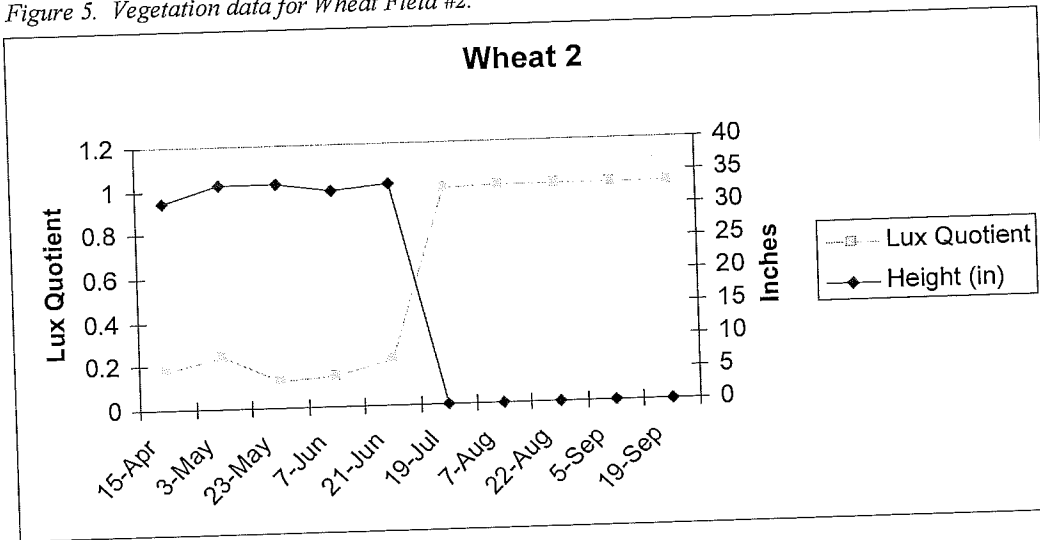


Figure 5. Vegetation data for Wheat Field #2.





*Plate 1. Wheat field '1' on April 11.*



*Plate 2. Wheat field '1' on June 7.*



*Plate 3. Wheat field '1' on June 21 following harvest, with remaining stubble.*



*Plate 4. Wheat field '1' on July 19 following disking.*



*Plate 5. Preparing wheat field on August 7 for next crop.*



## Tomatoes

Tomatoes were the most common vegetable crop in study area in 2007 and comprised over 10 percent of the agricultural landscape (Table 1). Tomatoes have been an important crop type in Yolo County for several decades and despite recent closures of processing facilities in the county, cultivation has remained relatively consistent over the past ten years (Table 2). Tomatoes are typically planted in early spring, and are harvested in August. The crop forms a fairly dense cover that reaches a maximum height of between 16 and 24 inches. Following harvest, waste vegetation remains on the ground, which is removed through subsequent disking.

Two tomato fields were included in the study (Figures 6 and 7). Field 1 was planted approximately two weeks before Field 2. Tomatoes are usually grown from seedling plants, which grow rapidly during the spring months and achieve maximum growth and development around June-July (Figures 6 and 7). This is followed by a gradual deterioration of the vegetation, as indicated by a corresponding increase in the Lux Quotient and decrease in height of the vegetation, as the fruit matures. Harvest occurs in August, which generally corresponds with the point at where the line indicating the Lux Quotient and height intersect. Following harvest, waste vegetation remains on the ground until the field is disked, which eliminates all vegetation from the field, as indicated by the Lux Quotient reaching a value of 1.0 and vegetation height reaching a value of zero. Plates 6 through 9 show a portion of the sequence of growth and harvest for tomato field number 1 as indicated by the change in values in Figures 6 and 7. Plate 10 shows a tomato field being harvested.

Figure 6. Vegetation data for Tomato Field #1.

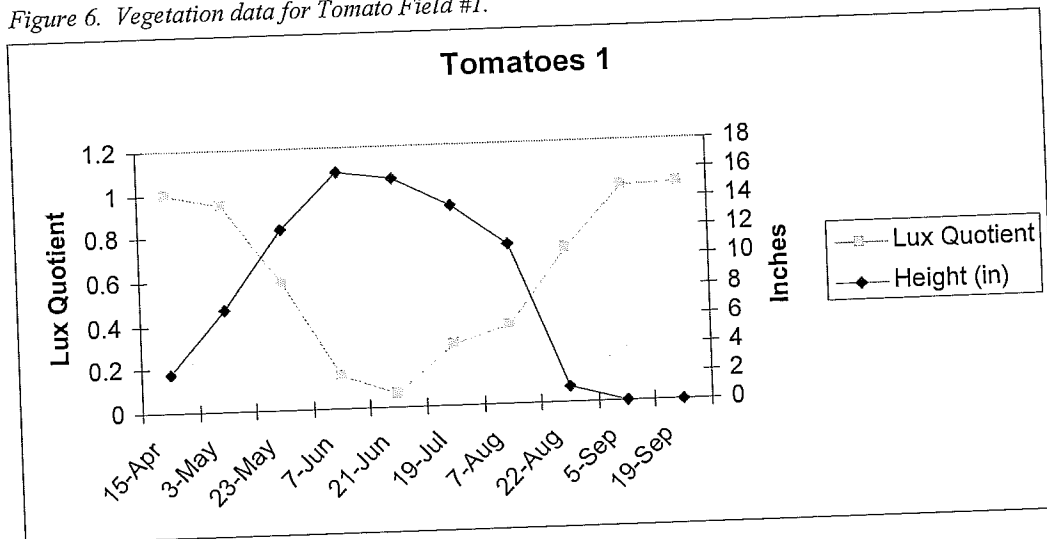
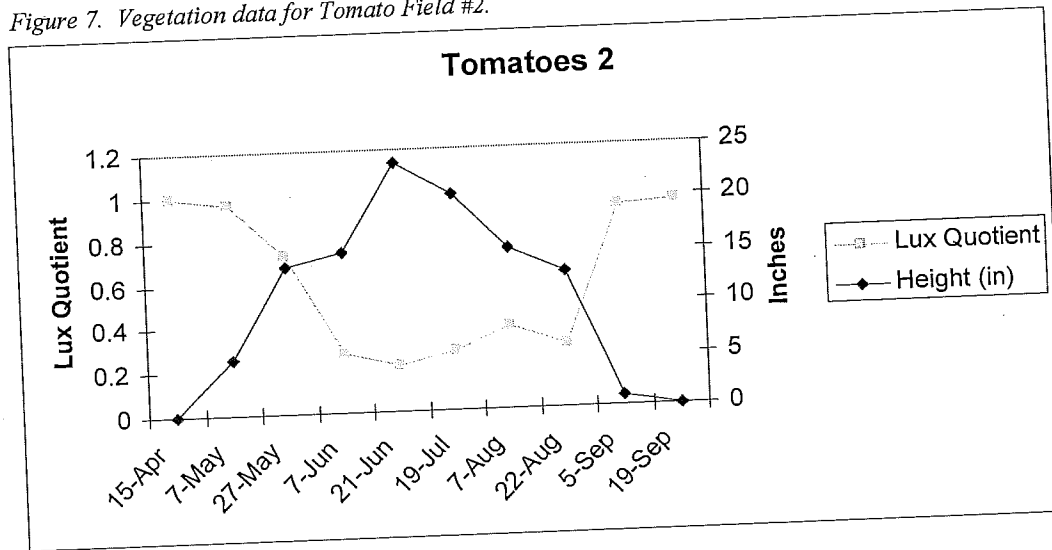
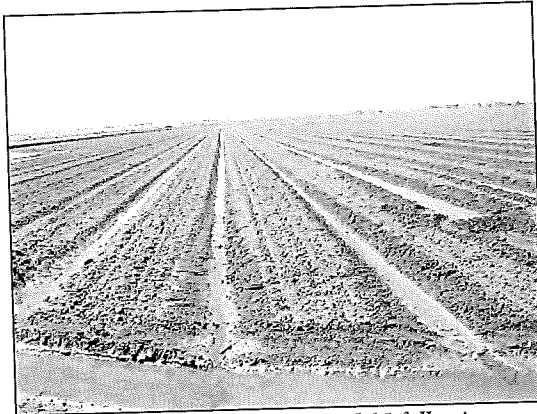


Figure 7. Vegetation data for Tomato Field #2.

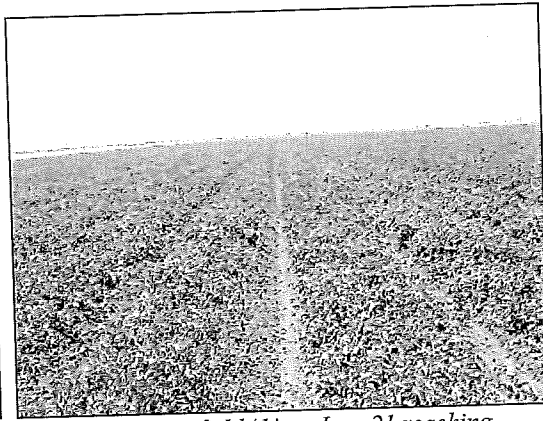


The pattern on Figures 6 and 7 is indicative of crops that are planted in late winter or spring, at or not long after Swainson's hawks arrive into the Central Valley, and harvested in the late summer. These crops grow to maturity during the time Swainson's hawks are present, as indicated by the crossing of Lux Quotient and height lines during the spring months (decreasing Lux Quotient and increasing vegetation height indicating an increase in cover) and peak Lux Quotient in June-July.

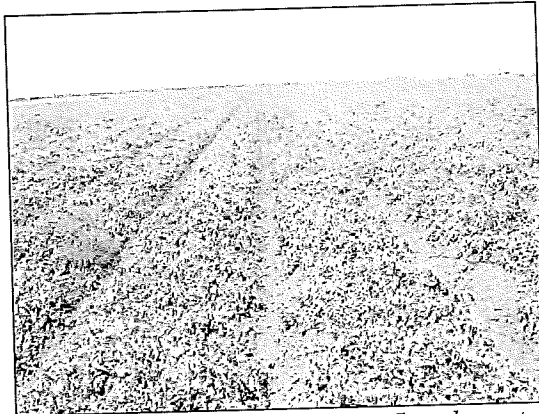
This pattern also is suggestive of a crop type with heightened prey accessibility during the early spring – although probably with relatively low prey abundance, followed by a period of reduced prey accessibility as rodent populations increase, and then followed by a period later in the breeding season when accessibility is at its peak (during harvest) when prey abundance is also greatest. This pattern is consistent with observations of foraging Swainson's hawks in irrigated croplands (Estep 1989, Swolgaard 2008, Anderson et al. *in preparation*) that indicate that while fields may be used throughout the breeding season, use is maximized during the harvesting period, when cover is reduced to expose abundant prey. Because harvesting of tomatoes occurs throughout most of August in Yolo County, this provides an abundant food resource for Swainson's hawks toward the end of the breeding season just prior to migration. Tomato fields supported the highest prey abundance and the most diverse rodent prey species composition of the 12 agricultural cover types sampled by Estep (1989).



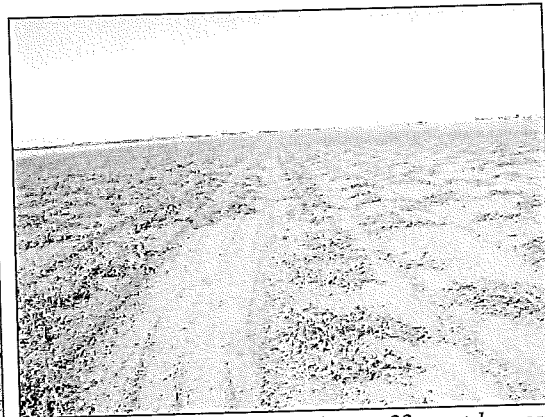
*Plate 6. Tomato field 'I' on April 15 following planting.*



*Plate 7. Tomato field 'I' on June 21 reaching maximum height and cover.*



*Plate 8. Tomato field 'I' on August 7, preharvest with deteriorating vegetation and ripening fruit.*



*Plate 9. Tomato field 'I' on August 22, post-harvest with waste vegetation remaining on the ground.*



*Plate 10. Tomato harvest.*

## Alfalfa

Alfalfa was the second most common agricultural cover type in the study area in 2007 and the most common irrigated crop type (Table 1). It has been an important crop in Yolo County for many years and has increased in harvested acreage over the last 10 years (Table 2). Alfalfa is planted as a perennial crop that typically remains uncultivated for 4 to 7 years in the Sacramento Valley. Fields are cut approximately once per month during the spring-summer growing season using a swather, which cuts the crop and leaves it in windrow strips 3- to 5-foot-wide. These are allowed to dry and are often raked to speed drying. Once dry, balers then gather the crop into hay bales. Alfalfa fields are also irrigated up to once per week during the growing season (Putnam et al. 2001).

Two alfalfa fields were included in the study. Figures 8 and 9 indicate a similar pattern of periodic increase and decrease in cover and a corresponding, but opposite pattern for vegetation height. This pattern is due to monthly cutting, which immediately reduces cover, followed by a period of growth. This pattern, and the relatively low profile of alfalfa fields in general (the vegetation ranges in height from approximately 2 to 30 inches and the average height of the vegetation across an entire growth cycle between cuttings is approximately 13.5 inches) suggests that prey accessibility in alfalfa fields is relatively high throughout the Swainson's hawk breeding season, and because the fields are not cultivated each year, prey abundance also remains relatively stable. This is consistent with findings in Estep (1989) who found moderately high and seasonally consistent prey abundance in alfalfa fields. Still, prey accessibility likely declines when cover increases, then increases following mowing. This is consistent with the findings of Swolsgaard (2008) who found that foraging use of alfalfa fields declined as vegetation height increased, and use peaked at and immediately following harvest when vegetation height was lowest. Plates 11 through 14 show a portion of the sequence of growth and harvest for Alfalfa Field Number 2 as indicated by the change in values in Figures 8 and 9. Plate 15 shows an alfalfa field being cut.

Figure 8. Vegetation data for Alfalfa Field #1.

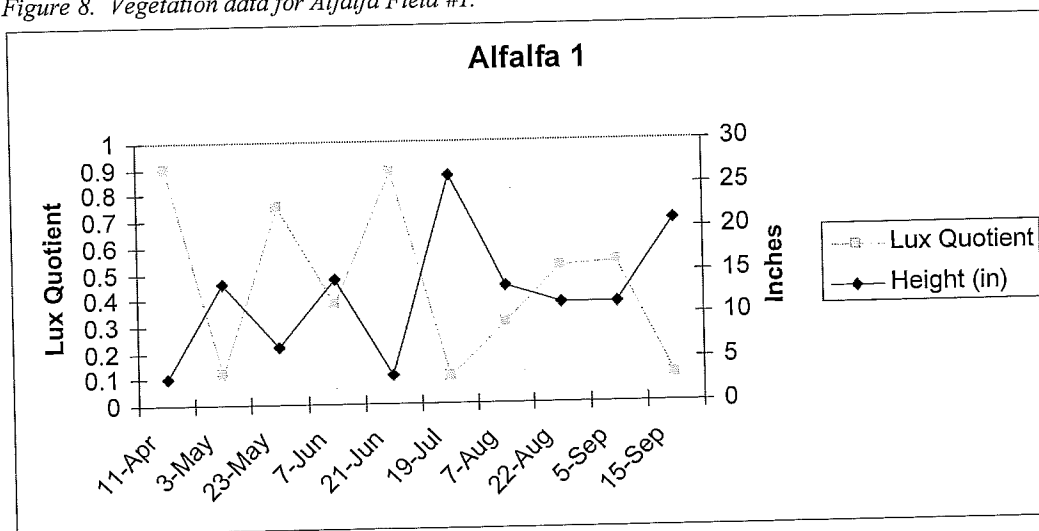
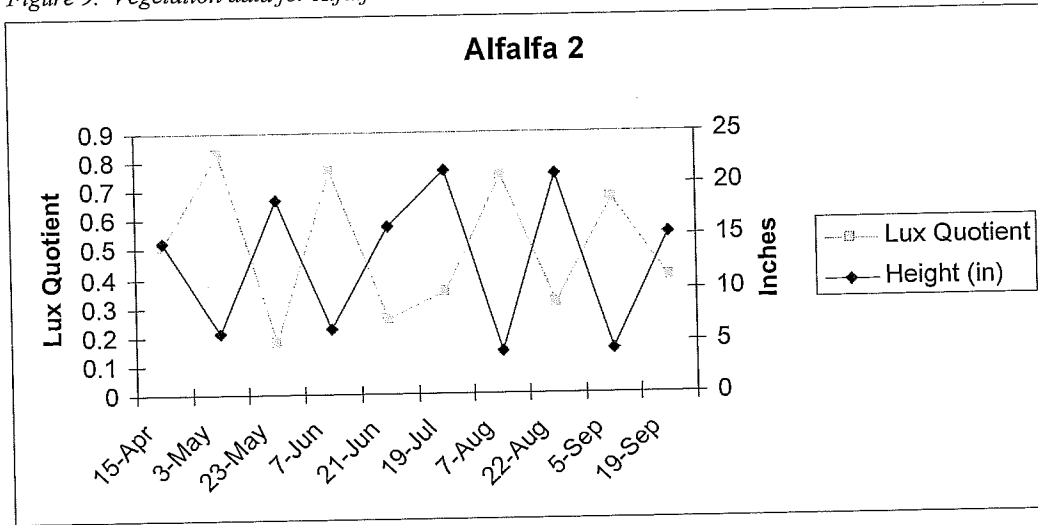


Figure 9. Vegetation data for Alfalfa Field #2.



The pattern in Figures 8 and 9 are indicative of crop types that undergo periodic harvesting, but not seasonal or annual cultivation. So, the pattern remains fairly consistent throughout the spring and summer months. In addition to alfalfa, this pattern is found in similar crops such as clovers, berseem, and other hay and cover crops; however, the frequency of cuttings may less than that of alfalfa.

Alfalfa is widely recognized as having the highest value as Swainson's hawk foraging habitat. All recent habitat use studies in the Central Valley (Estep 1989, Swolgard 2008, Anderson et al. in preparation) found the frequency of use of alfalfa fields the highest of any cover type. The low profile of the crop and the relatively abundant and stable prey populations due to the lack of annual cultivation create conditions that are suitable throughout the Swainson's hawk breeding season. Foraging use is further enhanced through management of the crop, including regular mowing and irrigating. These activities enhance prey accessibility by reducing cover and during flood irrigation, forcing prey to more exposed field borders.

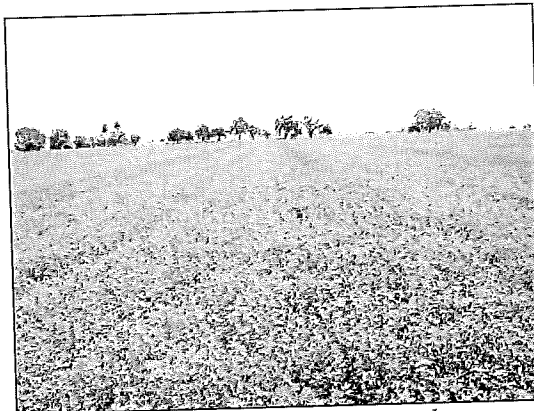
Across the Yolo County agricultural landscape with its diverse matrix of agricultural crop types, alfalfa fields with variable cutting and irrigation schedules can provide a steady supply of high quality foraging habitat over the entire Swainson's hawk breeding season.



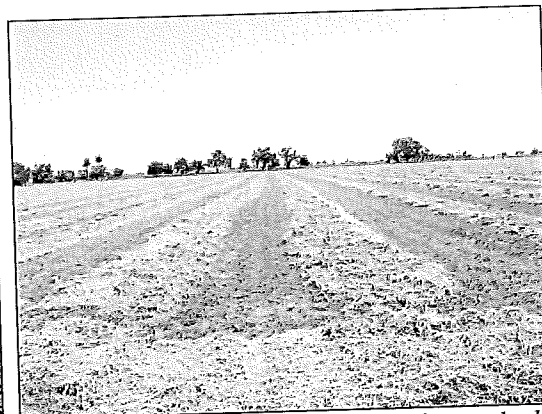
*Plate 11. Alfalfa field '2', post cutting and bailing.*



*Plate 12. Alfalfa field '2', intermediate growth.*



*Plate 13. Alfalfa field '2', mature growth.*



*Plate 14. Alfalfa field '2', windrows of cut and raked alfalfa. The crop is drying prior to bailing.*



*Plate 15. Cutting alfalfa.*

## Sunflowers

Sunflowers have increased in Yolo County four-fold since 1997 (Table 2) to become one of the most common crop types in the county in 2007, comprising over seven percent of the agricultural landscape (Table 1). Sunflowers are planted in the spring and grow rapidly to a height of between 40 and nearly 70 inches depending on the variety. The crop usually grows to a dense uniform canopy of vertical stalks with large flower heads. It is initially harvested to stubble in late summer, followed by disking that removes all remaining vegetation.

Figures 10 and 11 indicate a similar pattern, although the sunflower varieties were different, with Field 1 growing to nearly twice the vertical height as Field 2. Both fields were planted in late April, rapidly grew to a uniformly dense cover exceeding 20 inches in height by mid-to late-May, and reached their maximum height and cover by late June-early July. Maximum cover and height was maintained through the summer months. Both fields were harvested in early September, as indicated by the sharp increase in the Lux Quotient and decrease in vegetation height (Figure 10 and 11). The pattern in Figures 10 and 11 is similar to other crop types that are planted in late winter or spring and harvested in late summer (e.g., tomatoes); however, sunflowers rapidly reach a dense, uniformly tall cover and are not harvested until at and sometimes after Swainson's hawks depart. Plates 16 through 19 show a portion of the sequence of growth and harvest for sunflower field number 1 as indicated by the change in values in Figures 10 and 11.

Figure 10. Vegetation data for Sunflower Field #1.

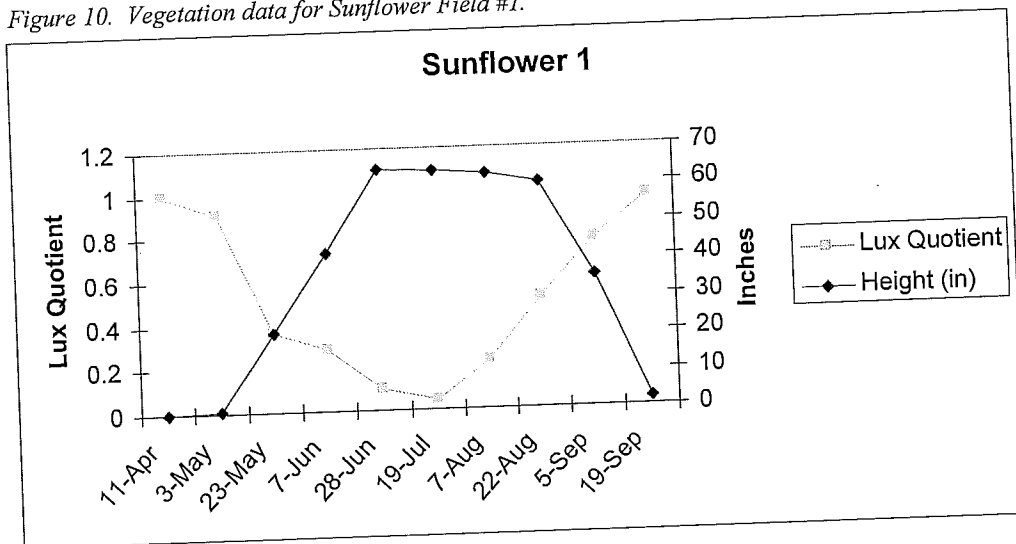
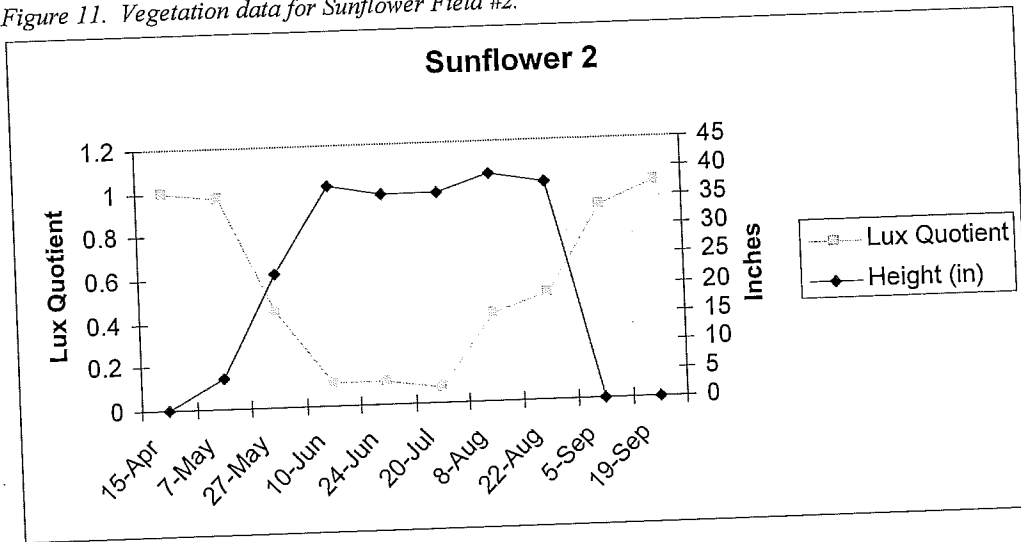


Figure 11. Vegetation data for Sunflower Field #2.



Figures 10 and 11 indicate a pattern that is considered only marginally suitable for Swainson's hawk foraging. This is consistent with reported use of sunflower fields (Estep 1989, Anderson et al. *in preparation*). Estep (1989) also reported relatively low prey abundance in sunflower fields. When Swainson's hawks arrive onto the breeding grounds, sunflower fields have little to no vegetation and likely support low rodent populations. The crop matures rapidly and as prey populations increase, accessibility decreases due to the dense, tall, uniform cover. The mature crop is not harvested until September, providing minimal value to pre-migratory Swainson's hawks. This pattern is also found in several other crop types including corn, safflower, and sorghum (Plate 20).



Plate 16. Sunflower field '1', May 5.

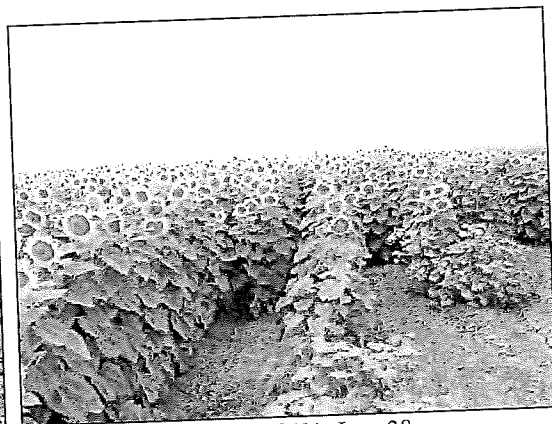


Plate 17. Sunflower field '1', June 28





Plate 18. Sunflower field '1', August 22.



Plate 19. Sunflower field '1', September 19, following harvest.



Plate 20. Sorghum field with similar growth, harvest, and cover characteristics as sunflower, corn, and safflower.

## Safflower

Safflower is another relatively common crop type in Yolo County; however, harvested acreage has declined in the county over the last 10 years (Table 2), and in 2007 comprised just over two percent of the agricultural landscape (Table 1). Safflower is a thistle-like plant that produces many branches, each with a terminal flower head. Each head is a dense capitulum with 20 to 180 flowers, each with stiff, pointed bracts (UC Davis 2006). Safflower fields generally have a dense, uniform structure that grows to a height of 18 to 72 inches, depending on the planting date, plant spacing, and site conditions (UC Davis 2006), forming a dense, prickly cover that can be impenetrable to aerial predators. Safflower has similar planting, growth, and harvesting characteristics as

sunflower and corn. It is planted in the late winter to early spring, reaches maximum cover and height by late June, and is harvested late in the summer, often after most Swainson's hawks have departed.

The pattern in Figures 12 and 13 indicates that safflower is generally planted on or before Swainson's hawk arrival on the breeding grounds. By mid-April, plants have already achieved approximately half of their maximum cover and height and maintain a nearly zero Lux Quotient through early September, when fields are harvested. Harvesting generally cuts plants below the first branch, resulting in approximately 8 to 12-inch stubble of plant stalks, following by discing. Plates 21 through 24 show a portion of the sequence of growth and harvest for sunflower field number 1 as indicated by the change in values in Figures 12 and 13. Plate 25 shows a safflower field being harvested and the stubble that remains immediately following harvest.

This pattern suggests that safflower fields have very low to no accessibility to foraging Swainson's hawks for the most of the breeding season. The dense thistle-like cover creates an impenetrable barrier to aerial predators. The late harvest has limited value to pre-migratory Swainson's hawks.

Figure 12. Vegetation data for Safflower Field #1.

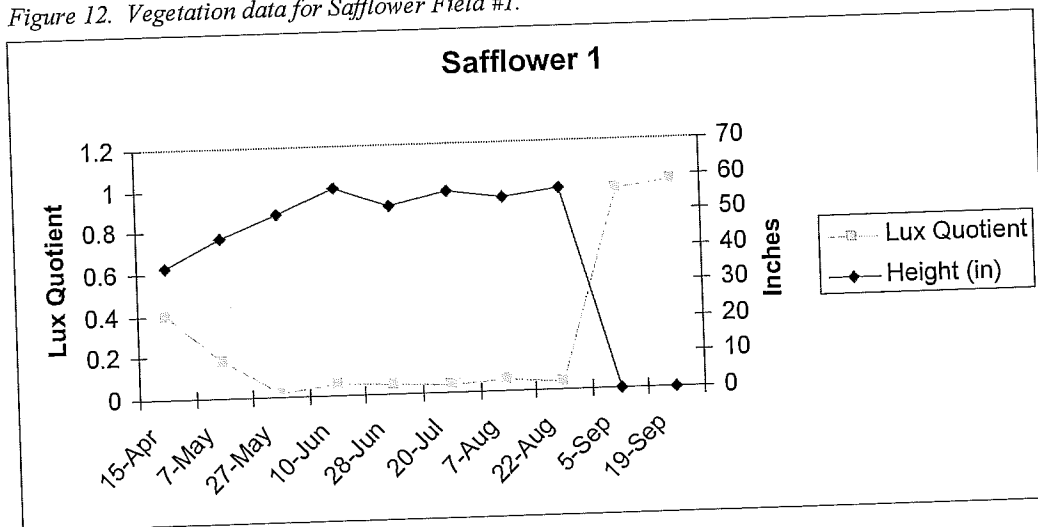


Figure 13. Vegetation data for Safflower Field #2.

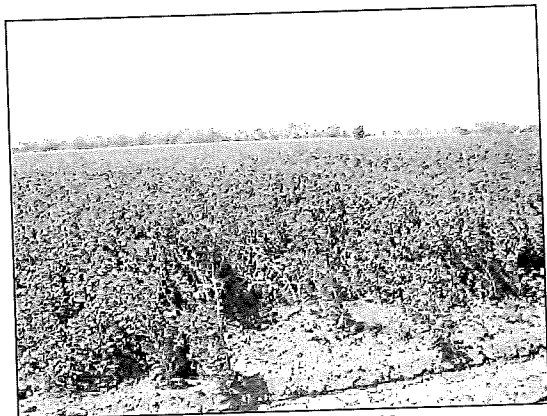
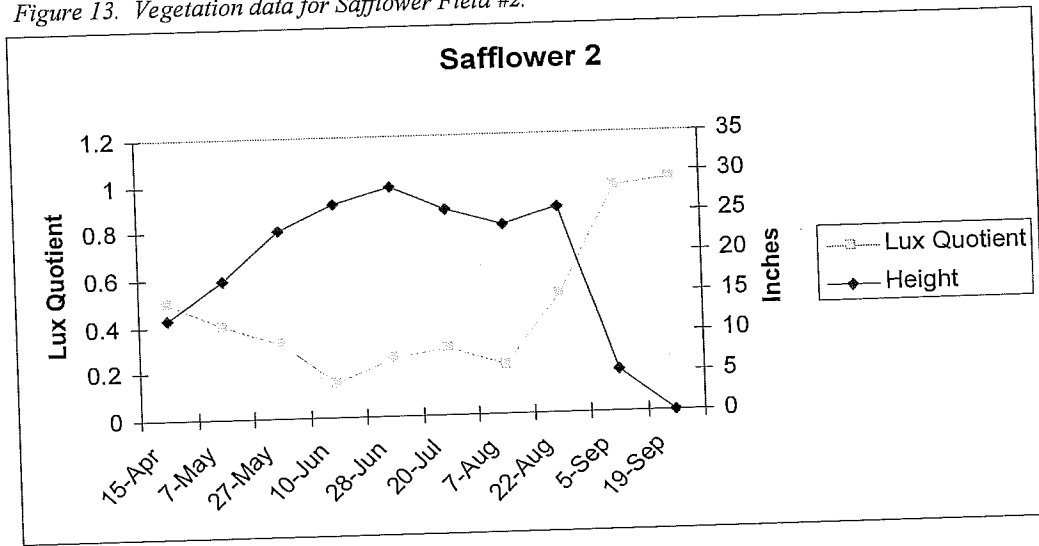


Plate 21. Safflower field '1', June 10, mature vegetation.



Plate 22. Safflower field '1', June 28, with flower heads.

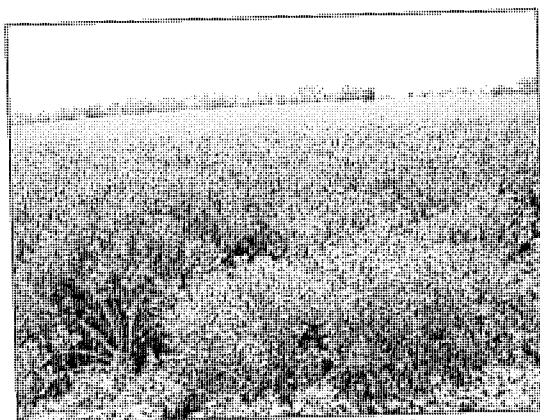


Plate 23. Safflower field '1', August 22.



Plate 24. Safflower field '1', September 5, following harvest.



Plate 25. Safflower harvest showing remaining stubble.

## Field Corn

Field corn remains a relatively important crop type in Yolo County, comprising three percent of the agricultural landscape in 2007 (Table 1); however, harvested acreage has declined substantially in the last 10 years (Table 2). Corn is similar to safflower and sunflower in its planting and harvesting regime. It is usually planted in the spring, grows rapidly during the spring months reaching a maximum height of over 100 inches, and is harvested in late summer, usually after Swainson's hawks have departed the Central Valley.

Figure 14 indicates the change in cover and height of field corn. Planted in mid-April, the crop rapidly grew to approximately one-half of its maximum cover and height by mid- to late-May, and reached maximum cover and height by mid- to late-June. The Lux Quotient was nearly zero between mid-June and early September. Plates 26 through 30 show a portion of the sequence of growth and harvest for field corn as indicated by the change in values in Figure 14.

Field corn is generally regarded as a low value crop type for Swainson's hawk foraging. The pattern in Figure 14 suggests very low prey accessibility through most of the breeding season. Prey accessibility is higher prior to and following planting, but prey abundance is likely low during these periods. Estep (1989) reported relatively low rodent prey abundance in corn fields. As prey abundance increases, accessibility decreases, making corn fields unavailable to foraging Swainson's hawks from mid-May through September. Corn is also harvested too late in the season to provide foraging benefit to pre-migratory Swainson's hawks.

Figure 14. Vegetation data for Field Corn.

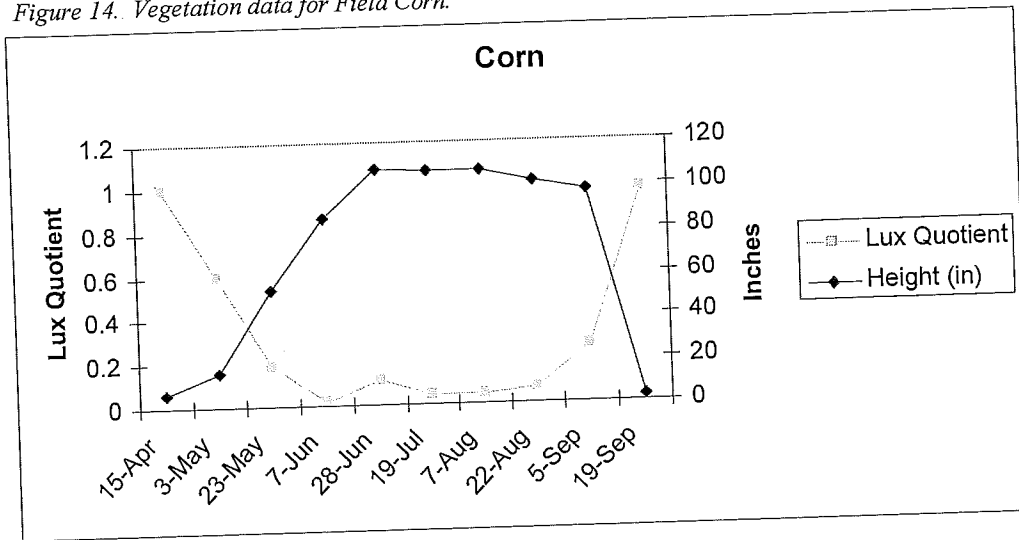


Plate 26. Corn field, April 15.

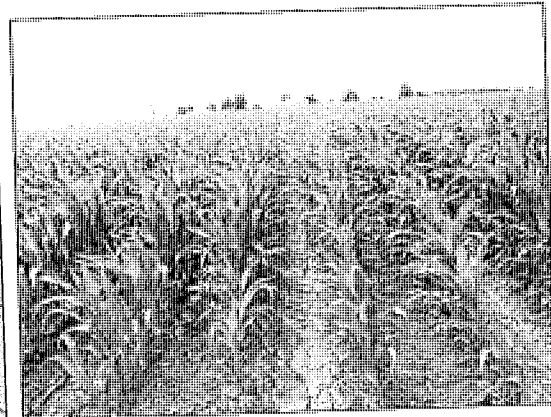


Plate 27. Corn field, May 23.

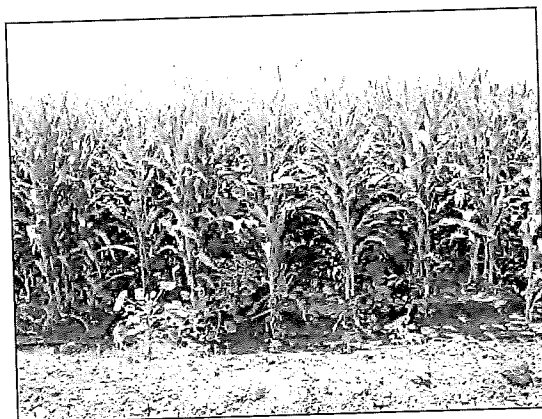


Plate 28. Corn field, July 19.



Plate 29. Corn field, September 5.



*Plate 30. Corn field, September 19, following harvest.*

## Garlic

Garlic is an uncommon crop type in Yolo County. It was selected as a study field because it is representative of many of the other crop types that fall under the categories of miscellaneous field and vegetable crops, and which together comprise a fairly significant percentage of the agricultural land use in the study area (Table 1). Garlic is similar in growth and structure to the onion, although it produces long thin blades instead of the tubular hollow blades produced by the onion (Sims et al. 1976). Garlic is typically planted in the late fall or early spring, grows to a maximum of approximately 35 inches in height, and harvested from late-spring to mid-summer.

Figure 15 indicates that the garlic crop was approaching one-half of its height and cover by the time most Swainson's hawk had arrived on the breeding grounds. Vegetative cover increased sharply and was at its maximum by mid-May. By late-May vegetation began to deteriorate and fall over as bulbs matured, gradually increasing the Lux Quotient (decreasing cover) until the field was harvested in mid-July. Waste material was left in the field until disking of the field occurred in early August. Plates 31 through 35 show a portion of the sequence of growth and harvest for garlic as indicated by the change in values in Figure 15.

In general, Figure 15 suggests that rodent prey were most inaccessible to foraging Swainson's hawks during the spring following arrival and slowly became more accessible as the vegetation deteriorated and the Lux Quotient increased. By the mid-July harvest, most of the vegetation was removed and accessibility was maximized. However, as with other harvested crops, while accessibility was maximized following harvest, prey populations may have declined as vegetation was removed and the field was disked, and thus the foraging value of the field following harvest may have been limited.

Figure 15. Vegetation data for garlic.

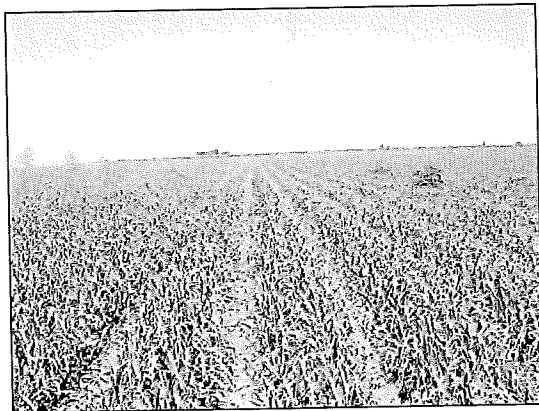
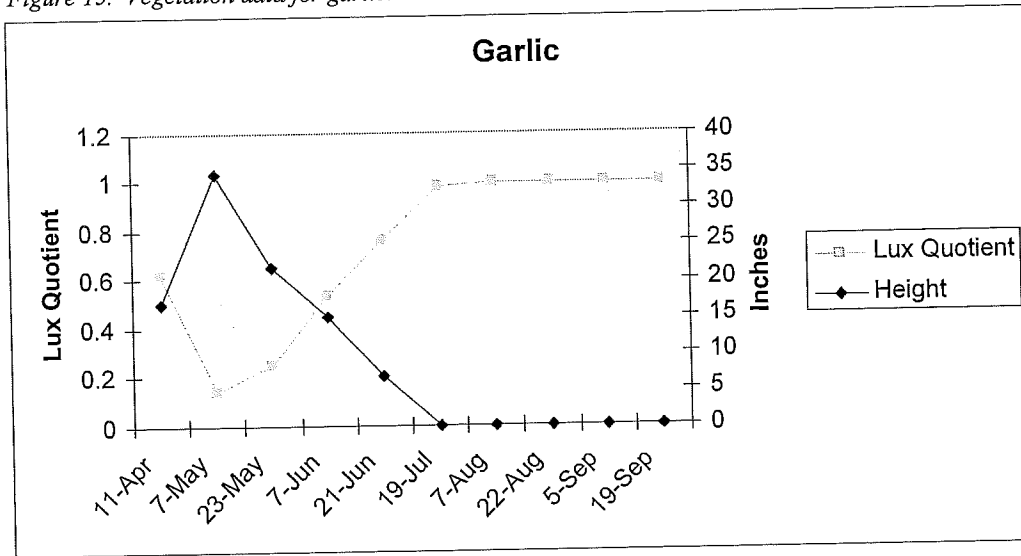


Plate 31. Garlic field, April 11.

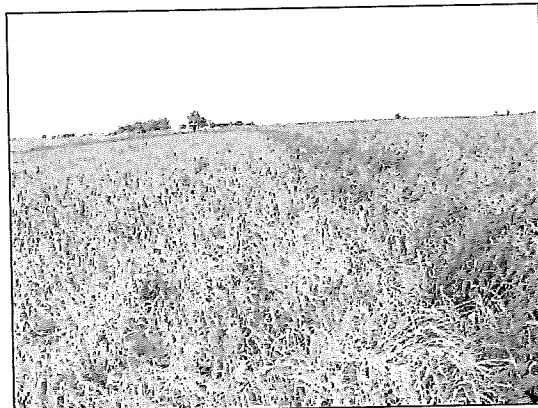


Plate 32. Garlic field, May 23.

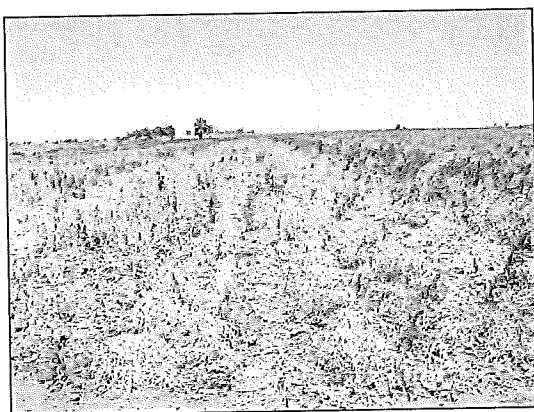


Plate 33. Garlic field, June 7.

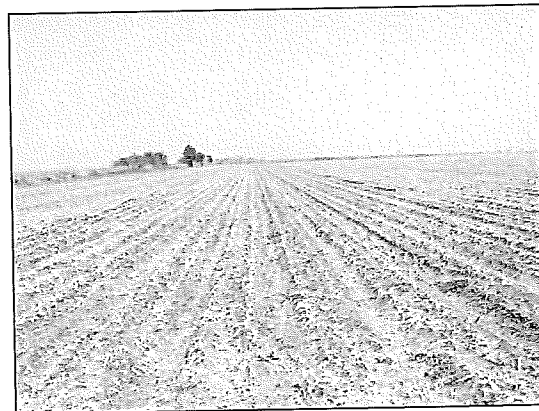
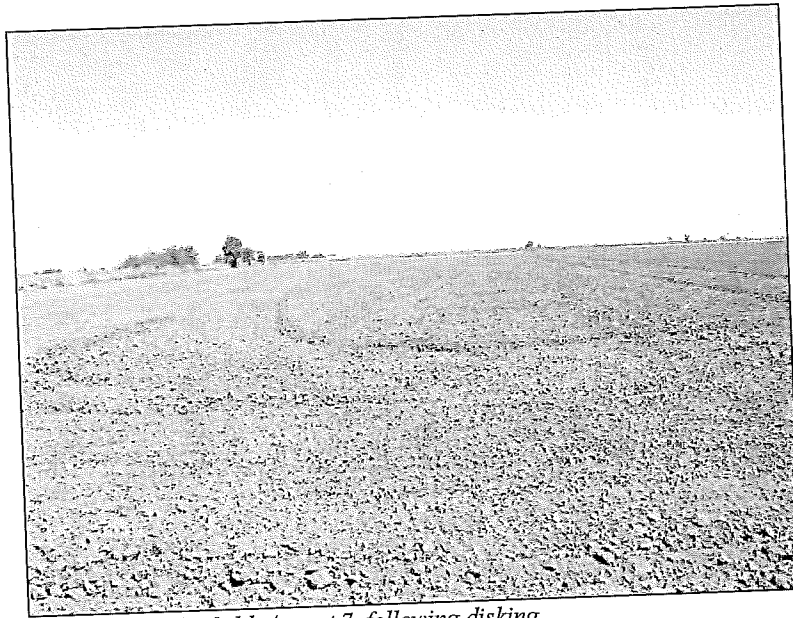


Plate 34. Garlic field, July 19, following harvest.



*Plate 35. Garlic field, August 7, following disking.*

## **Bell Peppers**

Bell peppers and other pepper varieties are relatively uncommon in Yolo County and are included on Tables 1 and 2 under the category of miscellaneous vegetable crops. Along with garlic, peppers were selected to represent the variety of miscellaneous field and vegetable crops that together comprise a fairly significant percentage of the agricultural landscape in the study area (Table 1). Bell peppers are planted in early spring and harvested in late summer. They are usually planted in single or double rows separated by irrigation furrows. The mature crop retains a relatively low profile reaching a maximum height of between 20 and 25 inches, and does not necessarily form a complete vegetation canopy throughout the field. They can be harvested at either at the immature green stage or after the mature color develops (Hartz et al. 2008).

Figure 16 indicates the relatively late planting and slow development of the vegetation. By early July, the crop has reached approximately one-half of its total height. Maximum cover is not reached until mid- to late-July. Maximum vegetation height and cover is maintained from approximately mid- to late-July through harvesting in mid-September, but also retains a relatively open canopy (as indicated by the Lux Quotient not dropping below 0.2). Plates 36 through 39 show a portion of the sequence of growth and harvest for bell peppers as indicated by the change in values in Figure 16. Plate 40 shows the bell pepper field during harvest.

The pattern in Figure 16 suggests that foraging accessibility in bell pepper fields is highest prior to and immediately following planting. Prey populations are likely low during this period, however, so foraging use may not be significant. The crop matures relatively slowly and maintains relatively low cover (high foraging accessibility) through mid-July. From mid-July to harvest when the crop is mature, accessibility is lowest but



still may be marginally accessible to foraging Swainson's hawks. Harvesting occurs too late in the season to provide foraging value to pre-migratory Swainson's hawks.

Figure 16. Vegetation data for peppers.

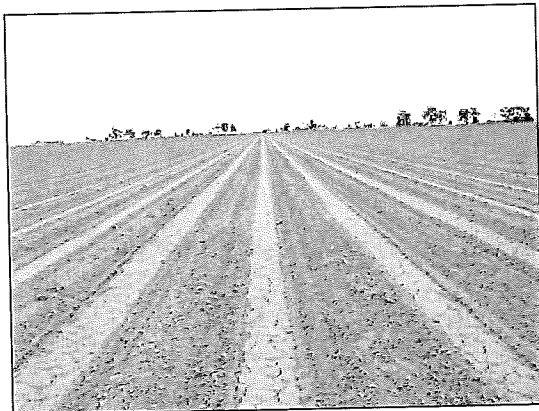
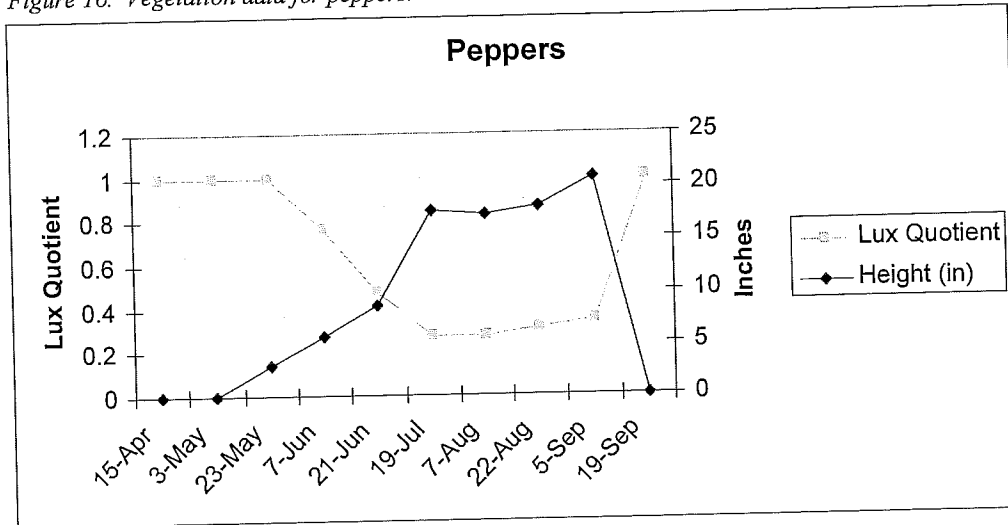


Plate 36. Bell pepper field, May 23.



Plate 37. Bell pepper field, July 19.

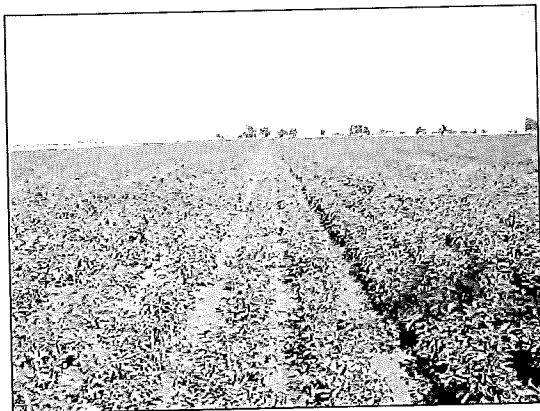


Plate 38. Bell pepper field, September 5.

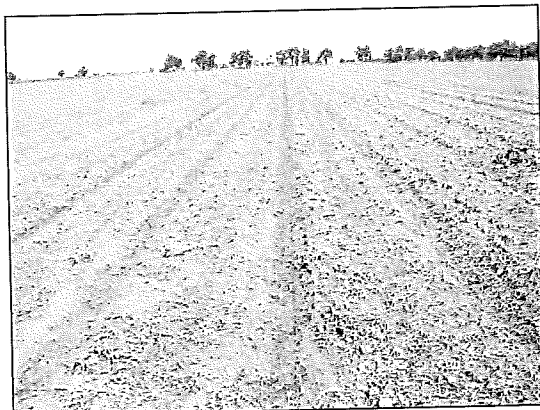


Plate 39. Bell pepper field, September 19, following harvest.



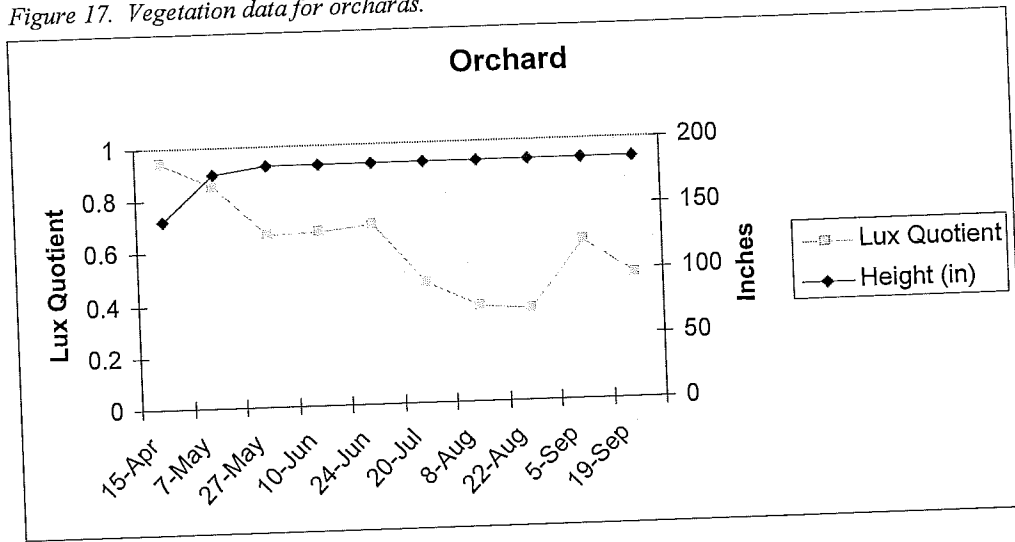
Plate 40. Bell pepper harvest.

## Orchard

Orchards, particularly almonds and walnuts, have been an important agricultural land use for many years in Yolo County. Land devoted to orchards in Yolo County has increased in the last several years (Table 2), and in 2007 comprised over seven percent of the agricultural landscape (Table 1). Orchards are typically planted in rows separated by at least 18 feet stem to stem. Rows in the study field were separated by 24 feet stem to stem. Orchards eventually grow to heights exceeding 150 inches and at maturity can create a uniform and dense canopy cover. However, during the several years of development, trees are smaller and canopy cover is variable. There is also variability between species, with mature walnut orchards having a greater canopy cover than almond orchards. The study field was a relatively young almond orchard. Because orchards are perennial crops (with turnover lifespan often measured in decades), the timing of planting and harvesting are less important in evaluating changes in vegetation structure during the spring and summer. Instead, because most orchard crops are deciduous, observed changes are a result of seasonal growth and leafing of trees.

The pattern in Figure 17 is indicative of a young to moderately-aged deciduous orchard. Vegetation height increased early in the spring as seasonal growth developed and then remained constant throughout the spring and summer. Cover was very low in early spring because the trees are bare and thus light penetration is high. As the trees added vegetation during the spring, cover increased as indicated by the gradual decline in the Lux Quotient. However, as may be typical of almond orchards and because the study orchard was still maturing, cover remained relatively low even when the canopy cover of the trees was greatest. Plates 41 through 45 show a portion of the sequence of growth for the almond orchard as indicated by the change in values in Figure 17.

Figure 17. Vegetation data for orchards.



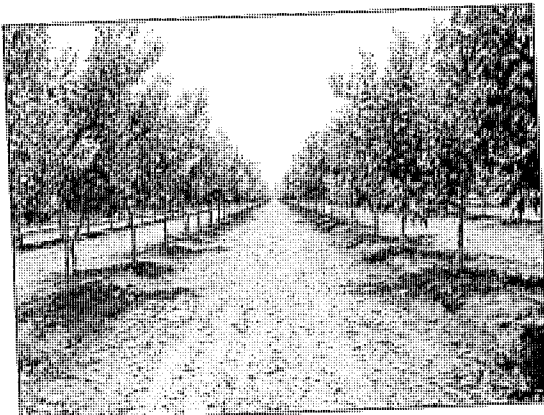
Orchards are generally thought of as having low value as Swainson's hawk foraging habitat (Estep 1989) mainly due to the inaccessibility to the ground through tall and often dense canopy vegetation, and the management of the ground, which is often maintained as bare ground and likely supports relatively low rodent populations (Plate 42). While some orchards may be physically accessible to foraging Swainson's hawks (i.e., they could potentially reach the ground by flying between the rows of trees as contrasted with sunflowers or safflower fields that are completely inaccessible due to vegetative cover), Swainson's hawks generally do not forage in wooded or dense shrub landscapes or landscapes such as orchards and vineyards, that mimic wooded or dense shrub landscapes. The pattern in Figure 17 and as indicated in Plates 41 through 45 suggest that while cover was relatively low to moderate throughout the spring and summer, vegetation height was extreme relative to other crop types and likely was sufficient to preclude Swainson's hawk foraging use of the field. Estep (1989) reported no use of orchards.



Plate 41. Almond orchard, April 15.



Plate 42. Almond orchard, June 10.



*Plate 43. Almond orchard, July 20.*



*Plate 44. Almond orchard, August 22.*



*Plate 45. Almond orchard, September 19.*

## **Vineyard**

Vineyard acreage has nearly doubled in Yolo County over the last 10 years (Table 2) and in 2007 represented approximately three percent of the agricultural landscape (Table 1). Like orchards, vineyards are perennial and therefore observed changes in vegetation structure are a result of seasonal growth of the vines rather than the timing of planting and harvesting. Vineyards are typically planted in rows separated by approximately 10-foot stem-to-stem. Vegetation height can peak above 80 inches and create a fairly dense canopy along rows, but with open space between rows. Vines are pruned each fall or winter and new growth begins developing in late winter-early spring. The ground around and between the vines can be managed either with plant cover or maintained free of vegetation.

The pattern in Figure 18 is similar to that of orchards with a relatively consistent vegetation height following initial spring growth of vines and a relatively open cover (as indicated by the relatively high Lux Quotient) that gradually declines as the vines mature and add vegetation. Plates 46 through 50 show a portion of the sequence of growth for the vineyard as indicated by the change in values in Figure 18. The ground along and between the rows was maintained as bare ground throughout the season, which likely reduced rodent prey populations.

Figure 18. Vegetation data for vineyard.

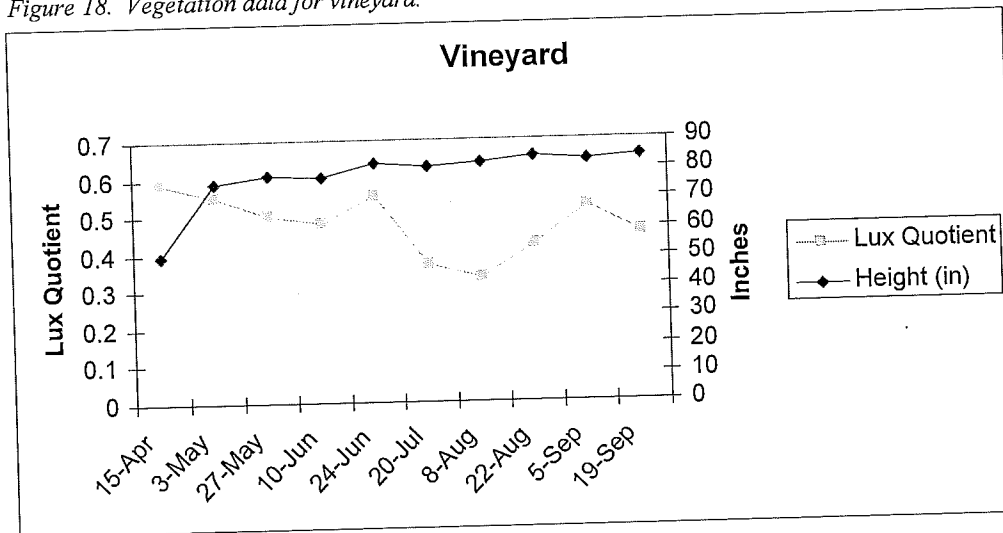


Plate 46. Vineyard, April 15.



Plate 47. Vineyard, June 10.



*Plate 48. Vineyard, August 8.*



*Plate 49. Vineyard, September 5.*



*Plate 50. Vineyard, September 19.*

Like orchards, vineyards are generally not considered a suitable agricultural foraging habitat for Swainson's hawks due to the height and density of the vegetation and relatively low rodent abundance. However, this has been largely speculative based on a general understanding of Swainson's hawk foraging behavior and the lack of foraging observations in vineyards where vineyards were a small component of the agricultural landscape (Estep 1989). Swolgaard et al. (2008) conducted an observation study of Swainson's hawk use of vineyard habitats and found that Swainson's hawks nesting in landscapes dominated by vineyards occasionally used vineyards as foraging habitat – particularly early in the season – although significantly less than expected given their frequency on the landscape. They suggested that vineyard-dominated landscapes are unsuitable for foraging Swainson's hawks at a landscape level, but provided recommendations to enhance vineyard habitats within an agricultural land use mosaic.

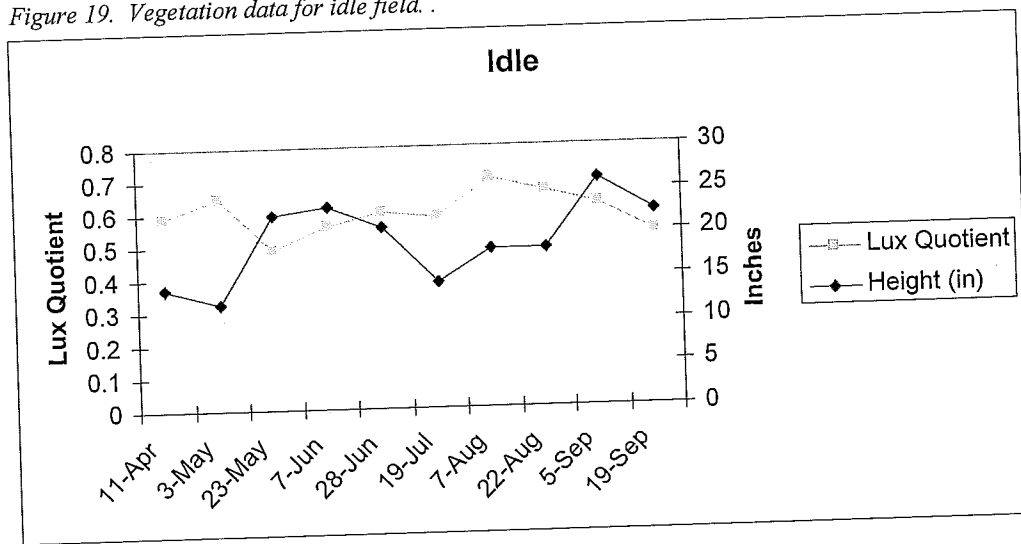
## Idle Field

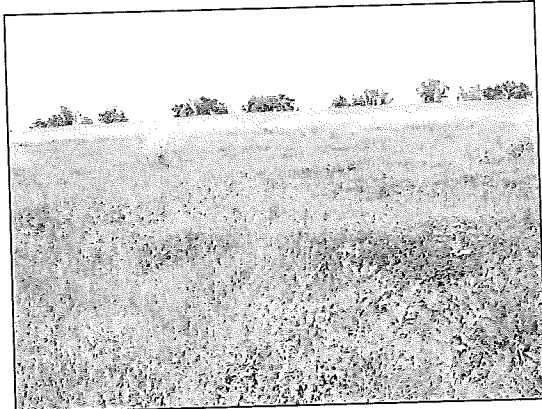
Idle fields are agricultural fields that have not been planted with a crop. Fields are left idle for a variety of reasons, including resting the field to preserve and build soil nutrients, economic issues, and late winter flooding that interrupts planned activities. The condition of idle fields is variable and based largely on whether or not the field is disked to reduce weedy vegetation. Fields that are not periodically disked can form dense weedy canopy that changes over the spring and summer as species composition changes. Weeds usually reestablish rapidly in fields that are periodically disked; however species diversity is reduced and vegetative structure is less complex in these fields. The study field had been most recently used for rice production and was not disked during the spring or summer.

The pattern in Figure 19 is similar to a field that supports perennial vegetation (e.g., annual grasslands, irrigated pastures). The pattern indicates a rather consistent vegetative structure with cover and height changing seasonally but not substantially. Cover remained relatively low throughout the spring and summer (as indicated by the high Lux Quotient values) and the average vegetation height varied from 12 to 27 inches. Seasonal vegetation changes in the study field occurred primarily as a result of changing weed species composition (Plates 51 through 55). Overall, the vegetation structure was much more diverse and variable in this field compared with a more uniform agricultural crop, grasslands, or pastures.

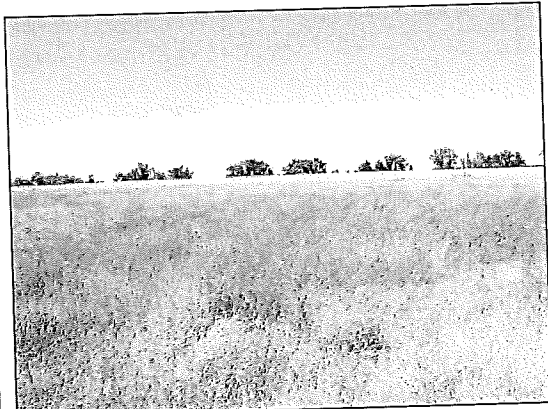
The pattern in Figure 19 also suggests that prey accessibility was relatively and consistently high during the Swainson's hawk breeding season. Estep (1989) found relatively high rodent abundance in idle fields and habitat use studies have indicated significant use of idle fields by foraging Swainson's hawks (Estep 1989, Babcock 1992, Swolgaard 2008).

Figure 19. Vegetation data for idle field.





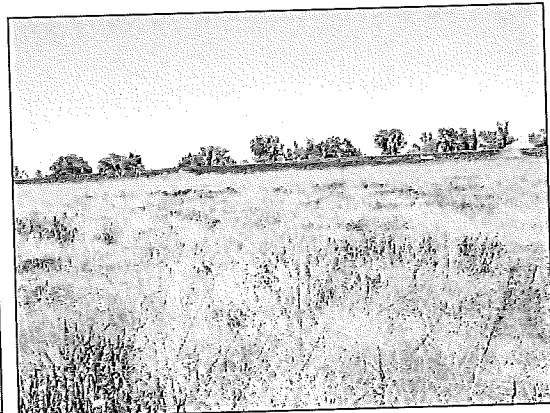
*Plate 51. Idle field, May 5.*



*Plate 52. Idle field, June 7.*



*Plate 53. Idle field, July 19.*



*Plate 54. Idle field, August 7.*



*Plate 55. Idle field, September 19.*



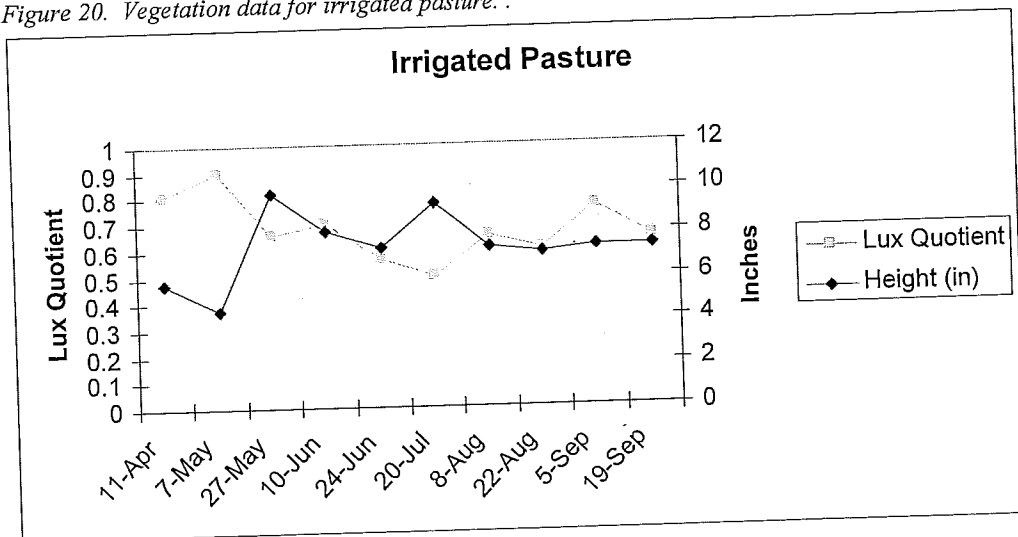
## Irrigated Pasture

The acres devoted to irrigated pasture in Yolo County has been very consistent (Table 2), and comprised approximately three percent of the agricultural landscape in the study area in 2007 (Table 1). Irrigated pastures are a perennial cover type and are grazed by cattle. With the exception of small irrigated pastures near farm residences, the majority of this type occurs in the southeastern panhandle of the county, which was also the site of the study field. Most irrigated pastures are regularly grazed and flood irrigated. Irrigated pastures usually maintain a low profile with vegetation height usually averaging from 3 to 12 inches.

The pattern in Figure 20 is indicative of a perennial cover type where vegetation is consistently maintained. Thus, changes in vegetation structure are not due to the planting, growth, and harvesting regimes observed in irrigated crops, but instead are due to seasonal growth of vegetation and livestock grazing. Plates 56 through 59 show the moderate changes in vegetation structure of the study field as indicated by the change in values in Figure 20. Cover remained low throughout the season as indicated by the consistently high Lux Quotient values and vegetation height averaged approximately seven inches throughout the spring and summer.

The pattern in Figure 20 is also indicative of a cover type that retains high prey accessibility throughout the Swainson's hawk breeding season. While rodent populations have been reported to be lower than in some irrigated crop types (Estep 1989), irrigated pastures may provide significant foraging value in areas where this habitat is a more dominant portion of the agricultural landscape.

Figure 20. Vegetation data for irrigated pasture.



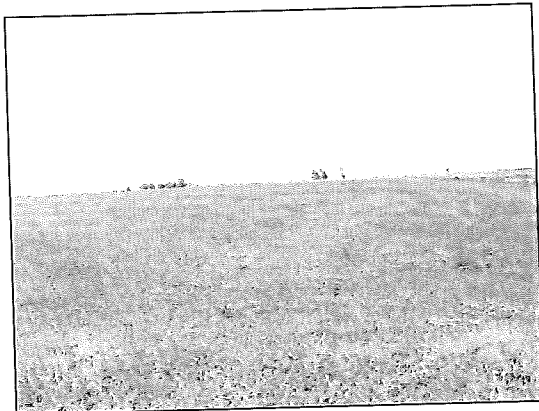


Plate 56. Irrigated pasture, May 14.

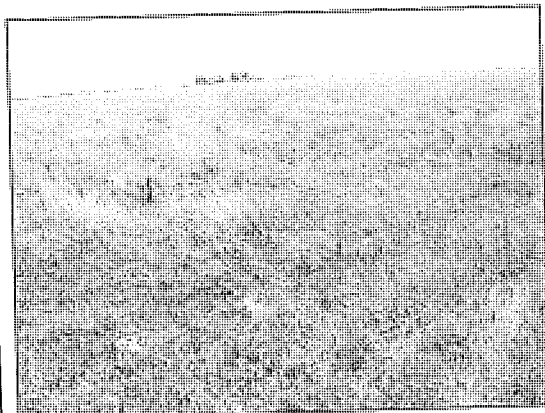


Plate 57. Irrigated pasture, June 10.

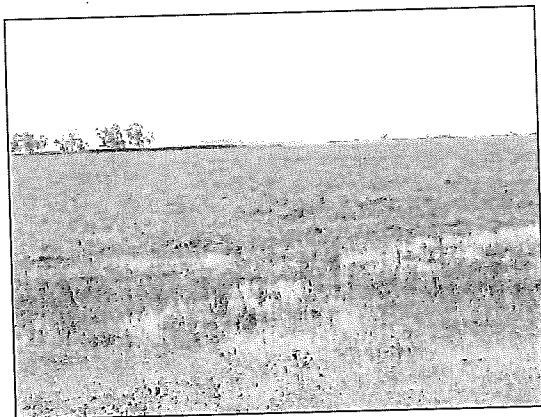


Plate 58. Irrigated pasture, August 8.

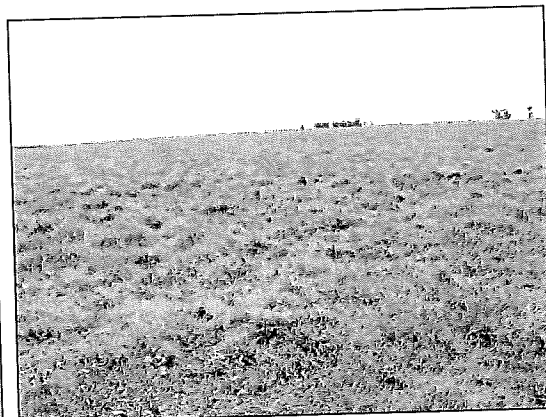


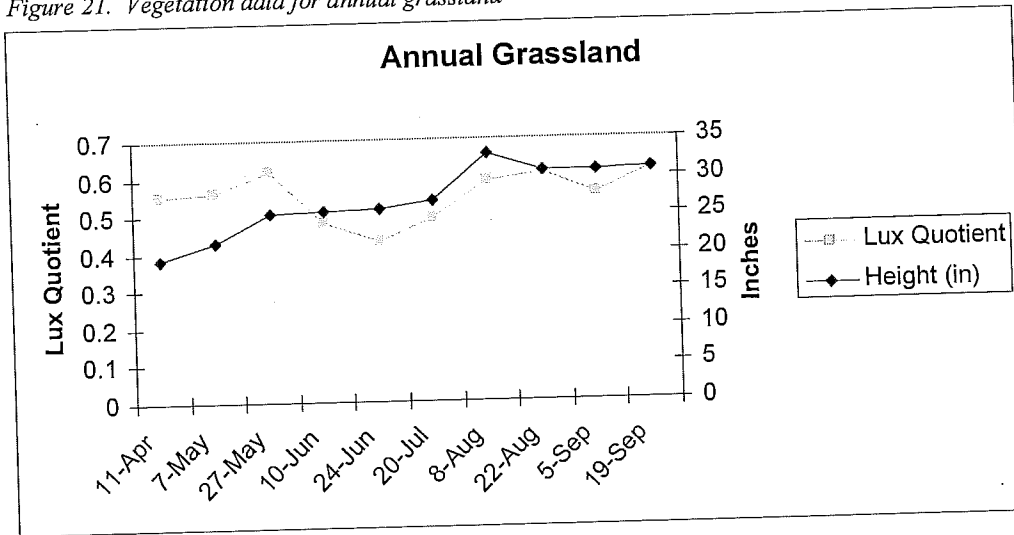
Plate 59. Irrigated pasture, September 5.

### Annual Grassland

Annual grassland, or dry pasture, is the most common agricultural land use in Yolo County (Table 2) and within the study area (Table 1); however, this type is not generally found within the irrigated farmlands of the county, but instead occurs primarily along the western edge of the valley floor and in the Dunnigan Hills. Annual grasslands are not cultivated habitats, but are often grazed by livestock. Like irrigated pastures, changes in vegetation structure of annual grasslands are due to natural seasonal changes in vegetation and grazing.

While the study field is generally used for grazing – and likely has been cultivated in the past, it was not grazed during the study. The pattern in Figure 21 is similar to that of irrigated pastures and idle fields. It is indicative of a perennial cover type that maintains a relatively consistent vegetation cover and height throughout the spring and summer. Plate 60 shows the general vegetation structure of the study field, which did not change substantially from mid-April to mid-September.

Figure 21. Vegetation data for annual grassland



The pattern in Figure 21 also suggests a cover type that has relatively high and consistent accessibility throughout the Swainson's hawk breeding season. Prey abundance in annual grasslands has been reported as moderately high and consistent throughout the breeding season (Estep 1989), and use of annual grasslands has also been reported as relatively high and particularly important where this type is a significant portion of the landscape (Estep 1989, Swolgaard 2008). Swolgaard (2008) also found that use of annual grasslands increased as vegetation height decreased. So, while Figure 21 suggests that accessibility is high in annual grasslands, vegetation height appears to influence the use of this habitat type. Grazing would likely be effective in managing annual grasslands to a more suitable vegetation height; however, additional study would be required to determine the effects of grazing intensity on the rodent prey base.



Plate 60. Annual grassland, May 7.

## Summary and Conclusions

The data presented in this report provide some insight into the change in vegetation structure of agricultural cover types used by foraging Swainson's hawks in Yolo County. These data can be used, to some extent, to evaluate the foraging value of cover types based on the accessibility of rodent prey to aerial predators. Ideally, these data should be correlated with prey abundance and habitat use data to fully evaluate the value of different cover types. Estep (1989) analyzed prey populations in different agricultural habitats and can provide some general insight into differences in prey abundance; however, additional longer-term investigation into prey abundance in agricultural habitats is warranted in order to statistically correlate prey abundance and prey accessibility.

Observational data are also important in evaluating differences in foraging value by correlating vegetation structure and prey base data with habitat use data. Several studies provide information on Swainson's hawk habitat use in agricultural habitats (Estep 1989, Babcock 1992, Swolgaard 2008) and can provide some general correlations between the results presented here and habitat use data. However, the foraging habitat use study by Anderson et al. (*in preparation*) is a focused observational study addressing the actual use of different agricultural cover types in 2008. To more fully and statistically evaluate the use of agricultural foraging habitats, the vegetation data presented here may be included in the Anderson et al. study by correlating vegetation structure over time with actual observed use.

The results presented here lend support to the findings of a variety of researchers (Wakeley 1978, Baker and Brooks 1981, Bechard 1982, Swolgaard et al. 2008) that detectability of prey decreases with increased vegetation height and/or cover. Once detected, the raptor must be able to physically access the prey through the vegetation. Raptors, such as the Swainson's hawk, that employ a soaring technique while hunting may be able to visually detect prey in certain agricultural crop types; however, the vegetation may be too dense or too tall to successfully navigate through in order to successfully hunt.

In an agricultural landscape, foraging habitat is highly dynamic as vegetation grows and is harvested. Swainson's hawks respond with fluctuating home range size and configuration throughout the breeding season as the foraging landscape changes over time (Estep 1989, Babcock 1992). In Yolo County, the landscape consists of a variety of seasonal crops with different planting, growth and harvest regimes, along with a patchwork of perennial cover types (e.g., alfalfa, irrigated pasture, annual grasslands) that provide a relatively constant source of suitable foraging habitat throughout the season. While certain crop types, such as orchard, corn, safflower, and sunflower provide limited foraging opportunities to Swainson's hawks due to reduced accessibility, the matrix of agricultural cover types in Yolo County combine to provide a high value foraging landscape that supports one of the largest concentrations of nesting Swainson's hawks within the species' range (Estep 2008).

Ultimately, these data will be useful in assessing the value of agricultural habitats as Swainson's hawk foraging habitat, particularly once supplemented with prey population data and foraging data from observational studies. But perhaps more importantly these data can be used in the development of management strategies designed to enhance foraging value while retaining agricultural productivity.

As an example, Figure 22 illustrates the seasonal suitability of each cover type in this study based on changes in prey accessibility derived from the vegetation analysis and assumptions of seasonal prey abundance and the effects of harvesting activities. Alfalfa provides the greatest foraging opportunities of any cover type due its low profile, lack of cultivation, and management. While alfalfa, irrigated pastures, and other perennial cover types provide a more constant source of available foraging habitat, other crop types may provide an important seasonal role. For example, the typical wheat/tomato rotation in Yolo County may be particularly important by providing early summer foraging habitat from the June wheat harvest and late summer (pre-migration) foraging habitat from the August tomato harvest. While their value is more limited during most of the season, harvesting of these crops in Yolo County provides an abundant food resource during those months.

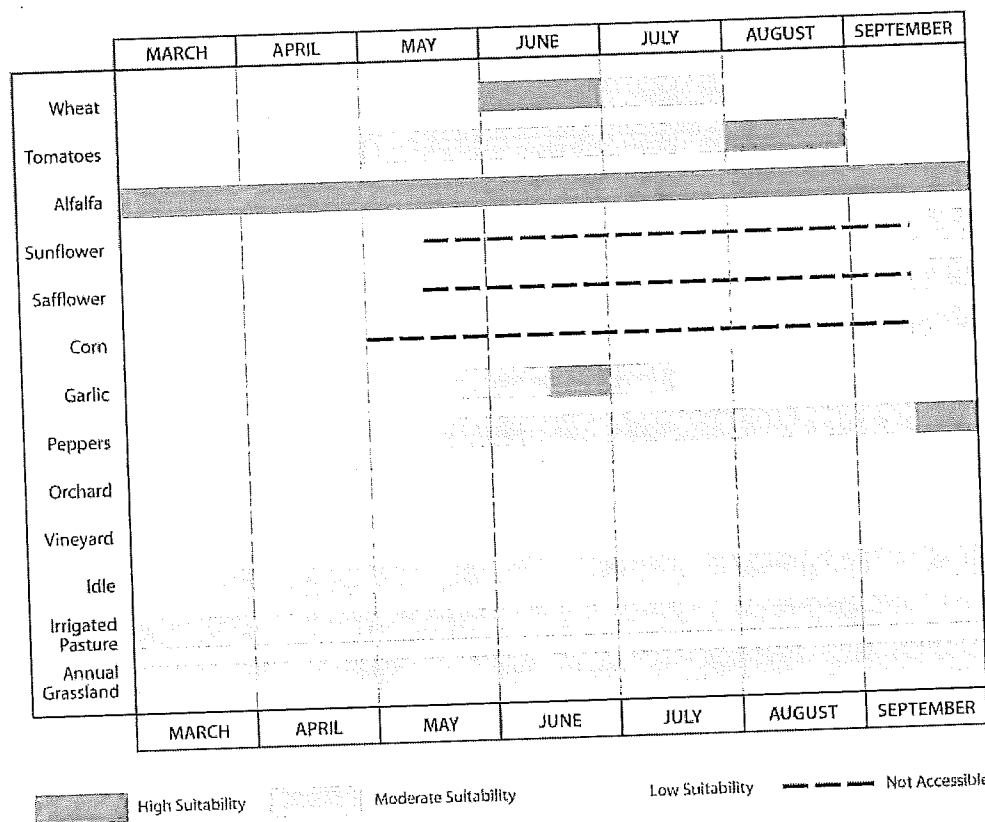


Figure 22  
Seasonal Suitability of Selected Agricultural Cover Types

Using this information, an example of a management strategy within a cultivated landscape includes an alfalfa base to provide season-long foraging habitat intermixed with annually cultivated crops with a rotational regime that provides high value during different times of the breeding season (e.g., wheat in June and tomatoes in August). This type of agricultural landscape enhances foraging value while allowing for periodic rotation into less suitable cover types such as sunflower or safflower that might have greater economic value. Thus, while a landscape that consists entirely of high value perennial cover types (e.g., alfalfa) may be considered optimal for species management, a more diverse landscape matrix may also provide high foraging value while optimizing agricultural productivity on Yolo County lands.

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STATE OF CALIFORNIA  
THE RESOURCES AGENCY  
DEPARTMENT OF FISH AND GAME  
WILDLIFE MANAGEMENT DIVISION  
NONGAME BIRD AND MAMMAL SECTION

BIOLOGY, MOVEMENTS, AND HABITAT RELATIONSHIPS  
OF THE SWAINSON'S HAWK IN THE CENTRAL VALLEY OF CALIFORNIA, 1986-87

by

James A. Estep

1989



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BIOLOGY, MOVEMENTS, AND HABITAT RELATIONSHIPS<sup>1/</sup>  
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by

James A. Estep<sup>2/</sup>

ABSTRACT

Four 93.6 sq km (36 sq mi) study plots were used to examine Swainson's Hawk biology, movements and habitat-use during the 1986 and 1987 breeding seasons. Thirty different land-uses or crop-types were identified for the total area studied. Croplands made up 45.4% of the area, and pasturelands made up 26.8%. The remaining lands (27.8%) were in various other uses. Sixty active Swainson's Hawk nests were located on all areas studied during the two years of field work. Breeding density ranged from 0.796 pairs/sq km (0.306/sq mi) to 1.446 pairs/sq km (0.556/sq mi). Nearest neighbor distances averaged 1.14 km (0.71 mi). Territory reoccupancy was 97%. Reproductive effort was low both years; 1.14 young/occupied nest and 1.33 young/successful nest (1986), 1.17 young/occupied nest and 1.44 young/successful nest (1987). Diet, in terms of biomass, consisted of 23.1% microtine rodents, 69.2% of the total mammalian prey. Birds were an important dietary component, comprising 49.8% of the total prey biomass.

The mean home range size of 12 radio-tagged Swainson's Hawks was 2760.4 ha (6818.2 ac). Males averaged 46.1% larger home ranges than females. Cropping patterns, changes in prey availability, and various farming practices were largely responsible for differences in home range size and seasonal and daily fluctuation of foraging ranges. Daily foraging ranges were from 12.2 ha (30.1 ac) to 6407.9 ha (15,763.4 ac). Swainson's Hawks preferred foraging cover-types, such as alfalfa and dryland pasture, that supported continually available prey. However, certain row crops were selected during harvest due to the sudden increase in prey availability and higher prey densities. Communal foraging occurred in areas where nesting habitat was limited but suitable foraging habitat remained. Hunting in response to various farming activities (e.g. mowing, harvesting, discing, and irrigation) accounted for 52.8% of the observed foraging time. Late in the season, large groups of Swainson's Hawks congregated in response to harvesting operations and the abundance of available prey that resulted. Nonbreeding groups of Swainson's Hawks were observed throughout much of the breeding season.

Most nests (78.1%) were located within riparian systems. Swainson's Hawks also nested successfully along busy roads and near human habitation. Use of alternate nest-sites was common. All nests were located on or adjacent to suitable Swainson's Hawk foraging habitat.

Given current trends, expansion of the type of agricultural and other land-use practices known to be incompatible with the habitat needs of the Swainson's Hawk is likely to continue in the Central Valley in the future. Loss of both nesting and foraging habitat to various kinds of development poses the greatest threat to the Central Valley population of Swainson's Hawk.

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2/ 5152 Glide Drive, Davis Ca. 95616

This report should be cited as follows:

Estep, J. A. 1989. Biology, movements, and habitat relationships of the Swainson's Hawk in the Central Valley of California, 1986-87. Calif. Dep. Fish and Game, Nongame Bird and Mammal Sec. Rep., 52 pp.

## RECOMMENDATIONS

1. Periodically survey Swainson's Hawk breeding habitat throughout the Central Valley to estimate the distribution and size of populations, monitor land-use trends, habitat changes, and known territories.
2. Develop management strategies to ensure protection of Swainson's Hawk habitat.
3. Preserve and protect riparian habitats essential to breeding Swainson's Hawks through legislation, acquisition, and private landowner cooperation.
4. Create nesting habitat throughout the breeding range of the Swainson's Hawk where the lack of nesting habitat is a limiting factor.
5. Encourage compatible agricultural practices for Swainson's Hawks through a program of incentives for the private landowner.
6. At the local government level, ensure that the habitat needs of the Swainson's Hawk are recognized and included in city and county development plans.
7. Determine the status of populations and habitat of Swainson's Hawks on their migration routes and wintering grounds.

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## INTRODUCTION

Once common throughout most of lowland California (Grinnell and Miller 1944), the Swainson's Hawk (*Buteo swainsoni*) currently occupies only a small portion of its former breeding range (Fig. 1). Knowledge that an estimated 91% decline in the breeding population had occurred (Bloom 1980) moved the Fish and Game Commission to designate the Swainson's Hawk as a Threatened species in 1983. Causes contributing to the population decline are the same as those that have impacted much of California's wildlife, primarily loss of habitat as a result of the conversion of native vegetative communities to agricultural and urban land-uses. Conditions on the wintering grounds in South America may also contribute to the decline; however, little is known concerning this aspect of the Swainson's Hawk's life cycle. Apparently pesticide contamination of the food chain is not interfering with annual reproduction (Risebrough et al. in press).

Two populations comprise the current Swainson's Hawk range in California. In northeastern California, primarily Modoc, Siskiyou, and Lassen Counties, Swainson's Hawks occupy the upland Juniper-sage/steppe community and the agricultural valleys typical to this region. This area is the southwestern-most corner of the Great Basin population of Swainson's Hawk. The more isolated Central Valley population is within the confines of the Sierra Nevada and Coast ranges, in the fertile and intensively farmed agricultural regions of the Sacramento and San Joaquin Valleys. Bloom (1980) estimated that 375 pairs of Swainson's Hawks continue to nest in California, 280 of these in the Central Valley.

As with other North American raptor populations (Garrett and Mitchell 1973, Colvin 1985), the decline of the Swainson's Hawk in California may be primarily a result of agricultural conversion of native habitats. Since the latter part of the 19th century, the Central Valley has undergone a dramatic conversion of native communities to agricultural lands. For example, agricultural conversion has been the main force contributing to the removal of approximately 98% of the riparian forest that once existed in the Central Valley (Katibah 1983). Perennial grassland (primarily *Scirpus sp.* and *Typha sp.*) and Valley Oak (*Quercus lobata*) woodlands were once the dominant upland communities in the northern Central Valley while saltbush (*Atriplex sp.*) desert was common in the southern Central Valley. In addition to riparian systems, other wetland communities were found extensively throughout the Central Valley, existing primarily as a result of the seasonal flooding of the major drainages, the Sacramento and San Joaquin Rivers (Katibah 1983).

The Swainson's Hawk is generally regarded as a western plains species, closely associated with open grassland communities. The species was apparently common historically throughout the Central Valley (Grinnell and Miller 1944). Today, however, the Swainson's Hawk is found primarily in the mid-section of the Central Valley in the vicinity of Sacramento.

Few pairs nest in the northern and southern extremes of the Central Valley. Detrich (1986) considered the lack of a suitable forage base, particularly microtine rodents, as the reason for the few numbers of nesting Swainson's Hawks in Shasta and Tehama Counties, in the northernmost part of the Central Valley. The primary factors responsible for reducing prey populations were thought to be the conversion of perennial grassland to exotic annuals, coinciding with the introduction of livestock.



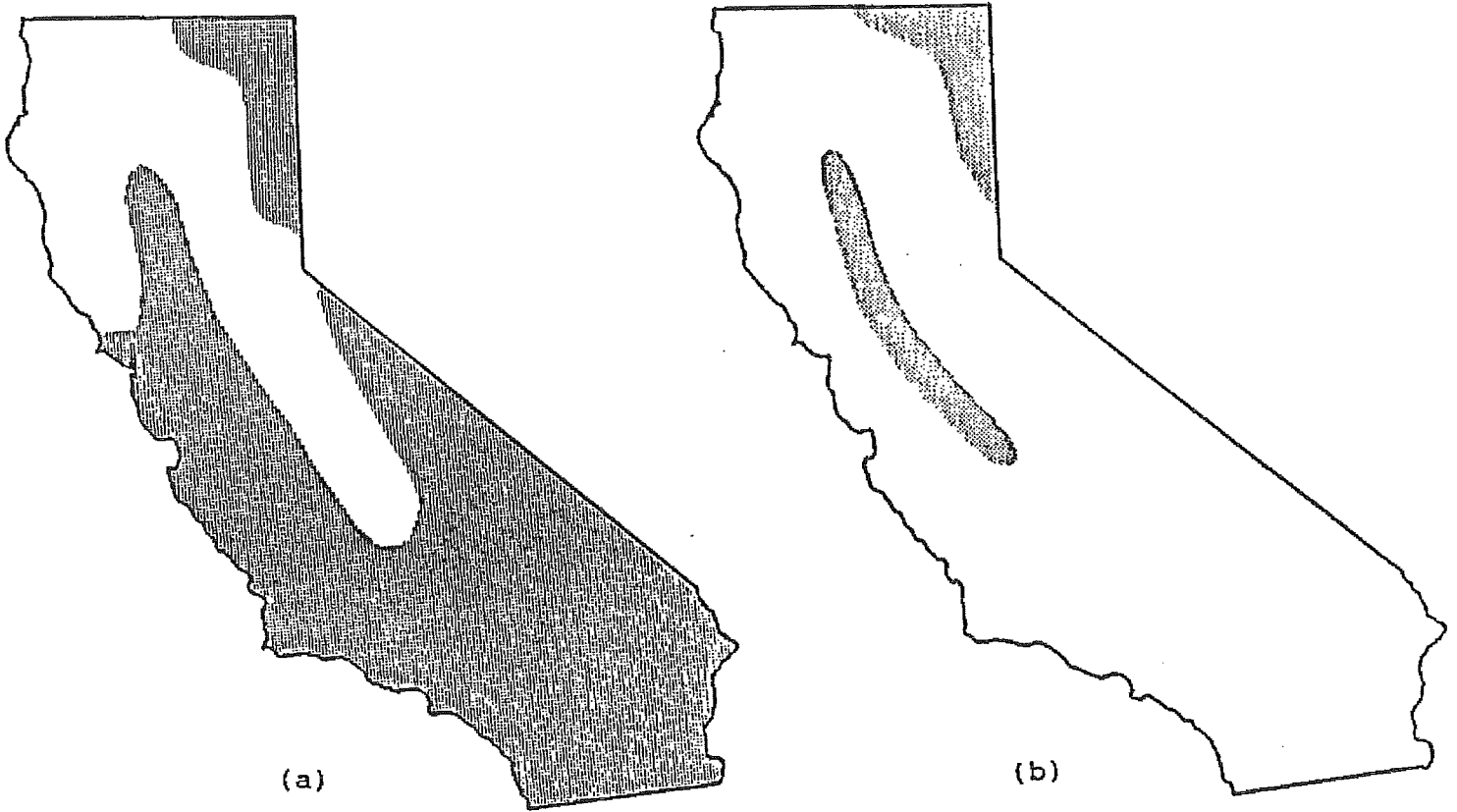


Figure 1. Historic (a) and current (b) (shaded area) range of Swainson's Hawk in California. (After Bloom 1980.)

The southern part of the Central Valley, the southern San Joaquin Valley, is largely devoid of suitable nest trees, due to agricultural conversion of the native vegetation. Bloom (1980) located only one nesting pair south of Fresno County. In addition, the present-day agriculture in this region, primarily cotton and vineyards, is incompatible with Swainson's Hawk's hunting style.

The Swainson's Hawk has, however, shown a certain ability to adapt to particular kinds of agricultural conversions that continue to replace native grassland habitat range-wide (Olendorff 1973, Munro and Reid 1982, Bechard 1982, Schmutz 1984, Woodbridge 1985). Virtually no native foraging habitat remains in the mid-section of the Central Valley. This is a region of intensively farmed croplands, pasturelands, and both large and small urban areas. Conversion to agricultural land-uses incompatible with Swainson's Hawk foraging needs and continued reduction of available foraging habitat from urban development could further impact the Central Valley population. Maintaining a viable population of Swainson's Hawks in the Central Valley while faced with incompatible land-use trends, requires information beyond that of baseline population data. To help in fulfilling this need, this study was proposed.

The purpose of this study was to investigate the habits, movements, and habitat-use and relationships of the Swainson's Hawk in the Central Valley. The objectives were to: 1) determine home ranges of Swainson's Hawks in the Central Valley through radio-telemetry; 2) examine Swainson's Hawk foraging behavior and use of agricultural habitats; 3) determine the effect of cropping patterns on movement and habitat-use; 4) determine nesting habitat use and availability; 5) examine prey populations and Swainson's Hawk diet; 6) determine reproductive success, and, 7) examine Central Valley land-use trends.

## STUDY AREA

### Overview

The study area consisted of four, separate 93.6 sq km (36 sq mi) square sites located between Sacramento and a point 32 km (20 miles) south of Stockton (Fig. 2). This is the region of highest Swainson's Hawk breeding density in the Central Valley (Estep unpubl. data.) Similar in topography (mean elevational difference = 14.5 m (47.6 ft)) and diversity of land-use/cover-types, the study areas differed in the percentages and distribution of those cover-types. The result was that the four study areas combined to represent the range of nesting and foraging conditions typical for the species in the Central Valley.

Historically, the Central Valley consisted of a variety of vegetative communities, including marsh, riparian systems, oak woodland, and grassland. Today, these communities are virtually lost or radically altered, replaced by one of the most intensive and diverse agricultural industries in the world (Fig. 3). In general, the study area was a combination of intensively farmed croplands, pasturelands, and expanding urban development. The climate is generally mild, with cool, wet winters, and hot, dry summers. The mean annual precipitation in the study area ranges from 33.0 cm (13.0 in) in the south to 43.2 cm (17.0 in) in the north.

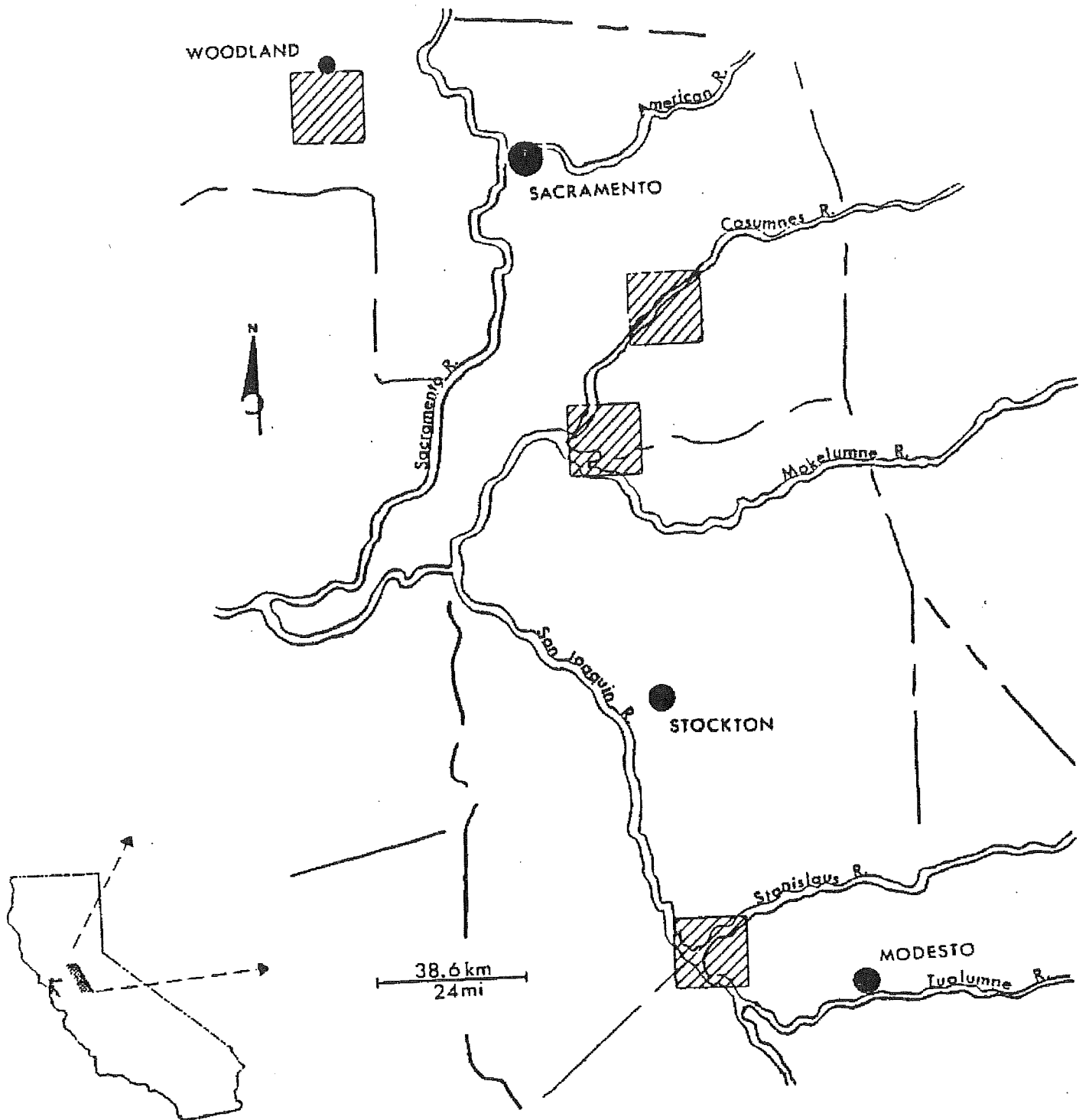


Figure 2. Location of four Swainson's Hawk study areas (cross-hatched squares) in the Central Valley of California, 1986-87.

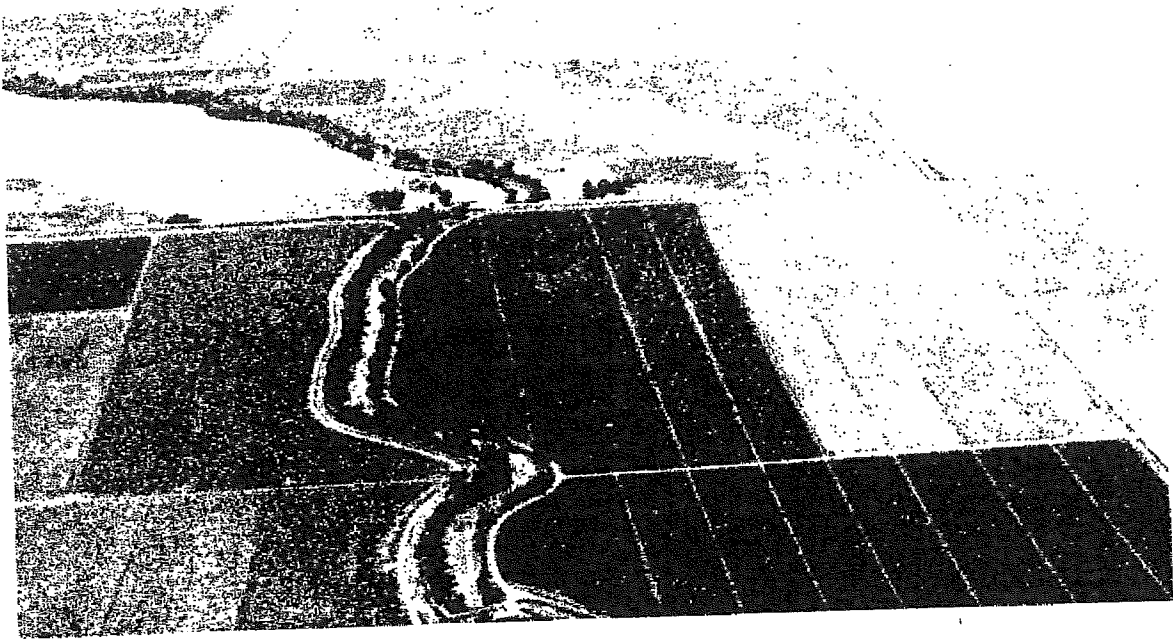


Photo by Ronald W. Schlorff

Figure 3. Aerial view of the Woodland study area showing typical land-use throughout much of the Central Valley. The narrow riparian system and the surrounding farmland provide important nesting and foraging habitat for Central Valley Swainson's Hawks.

### Woodland Study Area

Woodland is the northernmost of the four study areas (Fig. 2), located between the cities of Davis and Woodland, approximately 29 km (11 mi) west of Sacramento. The area is characterized by flat, relatively treeless terrain and a criss-crossing network of roads (Fig. 3). Intensive row and grain crop farming is the primary land-use. Willow Slough and Dry Slough are the only natural waterways through the study area, each supporting a relatively small amount of suitable riparian nesting habitat. One freeway dissects the area and a small amount of high density residential development from the city of Davis is located along the southern boundary.

### Wilton Study Area

The Wilton study area is approximately 39 km (15 mi) south of Sacramento (Fig. 2). Urbanization has accelerated in this area recently as residential growth expands southward from Sacramento. Low density residential development (1 to 5 acre parcels) is the primary land-use in the northwest and eastern portions of the study area. Much of the south is either irrigated or dryland pasture. Irrigated farmland is the primary land-use between the two main waterways, the Cosumnes River and Deer Creek, which run parallel with each other from the northeast corner to the southwest corner of the study area. Both support a narrow, but dense, riparian system throughout their length. The terrain is generally flat in the west and south, while much of the east is gently rolling hills.

### Galt-Thornton Study Area

The Galt-Thornton study area is located between the cities of Galt and Thornton, approximately 57 km (22 mi) south of Sacramento (Fig. 2). A mixture of croplands, pasturelands, and low density residential development characterize this study area. Much of the eastern portion of the site is residential with associated small irrigated pastures and small tracts of farmland. The northwest is mainly cropland and much of the south and central is irrigated pasture. Cosumnes River, Mokelumne River, Dry Creek, Grizzly Slough and Bear Slough traverse the study area, each supporting a relatively large riparian system.

### Vernalis Study Area

The Vernalis study area is the southernmost site, located near the town of Vernalis, approximately 52 km (20 mi) south of Stockton (Fig. 2). Two major rivers separate the extensive pasturelands in the east and central region from the main agricultural areas in the north and west. The southwest corner is a nearly treeless intensively farmed area. Both rivers, the Stanislaus and the San Joaquin, support relatively large riparian forests. Of all the study areas, Vernalis has the least amount of residential development. One highway traverses the southern half of the study area.

## METHODS

### Nest and Land-use Surveys

I surveyed known nest sites in March 1986 and 1987 to determine arrival dates of Swainson's Hawks into the Central Valley. In April survey effort increased

to locate all breeding pairs of Swainson's Hawks and other stick-nest building raptors in each study area. Breeding densities were calculated for all raptor species in each study area. Periodic visits were made to nest-sites throughout the season to collect productivity data, take nest and tree measurements, and to collect prey remains. Land-use was determined by surveying each study area by car, airplane, and on foot. All cover-types were recorded on USGS 1:24,000 topographic maps. Area measurements were calculated for all cover-types within each study area and home range using a planimeter with three-axis digitizer.

#### Radio-telemetry and Home Ranges

Swainson's Hawks were trapped using the Dho-Gaza capture technique (i.e. mist net with a live Great-horned Owl (*Bubo virginianus*) as a lure). Birds were banded with numbered, colored plastic leg bands and standard USFWS aluminum bands. In 1986, two adult Swainson's Hawks (1 male and 1 female) from the Woodland study area were fitted with backpack-mounted AVM SB2 radio-transmitters. In 1987, 10 adult Swainson's Hawks (7 males and 3 females) were fitted with longer-lived AVM P-2 radio-transmitters. Receiving devices included Telonics TR1 and TR2 receivers, with 2 element H-antennas and 3 element Yagi antennas.

I constructed individual range maps for each radioed bird. All of the cover types on each map were delineated and given unit numbers. Exact location (unit number), activity, condition of unit (mature growth, harvested field, etc.), and farming activity in each recorded unit (irrigating, mowing, harvesting, discing) were recorded. Types of activity recorded included perching, incubating, foraging flight, nonforaging flight, prey capture attempt, feeding, and foraging in response to farming activities.

Movements of radioed birds were recorded from May to September, 1986 and 1987. All birds were from different breeding pairs. Swainson's Hawks in the Central Valley are very active foragers, covering large areas in a short amount of time. Therefore, to more effectively analyze habitat-use and foraging behavior, data were recorded in 5 minute intervals over 4 hour observation periods. Observation periods for each bird alternated between morning and afternoon hours for complete day-long periods.

I estimated home range and foraging range areas using a modified minimum polygon method (Harvey and Barbour 1965). This method excluded much of the unused area between nests and distant foraging habitats from home range and foraging range calculations.

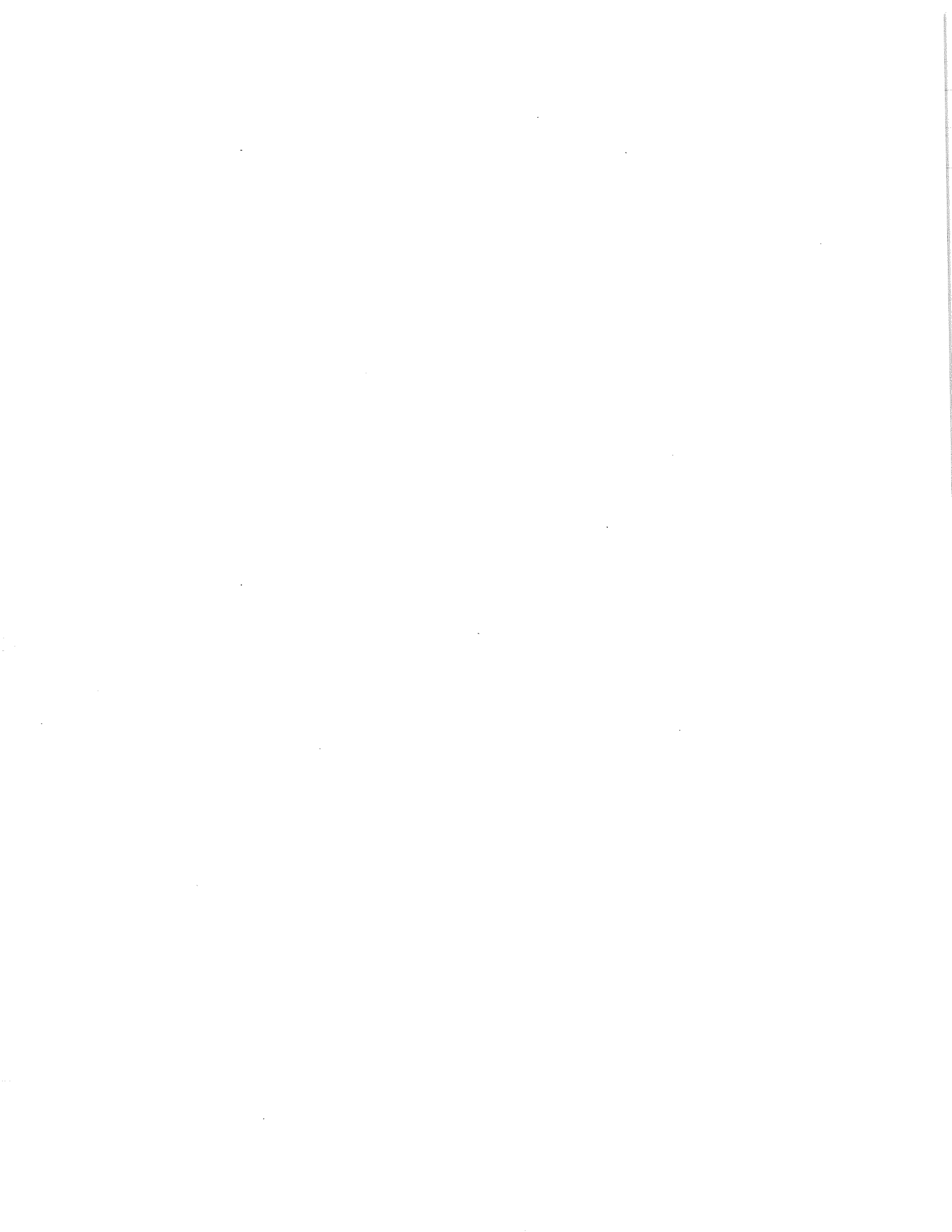
Autocorrelation of locational data usually results when a short time interval between recorded locations is used. However, a reasonably accurate estimate of home range size was expected due to the large number of locations recorded, over a long time frame, thus reducing the effect of autocorrelation (Swihart and Slade 1985).

#### Habitat-use

Habitat preference data were analyzed using the FORTRAN program PREFER, a habitat-use/availability ranking technique (Johnson, 1980). The percentage of each available cover-type in each home range and the percent use of each cover-type was determined. Next, preference, through ranking of each cover-







type, for each individual and averaging across all birds was determined. Finally, it was determined which cover-types were preferred in relation to each other.

#### Prey populations and Food Habits

I estimated the relative abundance of rodent prey populations in various cover-types using a mark-recapture technique. From May to September, 1986-87, small mammals were captured in Sherman live-traps and individuals marked by toe-clipping. Traps were set 15 m (49.2 ft) apart in a seven by five rectangular grid of 35 traps. Traps were opened for three consecutive days, once a month.

Swainson's Hawk diet was examined through the direct observation of foraging hawks, recording of prey remains at the nest site, and the analysis of recovered regurgitated pellets. These data were collected on a regular basis from April to September, 1986 and 1987.

#### Nesting Habitat

I estimated nest tree availability in each study area by counting all suitable lone trees and groups of trees, and by measuring the extent of suitable riparian nesting habitat. Measurements were taken of individual nests and nest trees, including nest height and nest-tree height, diameter at breast height (DBH), diameter of supporting limbs, and nest diameter. Heights were measured using an abne level. Nearest neighbor distances were calculated for nest sites in each study area.

#### Nest-site and Mate Fidelity

As part of a continuing project to study nest-site and mate fidelity among Central Valley Swainson's Hawks, adult Swainson's Hawks were trapped and banded with colored, numbered plastic leg bands. For purposes of this study, I attempted to reestablish contact with birds in 1987 and early 1988 that were color-banded the previous year. There are plans to continue this study over several years in order to obtain additional data.

#### Statistical Methods

The FORTRAN program PREFER (Johnson 1980) was used to analyze habitat-use data. Habitat components were ranked by preference such that differences among habitats could be tested for significance. Two null hypotheses were tested: 1) all habitats were equally preferred; 2) selection of habitat component "i" equals that of habitat component "j". The first null hypothesis was tested using Hotelling's T statistic (Anderson 1958). The second null hypothesis was tested using the Waller-Duncan multiple comparisons procedure (Waller and Duncan 1969).

Correlations of some paired data were determined from calculations of Pearson Product-Moment Correlation Coefficients. The t-test was used to determine differences between means.

The confidence level for statistical tests was 0.95.

## RESULTS

### Land-use and Habitat Characteristics

The land-use in the mid-section of the Central Valley is primarily agricultural; however, urban development is rapidly expanding. The total study area encompassed 37,957 ha (93,754 ac). Intensively farmed cropland made up 45.4% of this area, and 26.8% was irrigated or dryland pasture. Thirty cover-types were identified for the total area (Table 1). Nearly ten percent of the study area was residential development.

The study areas differed mainly in the percentages and distribution of the various cover-types. The Woodland study area was a mosaic of similarly sized (mean = 51.6 ha (127.5 ac)) individual fields. The variety of cover-types and the percentage of croplands was the highest of the four study areas (Table 1). Twelve crop-types made up 79.4% of the area. Only 1% of the area was pastureland. The two waterways (Willow Slough and Dry Slough) in the study area supported very narrow riparian systems (0.9%). Much of the sloughbanks had been denuded as a result of local farming practices. However, some of what remained was excellent Swainson's Hawk nesting habitat. Trees not associated with riparian systems (referred to here as upland trees or upland nesting habitat) were few, (potential upland nest-sites = 5.04/sq km (1.97/sq mi)) mostly roadside Walnut (*Juglans sp.*) and isolated Valley Oaks (*Quercus lobata*).

By contrast, the Wilton study area was divided into distinct areas of residential (26.9%), pasture (24.3%), and cropland (25.5%). The remaining 23.3% was in other cover types (Table 1). The mean cropland field size was 58.6 ha (144.7 ac). Pasturelands included both large and small irrigated pastures and large unbroken areas of dryland pasture. Mature riparian forest (3.4%) existed throughout the lengths of Deer Creek and the Cosumnes River. Upland trees included a small amount of remnant oak woodland (2.5%) and isolated Valley Oaks (potential upland nest-sites = 5.41/sq km (2.11/sq mi)).

The Galt-Thornton study area was a mixture of croplands (mean field size = 51.6 ha (127.5 ac)) and large and small pastures (mean = 198.9 ha (491.3 ac)). Irrigated pasture was the dominant cover-type (33.7%). Corn was the dominant crop-type comprising 8.9% of the total area. Potential nesting habitat was more evenly distributed throughout this study area. All of the waterways (Cosumnes River, Mokelumne River, Dry Creek, Grizzly Slough and Bear Slough) supported dense, mature riparian systems (7.3%). In addition, upland trees (primarily Valley Oak) were more abundant here (potential upland nest sites = 9.46/sq km (3.69/sq mi)) resulting in less open, treeless terrain.

The Vernalis study area consisted of a 2631.8 ha (6500.5 ac) tract of irrigated pasture surrounded by cropland (mean field size = 53.5 ha (132.1 ac)). Irrigated pasture was the dominant cover-type (45.4%) and was the highest of the four study areas (Table 1). The Vernalis study area also had the highest percentage of riparian systems (14.6%). Both the San Joaquin and Stanislaus Rivers supported mature riparian forests on a relatively wide flood plain. Upland trees were also relatively abundant here (potential upland nest sites = 8.89/sq km (3.47/sq mi)).

Most fields were cultivated to the edge of riparian systems, restricting the outward expansion of riparian vegetation and resulting in little remaining

Table 1. Percentages of land-uses and crop-types on the four Swainson's Hawk study areas in the Central Valley, 1986.

<u>Land-use</u>	<u>Woodland</u>	<u>Wilton</u>	<u>Galt/ Thornton</u>	<u>Vernalis</u>	<u>Total</u>
Irrigated- pasture	1.0	24.3	33.7	32.9	23.0
Wheat	30.2	2.7	4.3	10.8	12.0
Corn	8.5	12.1	8.9	7.0	9.1
Low density residential	0.0	26.9	8.2	0.0	8.8
Roads, edges, channels, etc	8.4	7.2	8.7	6.1	7.7
Riparian	0.9	3.4	7.3	14.6	6.6
Alfalfa	7.9	0.0	2.3	9.2	4.8
Dry-land pasture	0.0	10.7	4.4	0.0	3.8
Tomatoes	12.2	0.4	0.0	1.9	3.6
Vineyard	0.1	2.5	7.6	3.2	3.4
Disced field	8.3	0.4	0.2	0.0	2.2
Beets	3.1	0.0	0.0	1.9	2.0
Rice	0.4	1.2	4.3	0.6	1.6
Oak woodland	0.0	2.5	3.0	0.0	1.4
Unidentified cropland	0.0	0.8	3.3	1.7	1.4
Oats	1.1	2.1	0.0	0.0	1.3
Fallow	2.8	2.5	0.5	0.0	1.3
Orchard	0.9	0.0	0.0	3.2	1.0
High density residential	3.2	0.0	0.7	0.0	1.0
Beans	0.0	0.0	0.0	3.0	0.8
Grass	6.3	0.0	0.0	0.0	0.7
Barley	0.0	0.0	0.0	2.3	0.6
Safflower	1.0	0.0	0.7	0.0	0.4
Peppers	0.0	0.1	1.0	0.0	0.3
Sunflower	2.2	0.0	0.0	0.0	0.2
Asparagus	0.7	0.0	0.0	0.0	0.2
Clover	0.0	0.2	0.7	0.0	0.2
Onions	0.0	0.0	0.0	0.7	0.2
County park	0.0	0.0	0.0	0.9	0.2
Golf course	<u>0.8</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.2</u>
	100%	100%	100%	100%	100%

oak woodland (5.5%). Sections of some streams were completely denuded of riparian vegetation. Riparian vegetation was dominated by Valley Oak in all study areas. Less common overstory species included Fremont Cottonwood (*Populus fremontii*), Walnut sp., Willow (*Salix sp.*), Box Elder (*Acer negundo*), Sycamore (*Platanus racemosa*), and Oregon Ash (*Fraxinus latifolia*). The more common midstory species included Wild Rose (*Rosa californica*), Poison Oak (*Rhus diversiloba*), California Blackberry (*Rubus vitifolius*), and Blue Elderberry (*Sambucus caerulea*).

Potential upland nest trees were of three types: roadside trees, usually Walnut or Eucalyptus (*Eucalyptus sp.*); lone trees, usually non-regenerating Valley Oaks isolated in the middle of an agricultural field or pasture; and rural farmhouse trees, usually Walnut or Eucalyptus surrounding a farmhouse.

Edge habitat was generally associated with croplands. Edges consisted of a variety of plants typically associated with disturbed areas (Appendix 1). Edges usually bordered irrigation ditches which divided individual fields. Some of these narrow strips, usually three to four meters wide, were permanent irrigation canals; however, most were temporary ditches, filled in after each harvest.

Fallow fields generally consisted of many of the same plants as edge habitat (Appendix 1). Some fallow fields were disced periodically to keep the weedy vegetation from maturing. In some fields, regeneration of the weed flora was extremely rapid.

Disced fields were those without any vegetation. Some were disced periodically to prohibit weed growth, others were prepared for planting, but never planted. The use of herbicides, both selective and broad spectrum, was very common, both to control weeds in maturing crops and to prohibit the growth of weeds in harvested or disced fields.

Most row crops were planted in the spring and matured while Swainson's Hawks were nesting. Harvest began in late July and continued through September. Many crops, particularly corn, sunflowers, beans, and safflower, were still largely unharvested by the time Swainson's Hawks began migration to their wintering grounds.

Wheat, a major grain crop in the Central Valley and particularly in the Sacramento Valley, was planted in early winter. By the time Swainson's Hawks began arriving in March, wheat fields were nearing mature growth. Most wheat was harvested in early June. After harvest, most wheat fields were left as wheat stubble for several weeks to several months, and eventually disced in preparation for the following years crop.

Alfalfa was the primary hay crop in all study areas. Mowed and bailed once a month, its vegetative cover was less than that of maturing row and grain crops. Unlike row and grain crops that are harvested and replanted each year, a single alfalfa planting may remain and continue to produce hay in a particular field for up to six years in the Central Valley.

Row and grain crops were rotated annually. The proportions of the major crop-types were similar from 1986 to 1987 in the study area, however, the distribution of the various crop-types was different between the years.

I divided residential development into high density (suburban housing) and low density (rural or ranchette development, 1 to 5 acre parcels) (Table 1). High and/or low density residential developments were in construction or planned in all study areas except Vernalis.

#### Breeding Season Chronology

Swainson's Hawks began arriving in the Central Valley in early to mid-March. The earliest observed arrival date in the study area was 11 March in 1986, and 12 March in 1987. Courtship and nest construction and repair activities began immediately upon arrival. The latest arrival date was 3 April 1986 and 4 April 1987. Most clutches were laid by mid-April, and the first nestlings appeared from mid to late-May. The first fledgling was observed on 4 July 1986, and 1 July 1987. Most birds left their breeding territories in late-August to early-September. The earliest departure date was 28 July 1987. The latest was 24 September 1987.

#### Breeding Density and Spatial Characteristics

In 1986 I located 39 pairs of nesting Swainson's Hawks in the four study areas. In 1987 I located 60 pairs (Fig. 4). The increase was probably due to an increase in survey intensity in areas where birds were not located the previous year, and the difficulty of locating nests in more inaccessible areas, rather than a population increase. Territory reoccupancy from 1986 to 1987 was 97%, with only one of 39 territories unoccupied in 1987. Nesting pairs of Red-tailed Hawks (*Buteo jamaicensis*), Red-shouldered Hawks (*Buteo lineatus*), and Black-shouldered Kites (*Elanus caeruleus*) were also located in each study area. Breeding densities were calculated for all species (Table 2). Swainson's Hawk breeding densities ranged from 0.796/sq km (0.306/sq mi) (Wilton) to 1.446/sq km (0.556/sq mi) (Woodland) and averaged 1.084/sq km (0.417/sq mi) for the four study areas combined. The highest density of all nesting raptors was found in the Galt-Thornton study area (3.539/sq km (1.36/sq mi)). Swainson's Hawks were the most abundant of the four surveyed raptor species overall, particularly in the Woodland study area, where they accounted for 56% of the nesting raptors surveyed.

There was no statistical relationship between breeding density and nest-site availability ( $P > 0.05$ ). However, nesting habitat alone did not appear to be a breeding density limiting factor, since there were unoccupied potential nest-sites in all four study areas. Breeding density was highest in the Woodland study area (Table 2), which supported the least amount of available nesting habitat, while the Galt-Thornton study area supported the second highest amount of available nesting habitat and the second highest breeding density.

I calculated nearest neighbor distances (Clark and Evans 1954) for the nest-site distribution of Swainson's Hawks in each study area. In general, the distribution of Swainson's Hawk nest-sites followed the distribution of riparian systems (Fig. 4), the primary nesting habitat of Swainson's Hawks in the Central Valley (Estep 1984). The mean distance between nest sites was 1.14 km (0.71 mi) and ranged between 1.08 km (0.67 mi) (Wilton) to 1.18 km (0.73 mi) (Galt-Thornton) for the four study areas. The nearest distance between nests was 0.14 km (0.09 mi). Four nests in the Woodland study area were located along a 0.66 km (0.41 mi) stretch of Willow Slough (Fig. 4).

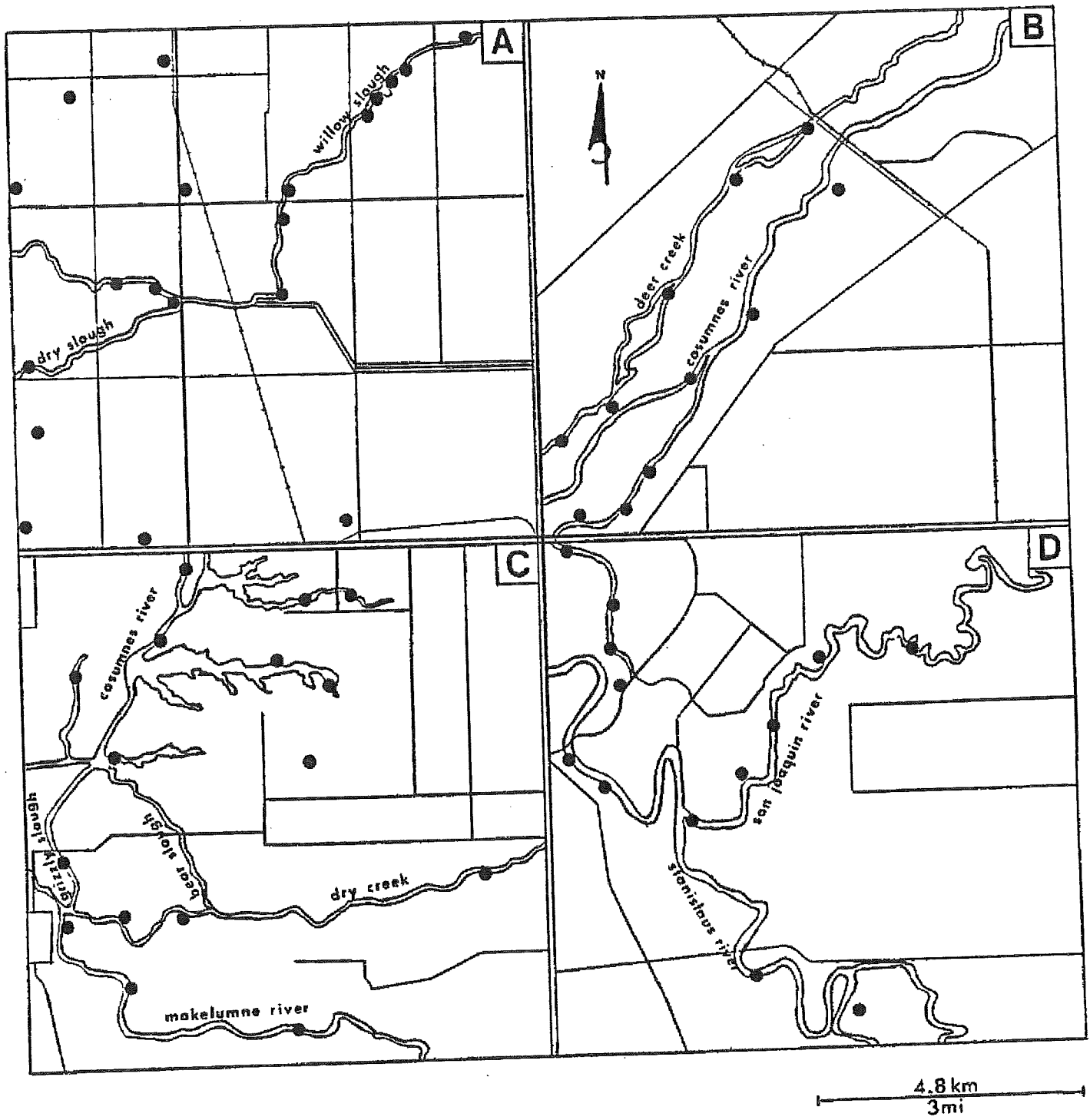


Figure 4. Swainson's Hawk nest locations (black dot) for each Central Valley study area (A-Woodland; B-Wilton; C-Galt-Thornton; D-Vernalis), 1987.



Table 2. Number of pairs and breeding densities of four raptor species in the Central Valley Swainson's Hawk study areas, 1987.

	<u>Woodland</u>	<u>Wilton</u>	<u>Galt Thornton</u>	<u>Vernalis</u>	<u>Total</u>
	#(#/sq km) (#/sq mi)				
Swainson's Hawk	20(1.45) (0.56)	11(0.80) (0.31)	16(1.15) (0.44)	13(0.94) (0.36)	60(1.08) (0.42)
Red-tailed Hawk	4(0.29) (0.11)	14(1.01) (0.39)	15(1.08) (0.42)	13(0.94) (0.36)	46(0.83) (0.32)
Red-shouldered Hawk	0(0.00) (0.00)	7(0.50) (0.19)	9(0.65) (0.25)	5(0.36) (0.14)	21(0.38) (0.15)
Black-shouldered Kite	12(0.87) (0.33)	6(0.43) (0.17)	9(0.65) (0.25)	2(0.15) (0.06)	29(0.52) (0.20)
Total	36(2.60) (1.01)	38(2.75) (1.07)	49(3.54) (1.38)	33(2.38) (0.93)	156(2.82) (1.10)

## Reproduction

Reproductive data were collected both years (Table 3). Due to the inaccessibility of many nests and the potential risk of causing nest abandonment during the incubation period (Fyfe and Olendorff 1976), data on clutch size and hatching success were not collected. A successful nest was defined as having fully fledged young. In 1986 I checked twenty-one nests in the Woodland and Wilton study areas. Eighteen were successful (85.7%) with 24 young fledged (Fig. 5). In 1987 I checked forty-eight nests (80%) from all four study areas. Thirty-nine (81.3%) were successful with 56 young fledged. The percentage of successful nests was high in the Central Valley, however, the number of young per occupied nest and successful nest was low (Table 3). Combining both years, 12 (17.4%) nests failed, 38 (55.1%) had 1 young, 15 (21.7%) had 2 young, 4 (5.8%) had 3 young, and none had 4 or more young. Eleven of the 12 radio-tagged birds successfully reproduced. There appeared to be no relationship between reproductive success and agricultural land-use. I found no statistical correlation ( $P > 0.05$ ) between fledgling success and the amount of cultivated land or amount of pasture within Swainson's Hawk home ranges. Rather, the fledgling success of Swainson's Hawk pairs utilizing only cultivated land for foraging was similar to that of those utilizing pasturelands. There were no pairs, however, that foraged in pasturelands exclusively.

## Prey Populations

I examined the differences in prey populations in twelve different cover-types. As a result of very low prey populations in several cover-types, I used a relative abundance index (the number of captures per 100 trap nights) to make comparisons between all cover-types (Table 4). Species trapped included California Vole (*Microtus californicus*), Deer Mouse (*Peromyscus maniculatus*), House Mouse (*Mus musculus*), Western Harvest Mouse (*Reithrodontomys megalotis*), and Black Rat (*Rattus rattus*). The House Mouse was the most commonly trapped rodent (52.8%). California voles, although important prey for the Swainson's Hawk in the Central Valley, were trapped in very low densities and in only four cover-types. This was partially due to their irregular distribution in agricultural areas (T. Marsh pers. comm.) and the difficulty of locating vole runways in agricultural fields. However, intensively farmed croplands are generally not conducive to high vole populations (T. Marsh pers. comm.).

Tomato and beet fields, each with dense, low-lying vegetation, supported relatively high rodent populations, compared with other row and grain crops (Table 4). Edges and fallow fields also supported relatively high populations. During the summer, croplands supported significantly higher rodent populations than pasturelands ( $P < 0.01$ ,  $t = 3.25$ , d.f. = 9). In general, rodent populations increased as agricultural fields matured, then dropped to near zero after harvest and discing operations, while pasturelands maintained relatively constant, but low, populations.

## Diet

During 1986 and 1987, I collected 451 Swainson's Hawk pellets from 21 nest sites. Twenty percent were then randomly chosen from each study area for a total of 90 pellets. These were analyzed to determine dietary composition (Table 5). The pellets contained 543 total prey items. Excluding four

Table 3. Swainson's Hawk reproductive data by study area, 1986-87.

	Woodland		Wilton		Galt Thornton		Vernalis		Total	
	<u>86</u>	<u>87</u>	<u>86</u>	<u>87</u>	<u>86</u>	<u>87</u>	<u>86</u>	<u>87</u>	<u>86</u>	<u>87</u>
#nests checked	16	19	5	10	-	10	-	9	21	48
#young fledged	19	18	5	12	-	12	-	14	25	56
% successful	81.3	68.4	100.0	90.9	-	80.0	-	88.9	85.7	81.3
% failed	18.7	31.6	0.0	9.1	-	20.0	-	11.1	14.3	18.7
#young/ occupied nest	1.19	0.95	1.00	1.20	-	1.20	-	1.56	1.19	1.17
#young/ successful nest	1.46	1.39	1.00	1.20	-	1.50	-	1.75	1.46	1.44

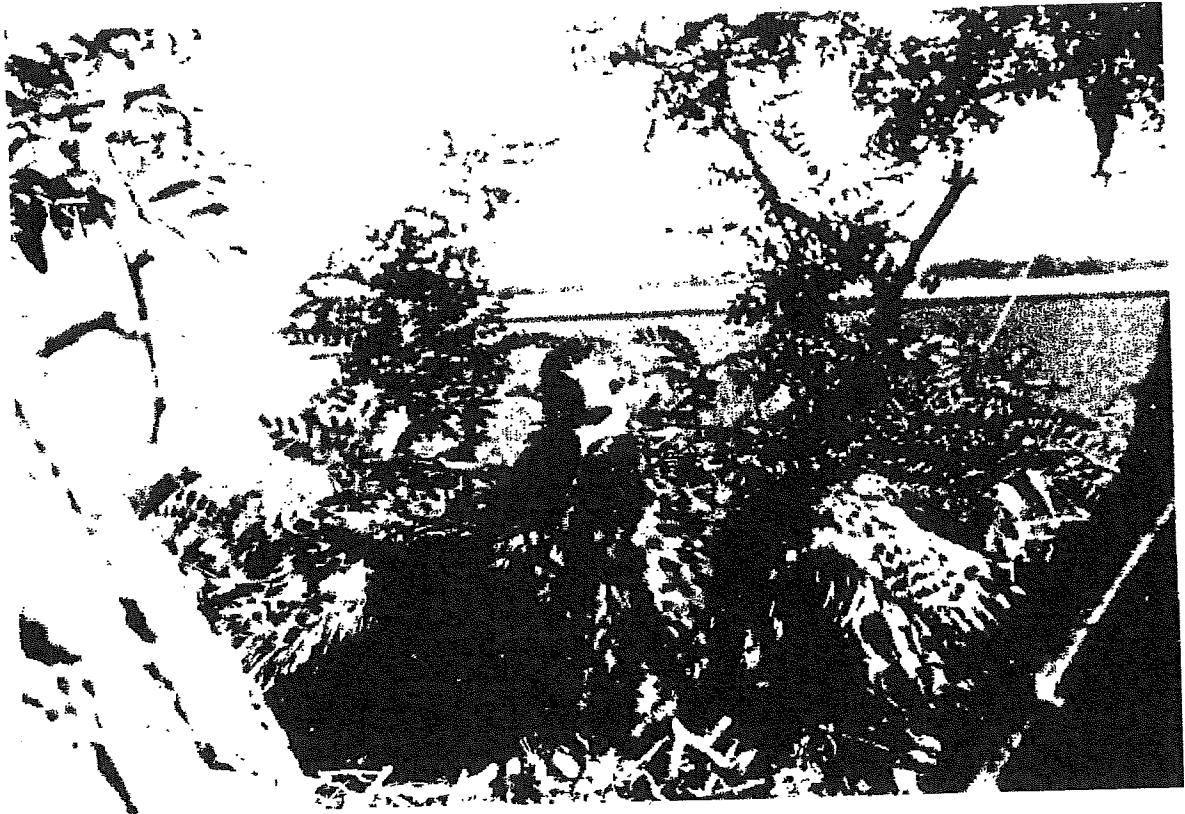


Photo by Philip J. Detrich

Figure 5. Typical successful Swainson's Hawk nest in the Central Valley with one young.

Table 4. Comparison of prey population indices (number of captures/100 trap nights) in 12 cover-types in the Central Valley, 1986-87.

Cover-type	Prey					Total	%
	<u>M.m.</u> <sup>1/</sup>	<u>P.m.</u> <sup>2/</sup>	<u>R.m.</u> <sup>3/</sup>	<u>M.c.</u> <sup>4/</sup>	<u>R.r.</u> <sup>5/</sup>		
Tomatoes	300.0	14.3	157.1	28.6	0.0	500.0	22.1
Beets	325.0	0.0	100.0	25.0	0.0	450.0	19.9
Edge	385.7	0.0	57.1	0.0	0.0	442.8	19.6
Fallow	16.7	200.0	8.3	8.3	0.0	233.3	10.3
Dryland						200.0	10.3
pasture	16.7	183.3	0.0	0.0	0.0	162.5	7.2
Alfalfa	100.0	12.5	37.5	12.5	0.0	83.3	3.7
Riparian	0.0	0.0	0.0	0.0	83.3	66.7	2.9
Corn	0.0	66.7	0.0	0.0	0.0	66.7	2.9
Sunflowers	0.0	66.7	0.0	0.0	0.0	66.7	2.9
Irrigated						33.3	1.5
pasture	33.3	0.0	0.0	0.0	0.0	25.0	1.1
Wheat	16.7	8.3	0.0	0.0	0.0	0.0	0.0
Disced						0.0	0.0
field	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	1194.1	551.8	360.0	74.4	83.3	2262.6	100.0
% of total	52.7	24.4	15.9	3.3	3.7		

1/ *Mus musculus*

2/ *Peromyscus maniculatus*

3/ *Reithrodontomys megalotis*

4/ *Microtus californicus*

5/ *Rattus rattus*

Table 5. Dietary composition as determined from regurgitated pellet analysis, prey remains, and observed prey captures by Swainson's Hawks in the Central Valley, 1986-87.

<u>Species</u> <sup>1/</sup>	<u>Number of Individuals</u>	<u>Percent Total Prey</u>	<u>Percent</u> <sup>2/</sup> <u>Biomass</u>
Meadow vole	92	15.0	23.1
Valley pocket gopher	11	1.8	5.8
Deer mouse	9	1.5	1.1
Western harvest mouse	3	0.5	0.3
Black rat	3	0.5	1.2
California ground squirrel	3	0.5	8.5
House mouse	2	0.3	0.2
Blacktail jackrabbit	1	0.2	0.5
Unidentified rodent	8	1.3	2.0
Unidentified mammal	1	0.2	0.6
(Total mammals)	(133)	(21.7)	(43.5)
Mourning Dove	7	1.1	4.9
Ring-necked Pheasant	6	1.0	15.1
Meadow Lark	4	0.7	2.6
Scrub Jay	2	0.3	0.8
Western Kingbird	2	0.3	0.6
Brewers Blackbird	1	0.1	0.4
European Starling	2	0.3	0.9
Black-headed Grosbeak	1	0.1	0.3
Cinnamon Teal	1	0.1	2.2
American Crow	1	0.1	2.2
Yellow-headed Blackbird	1	0.1	0.4
Wood Duck	1	0.1	3.7
Northern Flicker	1	0.1	0.9
Unidentified Sparrow	5	0.8	0.8
Unidentified raptor nestling	1	0.1	0.3
Unidentified passerine	16	2.6	5.2
Unidentified bird	14	2.3	8.8
(Total birds)	(66)	(10.8)	(49.8)
Gopher snake	2	0.3	0.6
Western toad	2	0.3	0.6
(Total reptiles and amphibians)	(4)	(0.6)	(1.3)
Crayfish	8	1.3	1.0
(Total crustaceans)	(8)	(1.3)	(1.0)
Grasshopper	244	39.9	3.1
Cricket	134	21.9	1.3
Silphadid	21	3.4	0.1
Dragonfly	1	0.2	3/
Pentatomidid	1	0.2	3/
(Total insects)	(401)	(65.5)	(4.4)

<sup>1/</sup> Scientific names of animals listed in appendix 2.

<sup>2/</sup> Weights of animals taken from Esten (1931), Evans and Emlen (1947), Wildlife and Fisheries Biology Museum, University California, Davis, and field weights from this study.

<sup>3/</sup> < 0.1

pellets that were composed of only insect remains (in which as many as 100 individual prey items could be identified from a single pellet) the pellets averaged 3.4 items per pellet. In addition, 69 prey items were identified from prey remains found in or below nests, or from observed prey captures.

California voles were the most common mammalian prey item from all study areas (Table 5) and comprised 69.2% of the total mammalian prey. The California vole was the single-most important prey species in the Swainson's Hawk diet in the Central Valley, comprising 23.1% of the total prey biomass. Mammalian prey taken less frequently included Valley pocket gopher (*Thomomys bottae*), Deer mouse, Western harvest mouse, Black rat, California ground squirrel (*Spermophilus beecheyi*), House mouse, and Blacktail jackrabbit (*Lepus californicus*).

Birds were an important dietary component in terms of variety, percent of total prey items, and percent biomass (Table 5). Bird remains were found in 41.1% of all pellets, and overall, made up a greater portion of the percent biomass (49.8%) than did mammals (43.5%). This is somewhat misleading, however, due to the weight of the Ring-necked Pheasant (*Phasianus colchicus*) (juvenile weight used). Although the Ring-necked Pheasant and the Mourning Dove (*Zenaidura macroura*), were the most common avian prey items, together they comprised only 2.1% of the total prey (Table 5). Insects, snakes, toads, and crayfish were also taken.

Fitzner, et al. (1981) reported snakes as the primary food of the Swainson's Hawk on the Hanford Site in Southeastern Washington State. Snakes and toads may be proportionately higher in the diet of the Central Valley Swainson's Hawk than indicated here, since pellet formation of undigestible remains of these groups is less likely. Swainson's Hawks were observed taking Gopher Snakes (*Pituophis melanoleucus*) and Western Toad (*Bufo boreas*) remains were found at several nest-sites; however, no remains of these species were identified from pellet analysis.

The insectivorous diet of the Central Valley Swainson's Hawk was similar to that reported elsewhere (Cameron 1913, Bent 1937, Johnson, et al 1987). Insects were frequently taken prey items (Table 5); however, in terms of biomass, made up only 4.3% of the Swainson's Hawk diet. Grasshoppers (*Melanoplus sp.*) and crickets (*Gryllus sp.*) were usually taken on the ground; however, grasshoppers were also taken on the wing as described by Woffinden (1986).

#### Foraging Behavior

Foraging activity made up 63.7% of the combined observation time for the 12 radio-tagged Swainson's Hawks (Table 6). The results do not indicate a significant difference between the percent foraging activity between the sexes; however, this is mainly a result of the different times of year individuals were tracked (Table 7). Care was taken not to trap birds during the incubation phase of the breeding cycle to avoid nest abandonment (Fyfe and Olendorff 1976). Just after young hatched, however, adult males proved easier to trap than females, hence the observation period for radio-tagged males was earlier in the year than for females (Table 7). In general, females rarely hunted during the incubation phase of the breeding cycle. While no attempt was made to collect quantitative data concerning the more detailed aspects of

Table 6. Percent of locations according to activity type of 12 radio-tagged Swainson's Hawks in the Central Valley, 1986-87.

<u>Bird Code</u>	<u>Flying</u>	<u>Perching</u>	<u>On the Ground</u>	<u>Total</u>
WO1M	69.7	26.3	4.0	100.0
WO2F	42.3	57.0	0.8	100.0
WO3M	46.4	42.5	11.2	100.0
WO4F	55.0	28.0	17.0	100.0
WO5F	30.0	57.5	12.6	100.0
WO6M	67.0	20.1	12.9	100.0
WI1M	91.0	5.9	3.0	100.0
WI2F	97.5	2.5	0.0	100.0
GT1M	61.0	24.9	14.1	100.0
GT2M	88.7	4.7	6.6	100.0
VE1M	79.0	9.8	11.2	100.0
VE2M	79.1	12.8	8.0	100.0

	<u>Foraging</u>	<u>Not Foraging</u>	<u>Unknown</u>	<u>Total</u>
WO1M	55.8	34.4	9.8	100.0
WO2F	35.2	64.8	0.0	100.0
WO3M	44.4	46.5	9.1	100.0
WO4F	60.8	34.2	5.0	100.0
WO5F	37.2	60.8	2.0	100.0
WO6M	63.6	29.6	6.8	100.0
WI1M	96.7	2.6	0.7	100.0
WI2F	91.4	8.6	0.0	100.0
GT1M	53.2	38.7	4.1	100.0
GT2M	86.5	13.1	0.4	100.0
VE1M	62.9	27.2	9.9	100.0
VE2M	72.7	21.9	5.4	100.0



Table 7. Telemetry information and total home range areas of 12 adult Swainson's Hawks in the Central Valley of California, 1986-87.

<u>Bird Code</u>	<u># Hours Tracked</u>	<u># Locations</u>	<u>Tracking Period</u>	<u>Home Range Area(ha)</u>
WO1M	108	1296	5-6 to 8-22-86	7839.0
WO2F	48	576	6-19 to 8-17-86	336.0
WO3M	112	1344	5-13 to 9-03-87	1258.7
WO4F	52	624	7-12 to 8-25-87	2193.6
WO5F	92	1104	6-16 to 9-12-87	1508.1
WO6M	60	720	7-28 to 9-02-87	8717.7
WI1M	44	528	7-3 to 8-06-87	2088.6
WI2F	42	504	7-3 to 8-07-87	2169.2
GT1M	40	480	7-4 to 8-21-87	2845.6
GT2M	40	480	5-16 to 7-30-87	1132.7
VE1M	42	502	5-15 to 7-29-87	1939.0
VE2M	<u>44</u>	<u>528</u>	5-15 to 6-19-87	<u>1102.1</u>
total =	724	8688		mean = 2760.4

Swainson's Hawk nesting ecology, I observed that females were almost totally provisioned by the males during the incubation period. During the nestling phase of the breeding cycle the hunting activity of females gradually increased. Male provisioning was no longer observed by the time young were near fledgling age.

Dividing hunting method into search technique and attack technique as outlined by Dunstan, et al. (1978), Central Valley Swainson's Hawks almost exclusively (unless responding to certain farming activities) searched for prey from a low altitude soaring flight, 30 to 90 m (98.4 to 295.2 ft) above the ground, and attacked by stooping toward the ground. In some portions of the Swainson's Hawk range, though only rarely observed among the Central Valley population, hunting from a perch (fencepost, utility pole) is also common (Woodbridge pers. comm.).

Unless farming activities attracted hunting Swainson's Hawks, birds would usually did not spend more than a few minutes searching a field for prey before moving on. This highly active foraging behavior often resulted in birds traveling as far as 29.0 km (18.0 mi) from the nest in search of prey. This occurred primarily during periods of increasing vegetative cover, and was presumably in response to decreasing prey availability. This, in turn, led to the formation of communal foraging groups of Swainson's Hawks in areas distant from suitable nesting habitat but where suitable foraging habitat remained.

Swainson's Hawks in the Central Valley appear to exploit an abundance of prey made available due to the effects of certain farming activities (e.g. harvesting, discing, mowing, flood irrigating, and agricultural burning). All of these activities made prey vulnerable to predation by reducing cover or otherwise increasing their exposure to foraging Swainson's Hawks. Overall, radio-tagged birds spent 52.8% of the observed foraging time hunting in apparent response to one of these farming activities. In addition, observations were made of 143 prey captures, of which 105 (73.4%) were made in fields being harvested, disced, mowed or irrigated.

In fields being harvested or disced, birds would hunt in front of or behind a harvester or tractor, capturing rodents that became exposed due to disturbance the farm machinery caused. Bent (1937) first reported the apparent association between foraging Swainson's Hawks and farm machinery. Hovering from a few meters to 30 meters (98.4 feet) from the ground, capture attempts were sometimes made within inches of a moving harvester blade or disc. The capture success of this hunting technique appeared to be very high. Caldwell (1986) found that certain species of raptors increase their hunting success (number of successful attempts per number of total attempts to capture prey) by hunting in association with farm machinery.

The increase in rodent populations in maturing crops was directly associated with a decrease in Swainson's Hawk use, presumably caused by a reduction in available prey as a result of increasing vegetative cover. Swainson's Hawks responded, however, to the abundance of prey that became available during harvest. During this time of year (late July through September), daily foraging ranges were as small as 12.2 ha (30.1 ac), as Swainson's Hawks restricted their hunting activities to a single field being harvested. Tomato and beet fields were of particular importance in this respect (particularly in the Woodland study area) because of their high rodent populations and cover-type availability. The high percentage of tomato field use by birds W01M

(63.5%), WO3M (51.6%), WO4F (66.9%), and WO6M (31.6%) was primarily due to harvesting activities.

Mowing and irrigation activities applied primarily to alfalfa and occurred regularly throughout the Swainson's Hawk breeding season. Alfalfa supported only moderate prey densities (Table 4); however, the sequence of monthly mowing and weekly flood irrigating made it a crop-type of high prey availability. Flood irrigation forced prey to take refuge along exposed borders in alfalfa fields, where hunting Swainson's Hawks captured them easily. The home range of bird WO2F included 53.5% alfalfa divided into 12 separate fields (Fig. 6). The sequence of mowing and irrigation of these fields resulted in one of these farming activities occurring 18 days (64.3%) of each 28 day period. Hunting activity in response to these activities by WO2F accounted for 61.5% of observed foraging time. The observed foraging behavior of birds GT2M, VE1M, and VE2M was similar.

Swainson's Hawks became more gregarious after young had fledged and commonly joined into feeding groups in response to farming activities (harvesting, discing, agricultural burning, etc.). The increased rodent prey availability, and the abundance of insects disturbed or made available by these farming activities attracted feeding groups of up to 180 individuals. These did not appear to be permanently aggregated premigratory groups. Individuals joined and left groups regularly. Groups of immature and nonbreeding Swainson's Hawks, observed as early as 7 June, may have been more cohesive. In some cases, when large fields of beets or tomatoes were being harvested, feeding groups would remain for the length of the harvest, up to several days. Cameron (1913), Nickerson, et al (1985), Woffinden (1986), and Johnson, et al (1987) reported similar group feeding behavior among Swainson's Hawks.

#### Home Range Characteristics

Radio-tagged Swainson's Hawks were tracked for a total of 724 hours. Home ranges were calculated from 8,688 recorded locations (Table 7). The majority of tracking time (67.2%) occurred while birds were in flight (Table 6).

Some home ranges were extremely large (Table 7) when compared with those reported in other studies of Swainson's Hawk and other North American buteos (Craighead and Craighead 1956, Wakeley 1978, Bechard 1982). The mean home range was 2760.4 ha (6818.2 ac). Males averaged 46.1% larger home ranges than females. During periods of low prey availability, many birds flew to distant foraging habitats. Consequently, foraging ranges tended to expand linearly, often resulting in a generally elongated home range configuration (Fig. 7 and 8).

The foraging ranges (the modified minimum polygon area within the home range that was used for foraging) of some radio-tagged birds, primarily those in the Woodland study area, had an elastic nature that fluctuated with the pattern of crop maturity and harvest. Bechard (1982) showed that increasing vegetative cover will reduce prey availability and result in a reduction of Swainson's Hawk use. Wakeley (1978) also measured vegetative cover and found a correlation between foraging use and prey availability among Ferruginous Hawks. While I did not measure vegetative cover directly, the pattern of crop maturity and Swainson's Hawk use was apparent. The foraging range of bird WO-01 illustrates this best (Fig. 9 and 10). The foraging range of bird WO1M varied daily, however, there were three major fluctuations within the 127 day

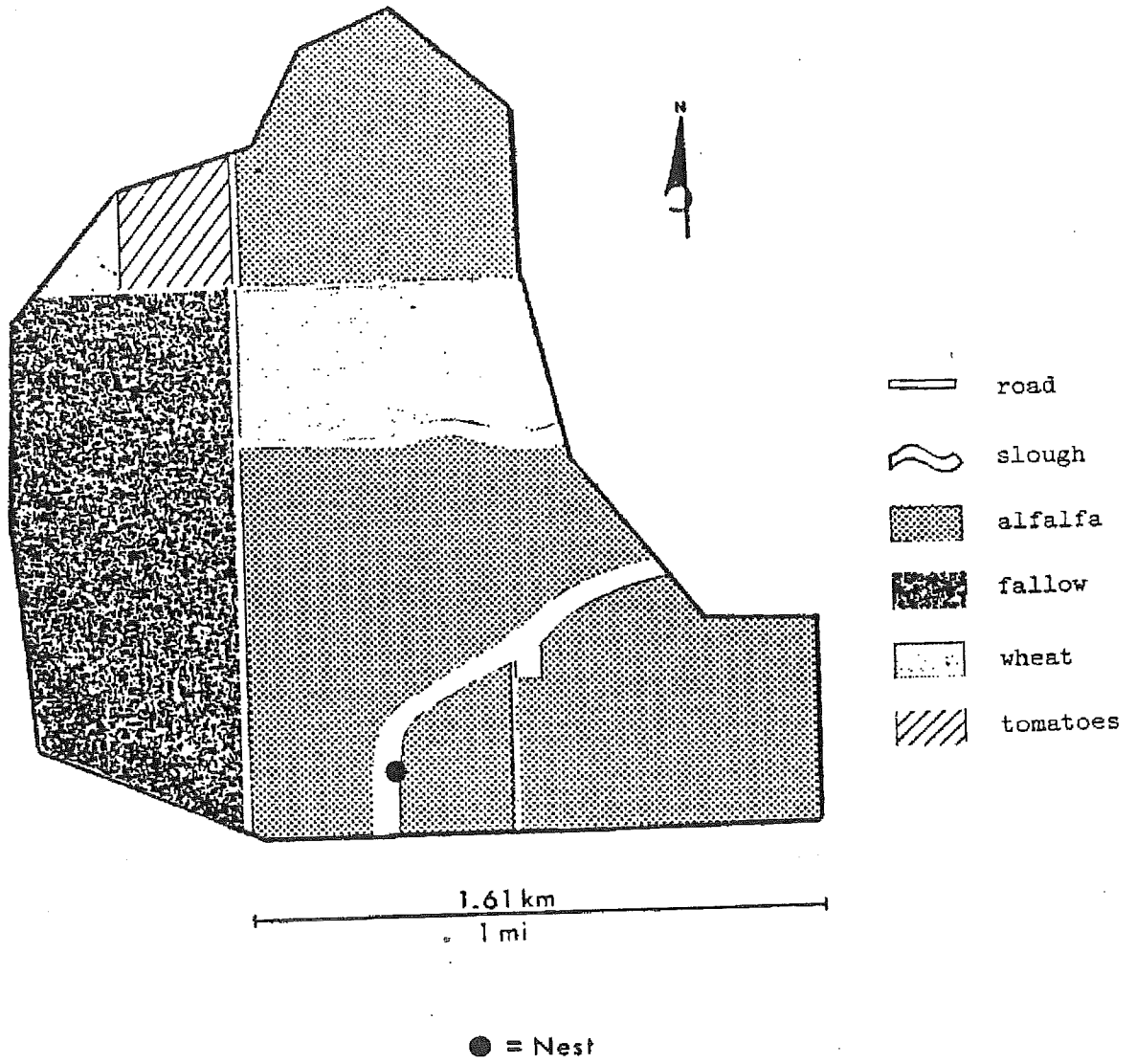


Figure 6. Land-use within the home range of bird WO2F, Central Valley, 1986.

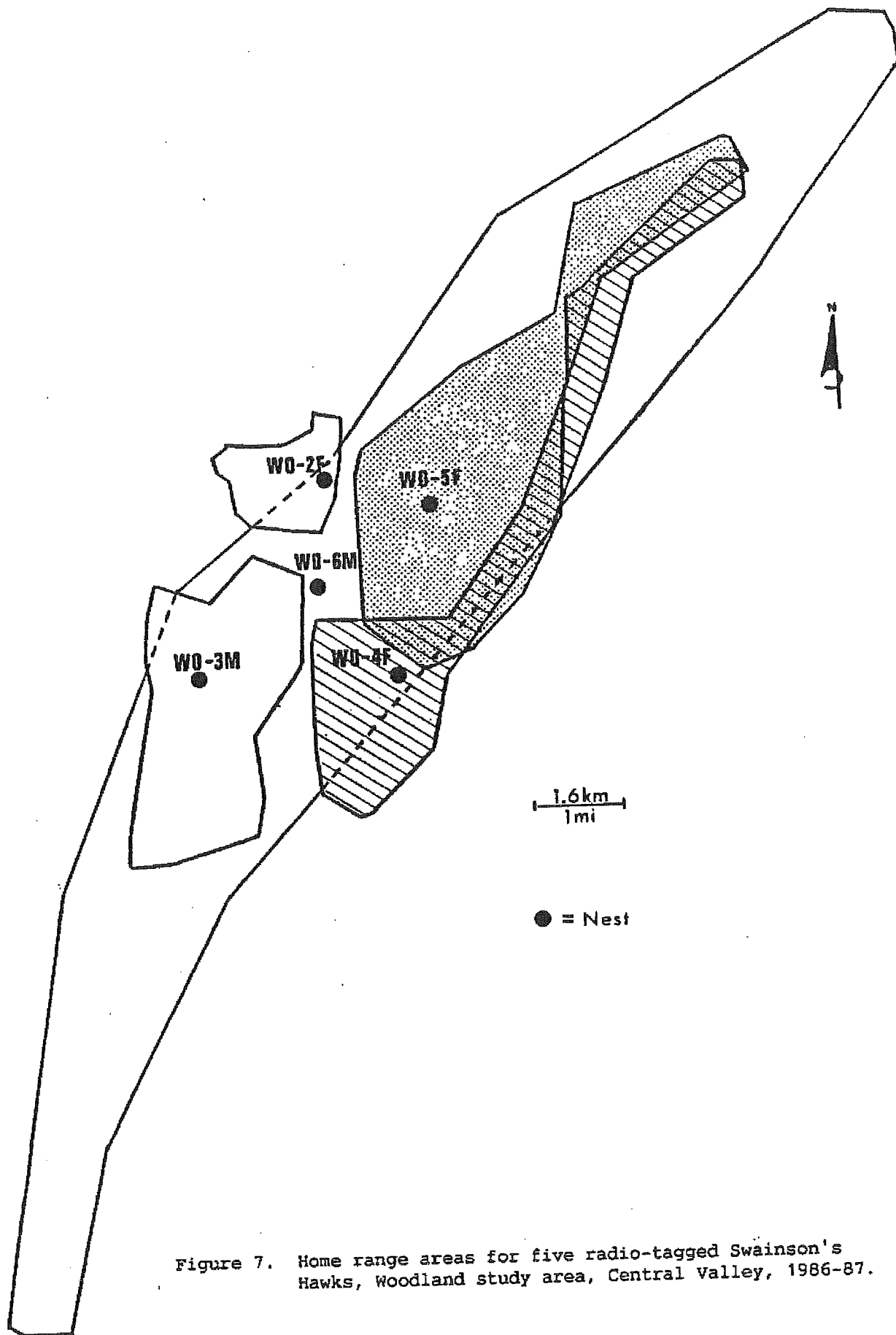


Figure 7. Home range areas for five radio-tagged Swainson's Hawks, Woodland study area, Central Valley, 1986-87.

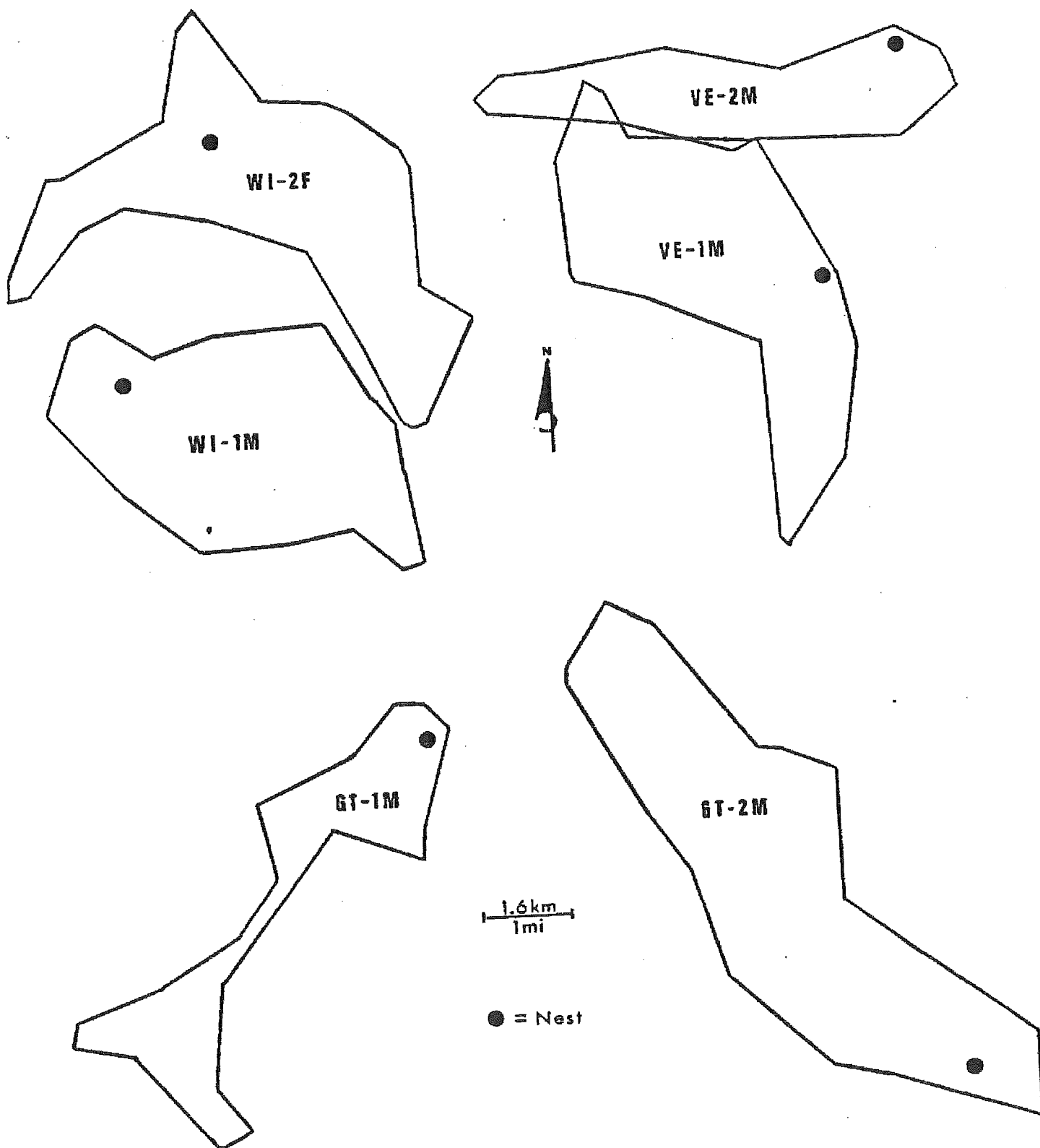


Figure 8. Home range areas for six radio-tagged Swainson's Hawks from the Wilton (WI-), Galt-Thornton (GT-), and Vernalis (VE-) study areas, Central Valley, 1987.

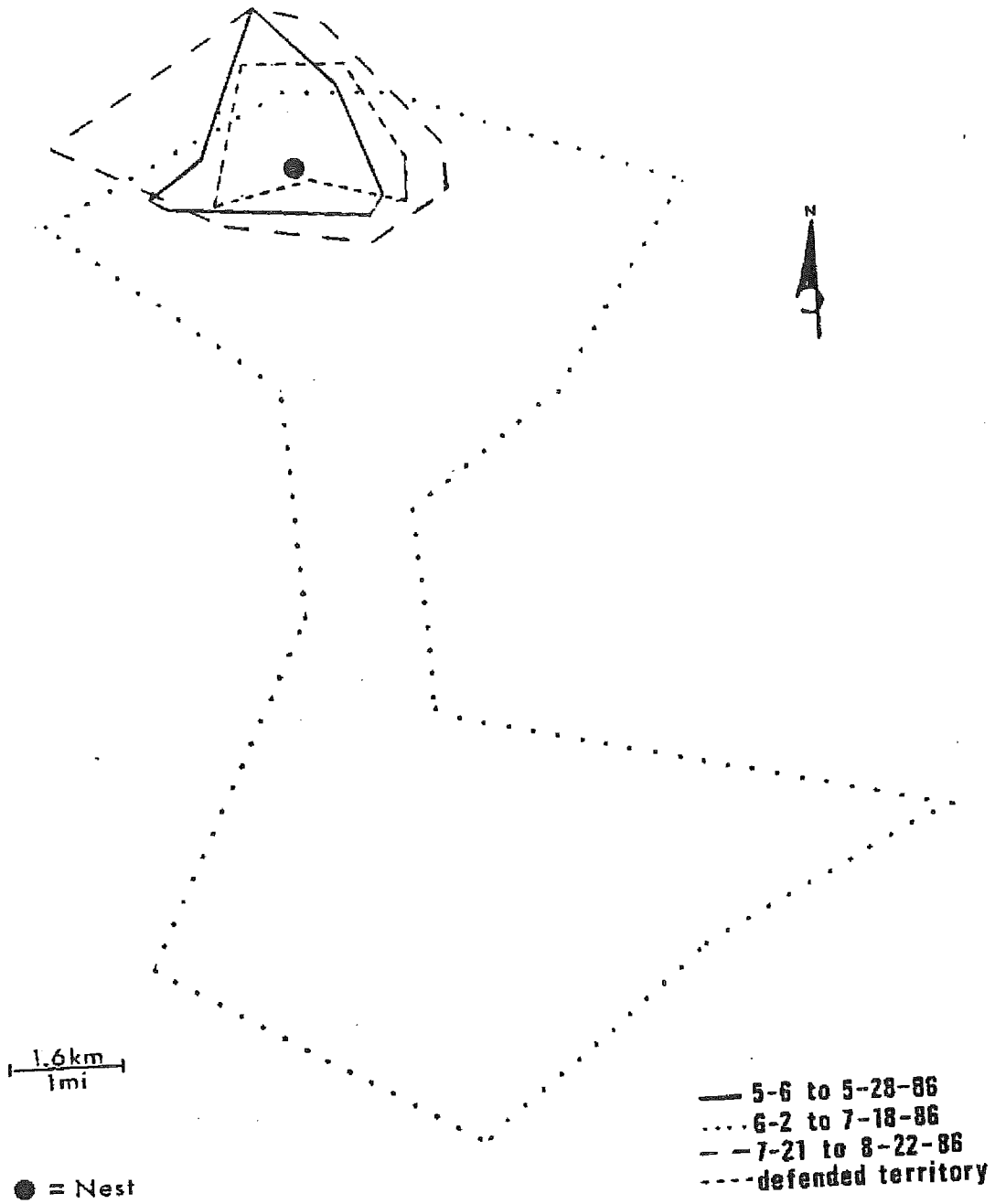


Figure 9. Foraging range areas and defended territory of bird WO-1M from 6 May to 22 August, 1986.

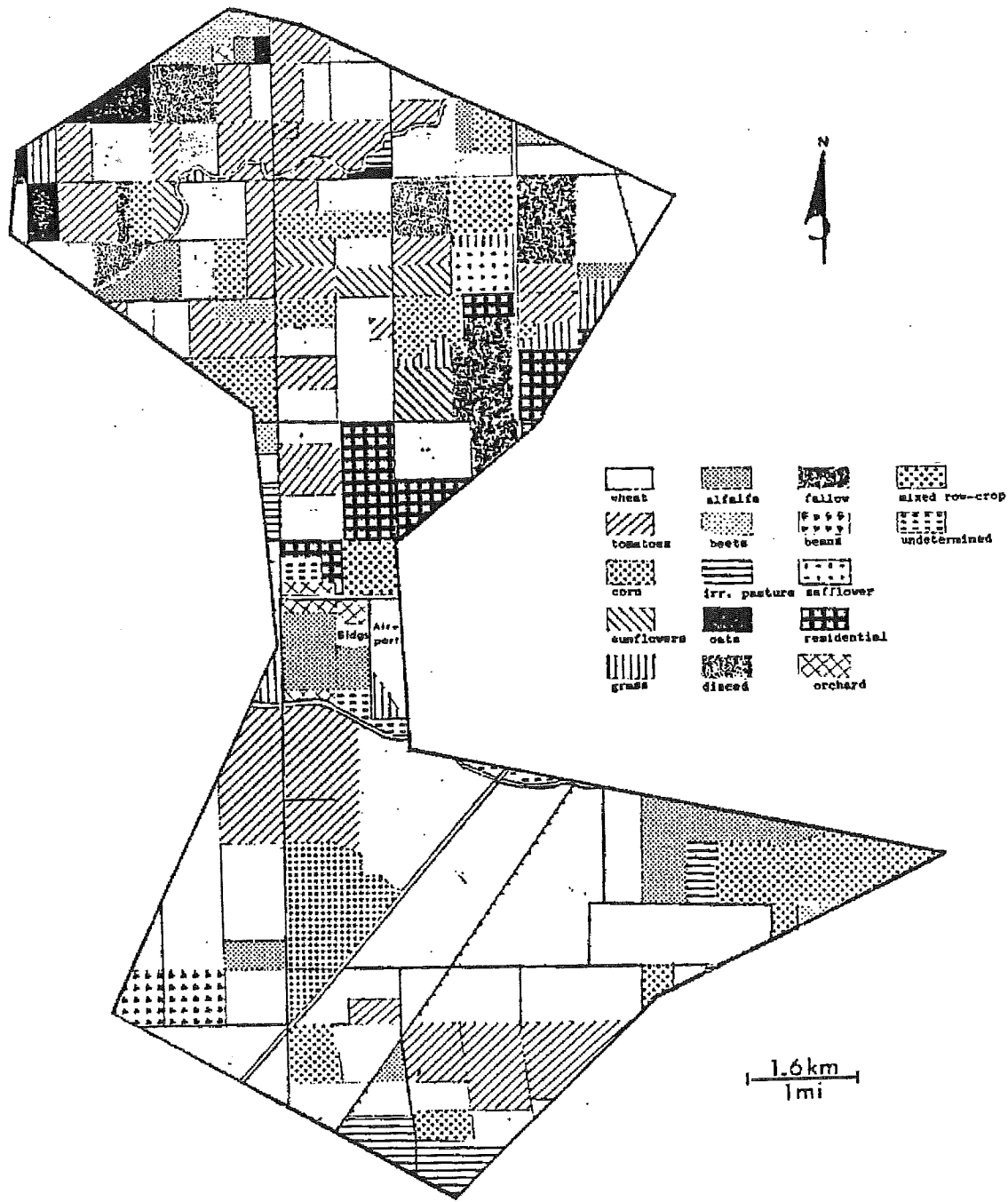


Figure 10. Land-use within the home range of bird WO-1M; Central Valley, 1986.



observation period. During the period from 5 May to 28 May 1986, most crops were immature or newly planted and vegetative cover was at a minimum. From 2 June to 18 July vegetative cover increased as crops matured, reducing prey availability and forcing Swainson's Hawk W01M to expand its foraging range. On 21 July, harvest of the major row crops began, increasing prey availability while rodent populations were at their peak. This had the effect of reducing Swainson's Hawk W01M's foraging range.

At the other extreme, 78.4% of bird W02F's home range was in alfalfa production or fallow (Fig. 6), neither of which had a vegetative cover that would preclude foraging at any time of the breeding season. The result was a stable foraging range, roughly equal to the home range, which was small (336.0 ha (829.9 ac)), and aggressively defended. While not radio-tracked, incidental observations of bird W02M indicated that it's home range was similar to that of it's mate, W02F.

Home ranges in the other three study areas included higher percentages of pastureland and alfalfa (Fig. 11), both available for hunting season-long. Foraging ranges did not fluctuate seasonally as in the Woodland study area and were more aggressively defended. Home ranges were generally smaller and similar in size (Table 7). As Bechard (1982) found among Swainson's Hawks in Washington State, a significant positive relationship existed between home range size and the amount of cultivated land available ( $P < 0.01$ ),  $r = 0.97$ ,  $df = 10$ ).

The size of daily ranges (the modified minimum polygon area calculated for each four-hour observation period) varied widely (12.2 ha (30.1 ac) to 6,407 ha (15,763.4 ac)), due mainly to the amount of available foraging habitat within each home range. Daily foraging ranges were smallest when fields were being harvested near the nest. It was common for Swainson's Hawks to forage in a single field being harvested for the duration of the harvest, up to several days. At the other extreme, when vegetative cover limited available foraging habitat, daily foraging ranges were largest.

Nest-sites were often eccentric within home ranges (Fig. 8). Factors causing nest-site eccentricity may have included the heterogeneous nature of available foraging habitat and the distribution of available nest-sites.

Defended territories were relatively small in relation to total home range area (Fig. 9). This was particularly true in the Woodland study area, where available foraging habitat around the nest was limited much of the season. Territories located near more preferred foraging habitat (Fig. 12) were more aggressively defended over a larger area in relation to home range size.

#### Foraging Habitat Use

Swainson's Hawks were observed foraging in 17 of the 30 identified cover-types. Some of these had very infrequent use and were therefore combined into "grains", "other row crops", and "other" categories. The result was that 10 cover-type categories (components) were used in the habitat preference analysis.

Results of habitat preference analysis revealed a statistically significant rejection of the null hypothesis that all components were equally preferred ( $P < .01$ ,  $F = 8.62$ ,  $d.f. = 9,3$ ). The ranking of these components (Table 8) shows

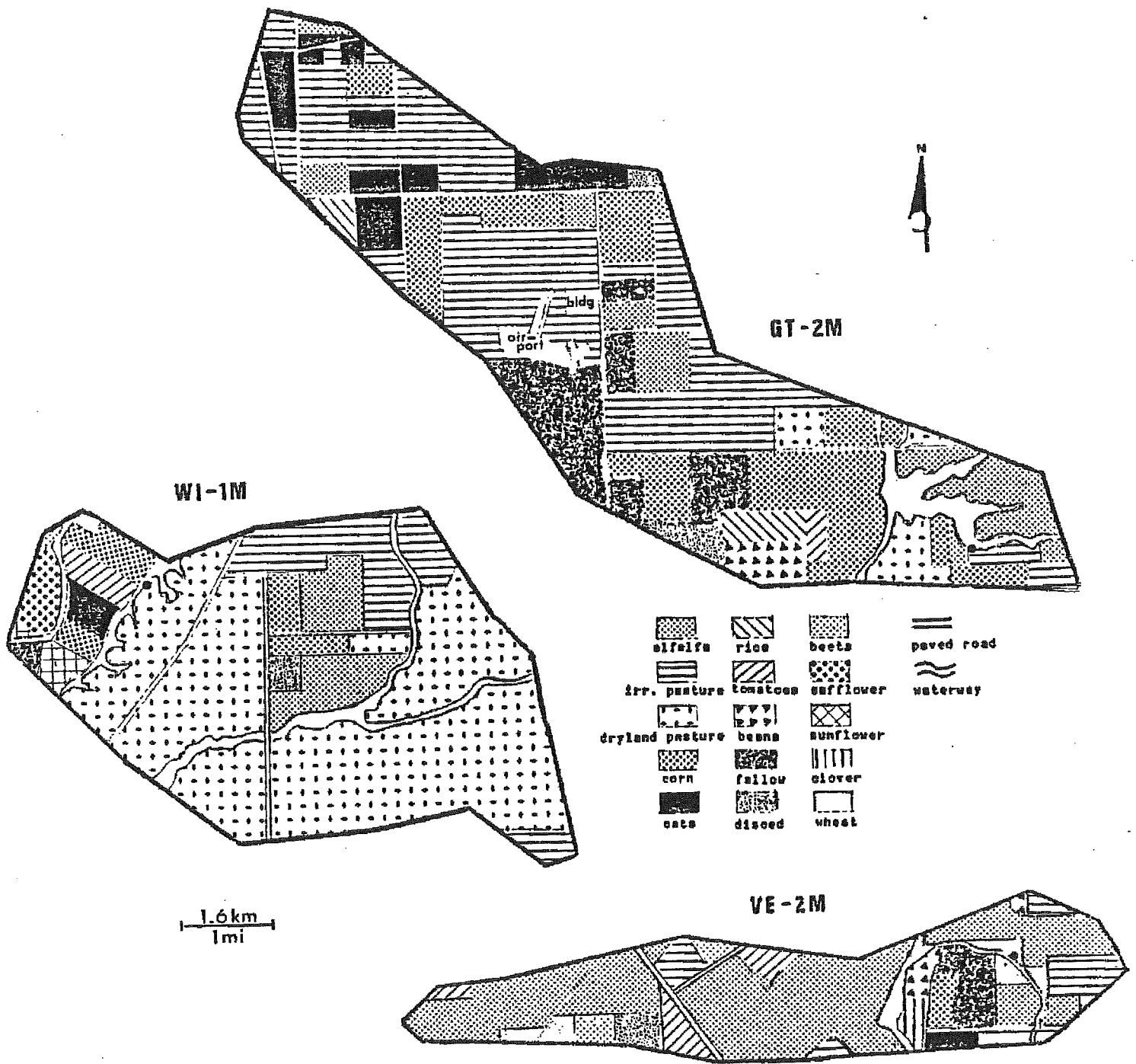


Figure 11. Land-use within the home ranges of three Swainson's Hawks in the Wilton (WI-1M), Galt-Thornton (GT2M), and Vernalis (VE-2M) study areas, Central Valley, 1987.

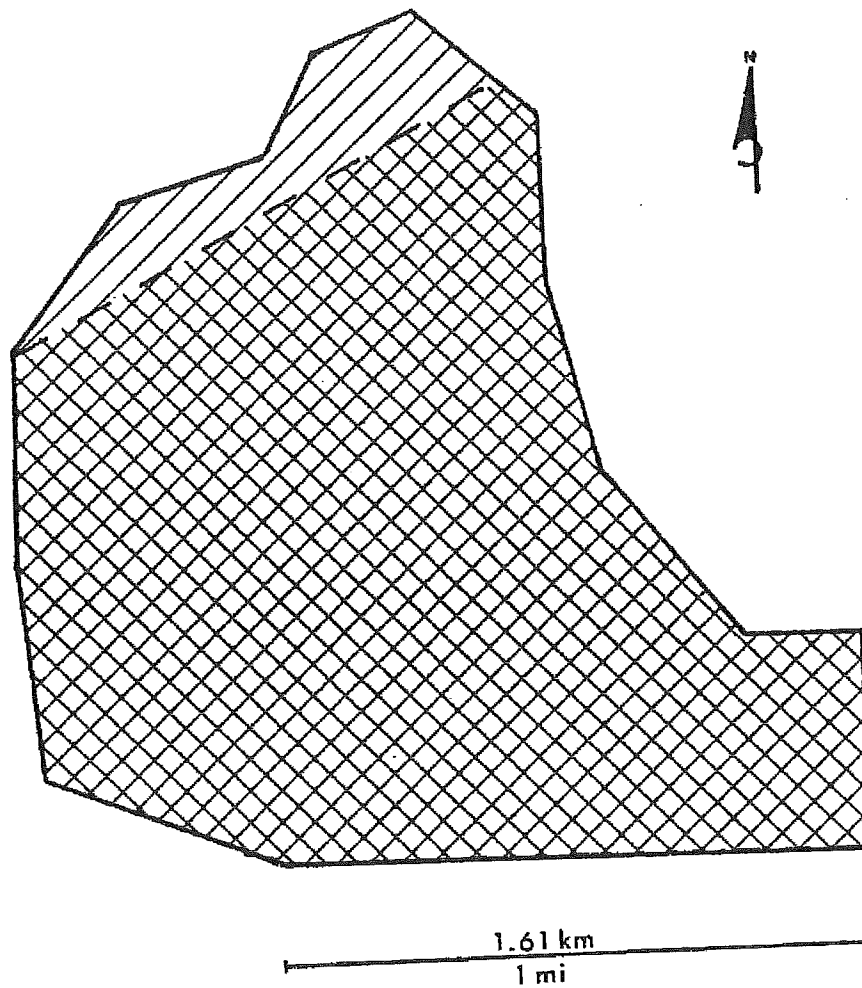


Figure 12. Home range (cross-hatched) and defended territory (double cross-hatched) of bird WO-2F in the Woodland study area, 1986.

Table 8. Relative importance of 10 agricultural habitats based on preference data gathered on 12 radio-tagged Swainson's Hawks in the Central Valley, 1986-87.

<u>Component</u>	<u>Rank</u>
Alfalfa	1
Disced field	2
Fallow	3
Dry-land pasture	4
Beets	5
Tomatoes	6
Irrigated pasture	7
Grains	8
Other row crops	9
Other	10

the relative importance of each to Swainson's Hawk foraging in the Central Valley; however, many of the multiple comparison results (Appendix 3) fell short of statistical significance ( $K = 100$ ,  $W = 3.11$ ), probably due to the relatively small sample size of radio-tagged birds (Johnson pers. comm.).

Cover-types that had less overall vegetative cover and greater prey availability ranked highest (alfalfa, disced field, fallow, and dryland pasture)(Table 8). Alfalfa was preferred across all 12 individuals and over all other components (Table 8 and Appendix 3). While supporting only moderate rodent prey populations (Table 4), the foraging use of alfalfa occurred continuously from March to September. Minimum vegetative cover and regular periods of increase in available prey due to frequent flood irrigating and mowing made alfalfa a highly compatible crop-type for foraging Swainson's Hawks.

Disced fields, while ranked second, were used primarily for feeding on grasshoppers and crickets. This was a daily activity for some Swainson's Hawks during the summer. Disced fields had little or no vegetative cover to reduce prey availability; however, they supported only very low rodent populations (Table 4). On a prey biomass basis, the relative importance of this foraging component is much less than its rank, which is based on use and availability.

Rodent populations were relatively high in fallow fields (Table 4) and vegetative cover relatively low. Swainson's Hawks successfully foraged in these fields unless the presence of certain plants, such as Bull Thistle (*Cirsium vulgare*) precluded access.

Dryland pasture most resembles the physical characteristics of historic grassland foraging habitat in the Central Valley. Much of the Wilton study area was open dryland pasture. Both WI-1M and WI-2F used this foraging habitat as their primary source of food, hunting in other cover-types opportunistically, usually in response to farming activities.

Irrigated pasture was rarely used by hunting Swainson's Hawks, except during periods of flood irrigating. Relatively low rodent populations were found in irrigated pasture (Table 4).

While beet and tomato fields supported the largest prey populations (Table 4), dense vegetative cover appeared to preclude Swainson's Hawk foraging during much of the year. However, during harvest they were hunted regularly. The Woodland study area had the greatest area planted to tomatoes and beets. Here, the radio-tagged Swainson's Hawks foraged almost exclusively in these crop-types from late-July to early-September.

The "other row crop" category included corn, sunflowers, safflower, beans, and peppers. Relatively small prey populations (Table 4) and low prey availability made these crop-types less preferred. As corn, sunflowers and safflower matured, growing to heights above 0.6 m (2 ft) they created an impenetrable barrier for hunting Swainson's Hawks. These crops often were not harvested until after Swainson's Hawks left the Central Valley for their wintering grounds.

The 'grains' component included wheat, oats, and rice. These crop-types were used only infrequently by hunting Swainson's Hawks, except for rice which was

never used. Wheat was one of the more common Central Valley crops, particularly in and around the Woodland study area (Table 1). Wheat is planted in early winter in the Central Valley and reaches a mature height soon after the arrival of most Swainson's Hawks in mid-March, reducing available prey in this crop-type. Swainson's Hawks were observed hunting in wheat fields while harvesting operations were in progress; however, only rarely in harvested wheat fields. Rodent populations were found to be relatively low in harvested wheat fields (Table 4).

The 'other' component included grass, clover, edges, riparian systems, vineyards, orchards, residential areas, oak woodland, asparagus, onions, a county park, and a golf course. These cover-types were used either very infrequently or not at all, due to low prey populations, inaccessibility, or low cover-type availability.

#### Nesting Habitat Use

I located sixty-one nest sites during the study. This includes the nest of one pair that did not re-nest in 1987, and does not include alternate nests that were used in 1987. Fifty nests (78.1%) were within riparian systems. Nine (14.1%) were in roadside trees (usually rows of trees bordering a paved county road or highway), and 5 (7.8%) were in lone, isolated trees in the middle of an agricultural field or pasture (Fig. 13). This close association with riparian nesting, which appears to be unique to the Central Valley of California and perhaps certain areas of Nevada (Herron 1985), is probably due to nest-site availability and reduced disturbance. Sharp (1902) noted a similar riparian association with nesting Swainson's Hawks in Southern California. Throughout the Central Valley, 87% of all known nests are within riparian systems (Estep 1984). Schlorff and Bloom (1983) evaluated the importance of Central Valley riparian habitat to nesting Swainson's Hawks and considered it critical to the survival of the population.

Valley Oak was the most commonly used nest tree species in all study areas (71.9%), followed by Walnut (12.5%) (primarily in the Woodland study area) Fremont Cottonwood (9.4%), Willow (3.1%), and Locust (*Robinia pseudoacacia*) (3.1%) (primarily in the Woodland study area). Valley Oak was the dominant tree species in all study areas, however, where oak and cottonwood trees were both present, cottonwood trees appeared preferred. Sharp (1902) noted that Swainson's Hawks in Southern California preferred cottonwood trees and rarely nested in oak trees. Gilmer and Stewart (1984) reported cottonwood as the preferred nest tree species in their North Dakota study area. During a survey of a 232 km (144 mi) stretch of the Sacramento River, all Swainson's Hawk nests located (30) were in Cottonwood trees (Estep 1987). Cottonwood trees were primarily associated with riparian systems, while oak trees were found both within and remote from riparian systems. Walnut trees were generally found along roadsides or near farmhouses as well as in riparian systems. However, only roadside Walnut trees were used as nest-sites.

Swainson's Hawks generally nested in trees that afforded a panoramic view of their territory. Trees were typically tall (mean = 17.6 m (57.7 ft), SD = 3.0 m (9.8 ft)) and located on the perimeter of riparian systems, or in isolated trees. Nests were often inaccessible, built high (mean = 14.4 m (47.2 ft), SD = 3.3 m (10.8 ft)) on the far reaches of small limbs. The mean tree and nest height (Table 9) were higher than any reported in the literature (Dunkle 1977, Munro and Reid 1982, Green and Morrison 1983, Thurow and White 1983, Gilmer

Table 9. Nest and nest tree characteristics of Swainson's Hawks in the Central Valley, 1986-87.

	<u>N</u>	<u>Mean</u>	<u>S.D.</u>	<u>Range</u>
Nest-tree Height	40	17.6m (57.7ft)	3.0m (9.8ft)	12.6-25.0m (41.3-82.0ft)
Nest Height	40	14.4m (47.2ft)	3.3m (10.8ft)	8.5-21.4m (27.9-70.2ft)
Distance From Top of Canopy	40	3.2m (10.5ft)	0.3m (1.0ft)	0.6-11.1m (2.0-36.4ft)
Nest Height as % of Tree Height	40	81.8		
DBH	36	84.8cm (33.1in)	26.9cm (10.5in)	34.3-145.5cm (13.4-56.7in)
Nest Diameter	6	44.5cm (17.1in)	12.2cm (4.8in)	30.5-55.0cm (11.9-21.8in)
Diameter of Nest- Supporting Limbs	15	11.0cm (4.3in)	3.8cm (1.5in)	5.1-15.2cm (2.0-5.9in)

and Stewart 1984). The diameter of nest trees was highly variable (Table 9). Nest construction was generally flimsy compared to the nests of other buteos and typically suffered wind damage during winter.

Use of alternate nests was common. Of the 25 pairs that had nests identified both years, 84% used an alternate nest in 1987. Nineteen (76%) used a different nest tree. Two (8%) pairs constructed a new nest in the same tree. Only 4 (16%) used the same nest both years. The mean distance between alternate nest trees was 176.5 m (578.9 ft) (range = 6.1 m (20.0 ft) - 756.9 m (2482.6 ft)).

Swainson's Hawks have been known to successfully nest near human activity (Gilmer and Stewart 1984, Schmutz 1984). In 1987 35% of the nests within the study area were within 0.4 km (0.2 mi) of a farmhouse or residential area, and 32% were within 0.4 km (0.2 mi) of a county road or highway. Three of the nests in the Woodland study area were along the edge of a busy state highway. There was no significant difference ( $P > 0.05$ ) between the nesting success or productivity (number of young fledged) of any of these nesting conditions and other nests.

#### Nest-site and Mate Fidelity

During the 1986 and 1987 breeding seasons 34 adult Swainson's Hawks were banded with colored, numbered plastic leg bands. Included were 16 individuals without color-banded mates and nine pairs of color-banded birds. The purpose of this effort was to determine nest-site and mate fidelity among Central Valley Swainson's Hawks.

All color-banded birds returned to the same territory in the 1987 and 1988 breeding seasons. All pairs of color-banded birds returned and nested with the same mate in the 1987 and 1988 breeding seasons. There was no mortality among the color-banded birds and no known adult Swainson's hawk mortality within the study area. In contrast, Woodbridge (pers. comm.) has reported several instances of interchanging territories and mates among Swainson's Hawks in the Northeastern California population.

#### Dispersal and Longevity

Very little is known about the dispersal of young Swainson's Hawks (Fig. 14). Nestlings have been banded in both California populations since 1978 with few birds relocated. In 1986, two adult Swainson's Hawks were trapped in the Woodland study area that were originally banded as nestlings in 1978. It was discovered that both of these birds were nested within two miles from where they were banded as nestlings. Both birds returned to nest in 1987 and 1988, marking their ninth year in the wild.

#### Plumage Characteristics

Woodbridge (1985) gives a fairly complete description of the many plumage variations among Swainson's Hawks. There are several intermediates between the three main color morphs (light, intermediate, and dark). In the Central Valley there seems to be a tendency of lighter morph males mating with darker morph females. This was true for 83% of the study pairs. Most of the rest had plumage morphs considered equal. Also, all 'pure' light morph (white wing linings and white body) birds were male, and all but one of the completely





Photo by Kevin Guse'

Figure 14. Juvenile Swainson's Hawk, Central Valley, 1987.

melanistic (dark wing linings and dark body) birds was female. The significance of these data and whether or not this pattern of sexual dimorphism occurs in other areas is undetermined, except for the Northeastern California population where similar results have been reported (Woodbridge pers. comm.).

#### DISCUSSION

The vegetative communities of the Central Valley show little resemblance to that of historic times. Agricultural conversion and urban expansion have resulted in extensive loss of native communities and the decline of many associated species of plants and animals (Warner and Hendrix 1984). Agricultural conversion has been the primary force in reducing the native habitats of the Swainson's Hawk throughout much of California. In the Central Valley, nearly all foraging habitat available to Swainson's Hawks is privately owned agricultural land. Still, a relatively large population of Swainson's Hawks continue to inhabit the mid-section of the Central Valley. Schmutz (1987) found that Swainson's Hawk breeding density increased with moderate cultivation, and even in areas of intensive cultivation breeding density remained relatively high. Certain agricultural land-uses appear to be compatible with Swainson's Hawk foraging needs. If properly managed, these agricultural habitats can continue to support a viable Swainson's Hawk population in the Central Valley. Other agricultural land-uses, however, are incompatible, and their expansion, and the continued expansion of urban development, will result in further loss of Swainson's Hawk nesting and foraging habitat, and ultimately, further reduction of the breeding population.

Over 95% of the known Swainson's Hawk nesting territories in the Central Valley are within the region south of Butte County and north of Fresno County, where irrigated farmland, primarily hay, row and grain crops, is the primary land-use. While urban development is rapidly increasing throughout the Central Valley, some relatively large urban-free areas still exist. Trees are generally sparsely distributed; however, many of the drainages in this region still support relatively large, mature riparian systems. In certain areas the combination of mature trees and agricultural land-use are compatible to Swainson's Hawk nesting and foraging needs. It is in these areas of suitable and relatively abundant nest trees in association with an abundant and available prey base that Swainson's Hawks continue to nest.

The Swainson's Hawk breeding densities here exceed those reported elsewhere for the species (Lokemoen and Duebbert 1976, Dunkle 1977, Gilmer and Stewart 1984, Schmutz 1984). However, this is not characteristic of the entire mid-section of the Central Valley, nor is it indicative of a large and healthy population. The distribution of nesting Swainson's Hawks follows the same irregular distribution of suitable nesting and foraging habitat throughout this region. Large areas exist, even in the mid-section of the Central Valley, which are devoid of suitable nest trees. Other areas support less preferred foraging habitats. High Swainson's Hawk breeding densities exist only in those areas where habitat conditions are most suitable.

A combination of several factors determine the number of breeding pairs of Swainson's Hawks an area can support. The breeding density in the Woodland study area indicates that the number of trees alone is not necessarily a factor above a certain density of suitable trees. Indeed, above a certain

density of trees, habitat suitability will decline. While tolerant of certain changing foraging conditions, the Swainson's Hawk remains a plains raptor, requiring wide-open space. The availability of suitable nest trees, their association with suitable foraging areas, historical Swainson's Hawk use, traditionality, presence of competitors, and human disturbance are all factors which will determine the density of breeding Swainson's Hawks.

Reproductive success (# fledglings/nest) of Swainson's Hawks in the Central Valley is low compared to other areas (Dunkle 1977, Gilmer and Stewart 1984, Bednarz 1985, Herron 1985, Woodbridge 1985) and is probably related to the overall sub-optimal habitat conditions in the region. 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. It follows that differences in available foraging habitat, particularly between those that support continually available prey and those that do not, might result in differential reproductive success. The farther a Swainson's Hawk must travel to successfully hunt, the less food it will bring back to the nest, and presumably the fewer young the pair can support. Evidence for this is revealed by Bechard (1983) who reported a lower Swainson's Hawk fledgling success with increasing cultivation. In contrast, however, Schmutz (1987) found that reproductive success of Swainson's Hawk pairs nesting near cultivated fields was higher than those nesting in extensive grassland areas. During this study I found no correlation between reproductive success and percentages of croplands or pasturelands within the home ranges of the radio-tagged birds. This was probably because there was not an extreme difference in foraging behavior or habitat availability. All pairs nested on or near cultivated fields. Only the Wilton study area pairs foraged primarily, but not exclusively, in pasture. It is likely, however, that Central Valley Swainson's Hawks today are overall less reproductively successful due to the nearly complete alteration of their former habitat.

Swainson's Hawks in the Central Valley are foraging opportunists, due mainly to the fluctuating prey density and availability in agricultural foraging habitats. They are very active foragers, hunting primarily from the wing and almost never from a perch. They also appear to be very selective foragers, sometimes traveling many miles, repeatedly, to a single field being harvested, until harvesting operations are complete. The foraging behavior of the Swainson's Hawk in the Central Valley has developed as a result of, and in response to, the very dynamic agricultural system. Prey density and availability change with the cycles of crop planting, maturity, and harvesting in each of the many crop-types in the Central Valley. The foraging behavior of Swainson's Hawks in the Central Valley is in response to these cycles, which likely increases their foraging effectiveness.

Swainson's Hawk diet is quite variable throughout the breeding range. Fitzner et al. (1981), for instance, reported that snakes are the primary prey item on their study site in Washington State. Also in Washington State, Bechard (1984) reported Northern Pocket Gopher (*Thomomys talpoides*) and deer mice as the most common prey species and found reptiles to be of little dietary importance. Gilmer and Stewart (1984), found that Northern Pocket Gopher and Richardson's Ground Squirrel (*Spermophilus richardsonii*) were the most common prey species on their North Dakota study area.

The diet of the Swainson's Hawk in the Central Valley consists of a relatively wide variety of prey species. The California Vole, while not found in large numbers in cultivated habitats, is the staple of the Swainson's Hawk in the Central Valley. The large percentage of California Voles in the diet of Swainson's Hawks and their apparent low densities and/or irregular distribution in agricultural habitats indicates a strong preference for this species by foraging Swainson's Hawks. The distribution and abundance of the California Vole may be an important factor in the distribution of the Swainson's Hawk in the Central Valley.

Birds made up a large percentage of the Swainson's Hawk diet in the Central Valley, and may be important during times of low rodent prey density and availability. Insects, particularly grasshoppers, are taken in great abundance by Swainson's Hawks in the Central Valley and elsewhere (Cameron 1913, Bent 1937, Johnson, et al. 1987).

Prey availability is an important controlling factor in the regulation of foraging activity, foraging ranges, and total home range area. Several other studies (Southern and Lowe 1968, Wakeley 1978, Baker and Brooks 1981, Bechard 1982, Janes 1985) have reported similar conclusions. During times of decreased prey availability Swainson's Hawks will enlarge their foraging ranges to secure adequate prey. Later, when prey availability increases near the nest, the foraging range is reduced. Where vegetative cover remains relatively constant and has less effect on the availability of prey, Swainson's Hawk foraging ranges fluctuate less and home ranges are generally smaller. In areas where prey are never available, Swainson's Hawks do not nest. Therefore, prey availability, as well as abundance, will affect the distribution and abundance of Swainson's Hawks, and it is certain crop-types and cropping patterns that largely determine the availability and abundance of prey.

The cover-types most compatible with Swainson's Hawk foraging are those shown to be most preferred by foraging birds. Alfalfa, particularly, because of its stable, continually available, and regularly enhanced (due to farming activities) prey base, is a highly compatible crop-type and the most preferred cover-type of foraging Swainson's Hawks in the Central Valley.

The preference for disced fields is somewhat misleading, and does not reflect their true value to overall Swainson's Hawk foraging. Disced fields were used by foraging Swainson's Hawks solely for feeding on insects, which contributed only a very small percentage of the overall dietary biomass. Still, disced fields supplied a readily available and easily obtainable source of food. Frequently, male Swainson's Hawks would hunt for insects in disced fields first thing in the morning, before hunting larger prey that would be brought back to the nest as provision for the female or as food for the young. In this instance, disced fields seemed to provide a quick and easy source of energy for foraging male Swainson's Hawks during the incubation and nestling periods.

Lightly grazed dryland pasture is also a compatible cover-type. While rodent prey populations are low here, particularly microtine rodents, prey availability is high. Swainson's Hawks successfully foraged here by covering large areas of unbroken pasture. However, even where dry-land pasture was abundant, Swainson's Hawks were attracted to fields being harvested, hunting opportunistically as harvesting operations occurred.

The greatest adjustments in Swainson's Hawk foraging behavior were made where row-crops are the dominant cover-type. The foraging use of row crops depends on the timing of planting and harvesting. Unlike tomato and beet fields, which were harvested earlier and supported large prey populations, most corn, sunflower, safflower, and bean fields were still unharvested by the time Swainson's Hawks departed for their wintering grounds, making those areas unavailable for foraging after vegetative cover reduced available prey.

The foraging use of beets, tomatoes, and other row crops occurred mainly while harvesting operations were in progress. The foraging ranges of some of the radio-tagged birds included so many individual tomato and beet fields that they hunted in these crop-types almost continuously from late-July to mid-September. Row and grain crops are rotated in the Central Valley annually; however, the basic cropping pattern remains similar. In general, certain row crops, while not the most preferred cover-types, can be an important part of overall Swainson's Hawk foraging, providing an abundance of prey during the last two months of the breeding season.

Swainson's Hawk foraging habitat-suitability in the Central Valley can be expressed in terms of land-use and cropping patterns based on the availability and abundance of prey. In general, land-use that includes a predominance of alfalfa, lightly grazed dryland pasture, or other cover-types with a continually available prey base and adequate prey populations, are highly compatible with Swainson's Hawk foraging needs. Cropping patterns that include combinations of hay crops, grains, and summer-harvested row-crops, and that support an adequate prey base, are also suitable. Foraging range adjustments will be made by Swainson's Hawks to secure food as prey availability fluctuates. Cropping patterns that include a predominance of grain crops are less suitable due to lower prey availability and prey populations. Cropping patterns with a predominance of late-harvested row-crops, particularly those that support low rodent populations, are even less suitable. Finally, cropping patterns that include an abundance of orchards, rice, vineyards, or cotton are unsuitable due to reduced prey abundance and availability. Orchards and vineyards remain indefinitely, effectively removing that land from potential Swainson's Hawk use.

The relative abundance of native trees that still exist in certain areas of the Central Valley provide the bulk of Swainson's Hawk nest trees. However, Swainson's Hawks have nested in exotic trees (such as Eucalyptus and ornamental fir trees) in the Central Valley, (Estep unpubl. data). Fitzner et al. (1981) reported that trees planted for shade or fruit were the primary source of Swainson's Hawk nest trees on their Hanford Site study area in Southeastern Washington State. They additionally mentioned that few Swainson's Hawk pairs would be present on the site if not for man's past activities. This is an indication of the potential for successfully expanding the current breeding range in the Central Valley by planting trees in areas where they are scarce but suitable foraging habitat remains, such as much of the southwest corner of the Central Valley.

It should also be noted that suitable Swainson's Hawk nesting habitat must be directly associated with suitable foraging habitat. While Swainson's Hawks in the Central Valley may travel long distances to secure food, they do not nest in regions of unsuitable foraging habitat. Every nest tree in the study area was on or adjacent to suitable foraging habitat.

The distribution of nesting Swainson's Hawks in the Central Valley closely follows the distribution of riparian forest. While Swainson's Hawks also nest in lone trees, roadside trees, and on the perimeter of groves, they are found most commonly nesting on the edges of riparian systems in the Central Valley.

Only a small fraction of the riparian forest that once existed in the Central Valley remains (Katibah, 1981). Loss continues primarily from bank protection projects, farm-related activities, and the expansion of urban development. Potential upland nest trees are also being reduced over time. Many remnant Valley Oaks are isolated in cultivated fields where their continued existence is threatened and regeneration is prohibited. Expanding urban areas also deplete potential upland nesting habitat.

While Swainson's Hawks are very traditional to their nesting territories, they commonly use alternate nest-sites. A pair whose territory includes many potential nest-sites, such as in a riparian system or grove, may construct a new nest in a different tree each year. Permanent nest-sites cannot be identified in these situations. For management purposes, all of the potential nest trees near an active Swainson's Hawk nest should be considered the nesting habitat for that pair, not just the currently active nest tree.

Some Swainson's Hawk pairs are apparently tolerant of a certain amount of human activity. In areas where nesting habitat is limited, such as in the Woodland study area, nest-sites are sometimes located near roads and houses. However, this is not to suggest that construction activity or the presence of houses or other structures will not cause nest abandonment. While some pairs do exhibit a certain degree of tolerance, others have abandoned their nests due to this type of human disturbance and some territories appear to have been permanently abandoned even though the surrounding nesting and foraging habitats appear unaltered (Estep pers obs.). Nesting Swainson's Hawks are particularly sensitive and prone to nest abandonment during the pre-nesting and incubation phases of the nesting cycle.

Land-use trends in the Central Valley continue to move toward increases in residential development and continued expansion of irrigated lands (DWR, 1983). Associated with the rapidly growing human population is the subdivision of farmland around cities into high-density suburban development and low-density rural residential development. Remaining natural areas and dry-land pastures may be impacted by the expected increase of over 202,347 ha (500,000 acres) of irrigated land by 2010 (DWR, 1983). Increases in the incompatible crops of rice, orchards, and vineyards are expected, further reducing the amount of available foraging habitat. Also, further tree loss may result due to agricultural and urban expansion.

If suitable foraging and nesting habitat is maintained, Central Valley agricultural habitats can support a viable Swainson's Hawk population. If current trends continue, however, the Swainson's Hawk breeding population in the Central Valley will face continued decline and eventual extirpation.

#### THREATS TO THE POPULATION

Continued loss of nesting and foraging habitat is the most significant threat to the remaining Swainson's Hawk breeding population in the Central Valley. Swainson's Hawks currently occupy only a small part of the historic Central Valley breeding range. In the mid-section of the Central Valley, habitat

conditions remain compatible to Swainson's Hawk needs. In some areas the breeding density is very high. At least two-thirds of the California population of Swainson's Hawk is found in this relatively small area. The disturbance of this area, resulting in habitat loss and territory abandonment, can affect a large percentage of the California breeding population.

Since the majority of Swainson's Hawk pairs nest within riparian systems in the Central Valley, continued loss of mature riparian forest will result in a reduction of breeding pairs. Loss of riparian forest occurs primarily from agricultural practices, state and federal bank stabilization and flood control projects, and urban development. Similarly, continued loss of upland trees will reduce available nesting habitat and reduce the number of breeding pairs.

There is a limited amount of nesting habitat in the Central Valley which exists in association with suitable Swainson's Hawk foraging habitat. Due to their long migration, Swainson's Hawks arrive on their breeding territories later than other stick-nest building raptors in the Central Valley. As habitat-loss occurs and available nest-sites are reduced, earlier nesting raptors, including Red-tailed Hawks, Red-shouldered Hawks, Black-shouldered Kites, and Great-horned Owls will utilize an increasingly greater percentage of the available nesting space, further reducing the Swainson's Hawk breeding population.

The current pace of urban growth in the Central Valley is such that each year several known Swainson's Hawk territories are abandoned or negatively impacted by loss of both nesting and foraging habitat. The conversion of agricultural land to urban development generally occurs without consideration of the foraging habitat needs of Swainson's Hawks or other raptors. The result is territory abandonment by the affected breeding pairs.

Incompatible crop-types reduce the availability of prey, and/or support reduced prey populations. While this type of habitat loss may be temporary, it can have a similar effect, that of causing territory abandonment and a reduction of breeding pairs of Swainson's Hawks. Orchards and vineyards, which are relatively permanent, can have long-term effects.

The status of the Swainson's Hawk on its South American wintering grounds is largely unknown. The shooting and pesticide poisoning of Swainson's Hawks in some South and Central American regions has been suggested as a possible threat to the species. However, until further research concerning the status, distribution and habitat relationships of the wintering population is conducted the validity of these concerns remain unknown.

#### MANAGEMENT RECOMMENDATIONS

Over 95% of the known Swainson's Hawk nest-sites in the Central Valley are on private land. This fact, coupled with less-than-effective protections afforded by Threatened and Endangered species legislation, make effective management difficult, at best. Ultimately, it will be private landowners who will determine the fate of the Swainson's Hawk in the Central Valley. The need for effective communication and cooperation cannot be over-stressed. Over the past several years I have found some Central Valley farmers and ranchers concerned over the loss of wildlife resources. Several, in fact, have made efforts toward preserving riparian systems and enhancing the wildlife value of their land.

Swainson's Hawk breeding habitat should be surveyed periodically throughout the Central Valley to keep current on the status of the population. Changes in land-use through urban development and incompatible agricultural practices and crop-types can have an immediate and deleterious effect on the remaining population. These trends should be monitored regularly.

Year-round protection of Swainson's Hawk habitat must be ensured. Often, nest trees are destroyed during the winter without regard to the returning pair of Swainson's Hawks. Nest-sites and nesting habitat should be identified throughout the Central Valley and efforts made toward protecting these sites year-round.

The preservation of riparian systems is critical. Recently, attention has been focused on the purchasing and preservation of some of the larger tracts of remaining riparian forest in the Central Valley. This is encouraging, however, even the most degraded riparian habitat will support nesting Swainson's Hawks. The smallest remnant riparian section along a river can support a Swainson's Hawk pair. Many pairs, particularly along the Sacramento River, nest in these 'islands' of riparian habitat. In addition, every effort must be made to preserve riparian systems along smaller drainages, such as Willow Slough in the Woodland study area, and Red Bridge Slough in the Vernalis study area. Any suitable tree, riparian associated or not, when found with suitable foraging habitat, should be considered a potential Swainson's Hawk nest tree.

Many areas of the Central Valley are devoid of suitable nest-trees while having suitable foraging habitat. These can be important areas for expansion of the Swainson's Hawk population in the future. A program of riparian revegetation and roadside tree planting can provide nesting habitat for this purpose.

Economics will determine what crop-types are available for foraging Swainson's Hawks. There are incentives provided by the Federal Government for farmers to leave land fallow for soil conservation purposes, or to provide habitat for wintering waterfowl. Perhaps similar incentives can be provided by the State of California for farmers to produce certain types of crops which are beneficial to the Swainson's Hawk and other California native wildlife.

Land development pressures exist throughout the Central Valley. Local governments and planning commissions need to be aware of dwindling natural resources in the Central Valley. An effort must be made to protect the habitats of the Swainson's Hawk and other Threatened and Endangered species on a local level where development pressures are greatest. Local development plans should recognize and consider the habitat needs of the Swainson's Hawk and be directed toward the preservation of those habitats.

In general, management of the Swainson's Hawk in the Central Valley includes providing for suitable nesting habitat through preservation of existing nest trees and potential nesting habitat, and efforts toward maintaining compatible agriculture. Both can only be accomplished through the cooperation of landowners and public officials, and the support of effective legislation.



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Appendix 1. Common plants found in edge and fallow field habitats  
in the Swainson's Hawk study areas of the Central  
Valley, 1986-87.

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<u>Common Name</u>	<u>Scientific Name</u>
Cheeseweed	<i>Malva parviflora</i>
Field Mustard	<i>Brassica campestris</i>
Shortpod Mustard	<i>Brassica geniculata</i>
Black Mustard	<i>Brassica nigra</i>
Curly Dock	<i>Rumex crispus</i>
Common Knotweed	<i>Polygonum aviculare</i>
Pale Smartweed	<i>Polygonum lapathifolium</i>
Lambsquarters	<i>Chenopodium album</i>
Redroot Pigweed	<i>Amaranthus retroflexus</i>
Tumble Pigweed	<i>Amaranthus ablus</i>
Lanced-leaved Groundcherry	<i>Physalis lancifolia</i>
American Black Nightshade	<i>Solanum nodiflorum</i>
Devilsclaw	<i>Proboscidea louisianica</i>
White Horsehound	<i>Marrubium vulgare</i>
Spiney Clotbur	<i>Xanthium spinosum</i>
Cocklebur	<i>Xanthium strumarium</i>
California Goldenrod	<i>Solidago californica</i>
Mare's Tail	<i>Conyza canadensis</i>
Flax-leaved Fleabane	<i>Conyza bonariensis</i>
Milk Thistle	<i>Silybum marianum</i>
Yellow Starthistle	<i>Centaurea solstitialis</i>
Annual Sowthistle	<i>Sonchus oleraceus</i>
Spiney Sowthistle	<i>Sonchus asper</i>
Prickley Lettuce	<i>Lactuca scariola</i>
Yellow Nutsedge	<i>Cyperus esculentus</i>
Small Flower Umbrella Plant	<i>Cyperus difformis</i>
Ripgut Brome	<i>Bromus rigidus</i>
Wild Oat	<i>Avena fatua</i>
Littleseed Canarygrass	<i>Phalaris minor</i>
Bearded Sprangletop	<i>Leptochloa fascicularis</i>
Dallisgrass	<i>Paspalum dilatatum</i>
Witchgrass	<i>Panicum capillare</i>
Barnyardgrass	<i>Echinochloa crusgalli</i>
Yellow foxtail	<i>Setaria glauca</i>

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Appendix 2. Scientific names of Swainson's Hawk prey from the Central Valley identified from dietary analysis, 1986-87.

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Mammals

California vole  
Valley pocket gopher  
Deer mouse  
Western harvest mouse  
Black rat  
California ground squirrel  
House mouse  
Blacktail jackrabbit

*Microtus californicus*  
*Thomomys bottae*  
*Peromyscus maniculatus*  
*Reithrodontomys megalotis*  
*Rattus rattus*  
*Spermophilus beecheyi*  
*Mus musculus*  
*Lepus californicus*

Birds

Mourning dove  
Ring-necked Pheasant  
Meadow Lark  
Scrub Jay  
Western Kingbird  
Brewers Blackbird  
European Starling  
Black-headed Grosbeak  
Cinnamon Teal  
American Crow  
Yellow-headed blackbird  
Wood Duck  
Northern Flicker

*Zenaida macroura*  
*Phasianus colchicus*  
*Sternella neglecta*  
*Aphelocoma coerulescens*  
*Tyrannus verticalis*  
*Euphagus cyanocephalus*  
*Sturnus vulgaris*  
*Pheucticus melanocephalus*  
*Anas cyanoptera*  
*Corvus brachyrhynchos*  
*Xanthocephalus xanthocephalus*  
*Aix sponsa*  
*Colaptes auratus*

Reptiles and Amphibians

Gopher Snake  
Western Toad

*Pituophis melanoleucus*  
*Bufo boreas*

Crustaceans

Crayfish

*Pasifastacus sp.*

Insects

Grasshopper  
Cricket  
Silphidid  
Dragonfly  
Pentatomidid

*Melanoplus sp.*  
*Gryllus sp.*  
*Silpha sp.*  
*Anisoptera*  
*Pentatomidae*

Appendix 3. Results of Waller-Duncan multiple comparisons between ten habitat components. I is preferred over K if the difference in mean rank is negative and vice-versa. Statistically significant if absolute standard difference > W (3.11).

I	K	Difference in mean rank	Absolute Standard Difference
			.27325
tomato	grain	-.20833	1.77374
beets	grain	-1.45833	2.19649
beets	tomato	-1.25000	1.85175
alfalfa	grain	-1.91667	1.72990
alfalfa	tomato	-1.70833	.59921
alfalfa	beets	-.45833	.05465
irr past	grain	-.04167	.26386
irr past	tomato	.16667	2.33915
irr past	beets	1.41667	2.49476
irr past	alfalfa	1.87500	2.01552
dryland past	grain	-1.54167	2.27938
dryland past	tomato	-1.33333	.15060
dryland past	beets	-.08333	.49729
dryland past	alfalfa	.37500	3.63318
dryland past	irr past	-1.50000	2.32558
fallow	grain	-1.70833	1.99664
fallow	tomato	-1.50000	.34768
fallow	beets	-.25000	.22444
fallow	alfalfa	.20833	2.88130
fallow	irr past	-1.66667	.38555
fallow	dryland past	-.16667	2.23109
disced field	grain	-1.91667	1.99563
disced field	tomato	-1.70833	.71180
disced field	beets	-.45833	.00000
disced field	alfalfa	.00000	2.68101
disced field	irr past	-1.87500	.72761
disced field	dryland past	-.37500	.30342
disced field	fallow	-.20833	.62383
row crop	grain	.58333	.99401
row crop	tomato	.79167	2.54084
row crop	beets	2.04167	2.06218
row crop	alfalfa	2.50000	.72886
row crop	irr past	.62500	2.55845
row crop	dryland past	2.12500	2.65655
row crop	fallow	2.29167	2.21932
row crop	disced field	2.50000	4.08270
other	grain	3.62500	4.22489
other	tomato	3.83333	5.81372
other	beets	5.08333	5.99666
other	alfalfa	5.54167	4.84291
other	irr past	3.66667	7.99207
other	dryland past	5.16667	6.54438
other	fallow	5.33333	5.71236
other	disced	5.54167	4.42998
other	row crop	3.04167	

## NEST-SITE SELECTION AND REPRODUCTIVE PERFORMANCE OF URBAN-NESTING SWAINSON'S HAWKS IN THE CENTRAL VALLEY OF CALIFORNIA

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**ABSTRACT.**—From 1990–94, we studied Swainson's hawks (*Buteo swainsoni*) nesting in the cities of Davis and Stockton and in adjacent rural habitats in California's Central Valley. We documented 31 urban nesting attempts at 16 sites in Davis and 34 nesting attempts at 24 sites in Stockton. Most were located in residential neighborhoods (Davis 81%, Stockton 71%) with the remainder in park-like landscapes or commercial/industrial settings. Nests were found more frequently in neighborhoods >20 yr old, with areas >45 yr old preferred due to the availability of mature landscaping. Three nests were found in neighborhoods <20 yr old, all in trees that predated urbanization. Nest trees were significantly taller than a random sample in 20–45-yr-old neighborhoods, but not in areas >45 yr old. Conifers were preferred over other trees in Davis (79%) and Stockton (94%) regardless of neighborhood age; conifers may provide better visual screening from below than other tree types. Fewer young fledged from nests in urban than in rural settings ( $P < 0.05$ ). The proportion of nesting attempts resulting in at least one fledgling, and the number of young fledged per nesting attempt and per successful nest for urban nests were among the lowest reported for this species. Swainson's hawk nests have not been found in apparently suitable urban areas in the Central Valley where foraging habitat is unavailable for 5–8 km (e.g., Lodi and Sacramento), thus requiring long-distance transport of prey throughout the entire nesting cycle. Rapid urbanization or crop changes near cities could cause the long-term decline of Swainson's hawks in existing urban neighborhoods.

**KEY WORDS:** *Buteo swainsoni*; California; nest-site selection; reproductive success; Swainson's hawk; urban-nesting.

Selección del sitio de nidificación y características reproductivas de *Buteo swainsoni* urbano-nidificantes en el Valle Central de California

**RESUMEN.**—Desde 1990 a 1994, estudiamos individuos de *Buteo swainsoni* nidificantes en las ciudades de Davis y Stockton, además de hábitat rurales adyacentes en el Valle Central de California. Documentamos 31 nidos urbanos en 16 sitios localizados en Davis y 34 nidos en 24 sitios de Stockton. La mayoría de los nidos fueron localizados en vecindarios residenciales (81% en Davis y 71% en Stockton), el remanente se ubicó en paisajes parecidos a parques o en sitios comerciales e industriales. Los nidos fueron encontrados más frecuentemente en vecindarios de más de 20 años de antigüedad, con áreas mayores a 45 años de antigüedad, preferidas debido a la disponibilidad de paisajes maduros. Tres nidos fueron encontrados en vecindarios con menos de 20 años de antigüedad y todos ubicados en árboles. Los árboles con nidos fueron significativamente más delgados que los obtenidos en una muestra azarosa en un vecindario de 20 a 45 años de antigüedad, pero no en áreas mayores a 45 años de edad. Las coníferas fueron preferidas sobre otros tipos de árboles en Davis (79%) y Stockton (94%) independientemente de la edad del vecindario; las coníferas proveen un mejor campo visual que otros tipos de árboles. El número de juveniles producidos en nidos urbanos era menor a los producidos en asentamientos rurales ( $P < 0.05$ ). La proporción de nidificaciones resultantes en al menos un volantón y el número de juveniles por nidificación y por nido

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exitoso para nidos urbanos, se encuentra entre los más bajos reportados para esta especie. Nidos de *B. swainsoni* no han sido encontrados en áreas urbanas aparentemente apetecibles en el Valle Central, donde los hábitat de forrajeo no están disponibles en 5 a 8 km (e.g., Lodi y Sacramento) así necesitan transportar grandes distancias sus presas. La rápida urbanización o cambios en las cosechas cerca de las ciudades podría causar una declinación a largo plazo de *B. swainsoni* en los vecindarios urbanos existentes.

[Traducción de Ivan Lazo]

In their reviews of the biology of the Swainson's hawk (*Buteo swainsoni*), neither Bent (1937) nor Palmer (1988) reported nesting in an urban setting. The first documented record of urban-nesting Swainson's hawks was in a Fremont cottonwood (*Populus fremontii*) in Davis, California in 1979 (Peter H. Bloom pers. comm.). Subsequently, James (1992) reported five successful urban nests found between 1988 and 1991 in Regina, Saskatchewan.

The California Department of Fish and Game (CDFG) classifies the Swainson's hawk as a threatened species. To understand why this species has declined in California, considerable research has been focused on its population, nesting, and foraging ecology in the Central Valley (Bloom 1980, Schlorff and Bloom 1984, Estep 1989, Risebrough et al. 1989, and Babcock 1995). Recent surveys in the Central Valley have revealed that Swainson's hawks regularly nest in certain urban settings in Sacramento, San Joaquin, Solano, and Yolo counties. They are not known to nest regularly in urban settings in either the more northern or southern portions of the Central Valley.

From 1990 through 1994, we studied urban-nesting Swainson's hawks in two cities in the Central Valley—Davis (Yolo County) and Stockton (San Joaquin County)—and in the surrounding agricultural landscape. We wanted to answer three primary questions: (1) What nest-site characteristics are the hawks selecting by tree type, tree height, and age of the surrounding urban neighborhood? (2) Do they fledge as many young as hawks that select nest sites in agricultural habitats? and (3) Why do Swainson's hawks nest in some Central Valley communities and not in others?

#### STUDY AREAS AND METHODS

We monitored the reproductive performance of nesting Swainson's hawks on two study areas in the Central Valley of California from 1990 through 1994 (Fig. 1). The Yolo County area covered approximately 346 km<sup>2</sup>, and more than 90% of it was in irrigated agriculture. The diverse mixture of crops was dominated by annual species including tomatoes, beets, grains, alfalfa, sunflower, and safflower. Orchards, vineyards and other perennial crops and also dry and irrigated pastures were <2% of the

landscape. Native habitats were restricted almost exclusively to narrow bands of riparian vegetation along water courses, and small, isolated stands of valley oak (*Quercus lobata*). Two urban areas, Davis and Woodland, constituted approximately 5% of the study area and were surrounded by agricultural landscape.

The San Joaquin County study area covered approximately 390 km<sup>2</sup>. Approximately 37% was urbanized land within Stockton, and the remainder was agricultural land (Fig. 1). The composition and diversity of crops were similar to the Yolo County study area. Native habitats also were limited to small, isolated stands of valley oak and riparian vegetation confined by flood control levees along stream courses.

Nest surveys were conducted each year from early April through June by inspecting all potential nesting habitat including nest sites occupied in previous years. Occupied nests were revisited at least once between mid-July and late August to count young fledged. Chicks reaching fledgling size were presumed to have fledged successfully (Steenhof and Kochert 1982). Nest sites were defined as urban if the nest was immediately adjacent to urban land uses and <250 ha of agricultural or undeveloped land was found within 1.5 km of the nest. The ages of neighborhoods in Davis were determined from 1952, 1975, and 1993 street maps and in Stockton from 1934, 1975, and 1993 street maps.

In 1994, we characterized existing trees in Davis at 198 points stratified by neighborhood age and spaced a minimum of 0.25 km apart. At each point, we recorded whether the nearest tree and the tallest tree within 50 m were conifers, and the height of the tallest tree within 50 m. The same data were recorded for all urban nest trees in Davis.

Nest productivity data were not distributed normally and could not be transformed for analysis with parametric statistical procedures. A one-tailed Wilcoxon matched-pairs signed-ranks test was used to compare nest productivity between rural and urban nests (Daniel 1990). The results of this nonparametric test were conservative because considerable information was lost by reducing the data to ranks of the annual differences in nesting success.

#### RESULTS AND DISCUSSION

The 31 urban-nesting attempts recorded from 1990–94 in Davis occurred at 16 different sites (Table 1). Similarly, the 34 urban-nesting attempts in Stockton occurred at 24 different sites. The most common setting (81% in Davis and 71% in Stockton) was in the yards of homes in residential neighborhoods (Fig. 2). In both cities, nests were also found

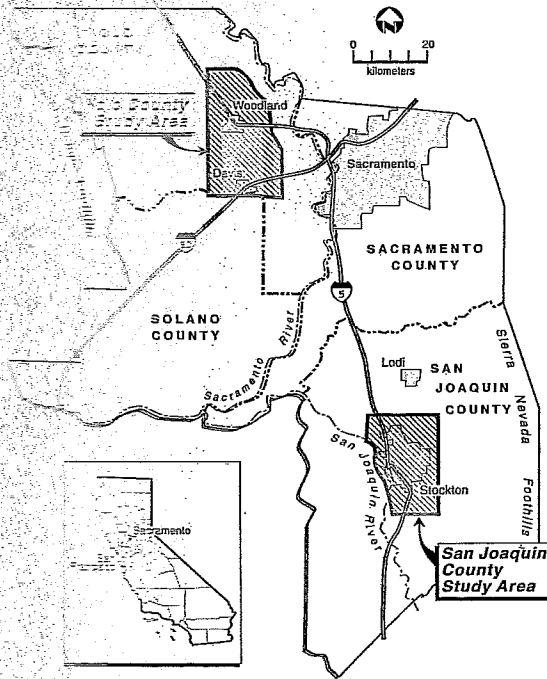


Figure 1. Location of the Yolo and San Joaquin study areas and urban centers in the Central Valley of California.

in park-like landscapes (19% in Davis and 17% in Stockton) such as golf courses, cemeteries, and on the central campus at the University of California, Davis. However, nests were notably absent from all urban parks. Three nests in Stockton were in commercial and industrial settings—two next to major intersections in commercial areas (Fig. 2), and one between State Highway 99 and the on- and off-ramps to the freeway. The settings for urban nest sites in the Central Valley were similar to those described by James (1992) in Regina, Saskatchewan. The level of human activity varied considerably between the sites, but was ongoing and highly predictable throughout the nesting season including during courtship and nest-site selection. Thus, urban-nesting Swainson's hawks selected sites with adjacent human activities and habituated to the setting from the beginning of the nesting cycle.

**Nest-site Selection.** Swainson's hawk nests in trees that postdated urbanization were found more frequently in neighborhoods >20 yr old than expected by chance in Davis (Fisher Exact Test,  $P = 0.041$ ) and nearly so in Stockton (Fisher Exact Test,  $P = 0.051$ ; Table 2). Neighborhoods >45 yr old were preferred, and nesting did not occur in neighborhoods <20 yr old except at three locations in Stockton where large, old trees that predated urbanization were used (Table 2). In Davis and Stockton, the

Table 1. Reproductive performance of urban- and rural-nesting Swainson's hawks in the Yolo and San Joaquin study areas.

STUDY AREA/ YEAR	URBAN			RURAL		
	NESTING ATTEMPTS	SUCCESSFUL NESTS	YOUNG FLEDGED	NESTING ATTEMPTS	SUCCESSFUL NESTS	YOUNG FLEDGED
Yolo County (Davis urban nests)						
1990	6	5	9	68	64	109
1991	8	6	9	86	74	116
1992	5	2	3	116	94	143
1993	4	2	4	94	66	105
1994	8	7	11	128	106	190
Total	31	22	36	492	404	663
San Joaquin County (Stockton urban nests)						
1990	3	1	2	13	11	24
1991	5	3	3	12	9	11
1992	5	5	9	10	7	12
1993	9	5	8	9	7	14
1994	12	8	14	16	14	22
Total	34	22	36	60	48	83

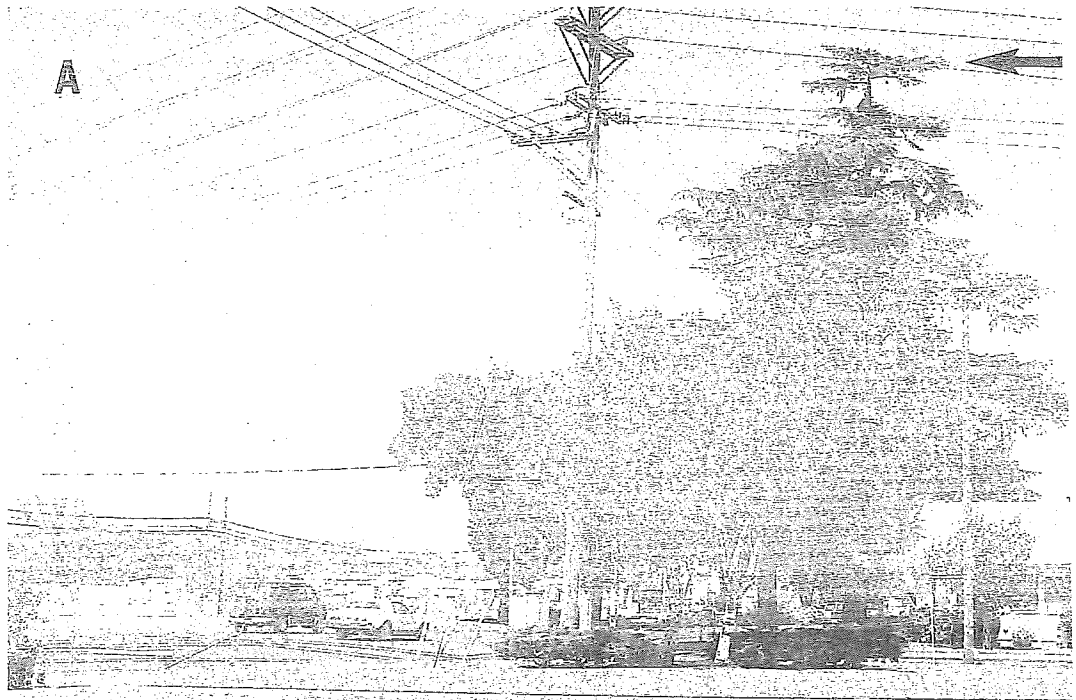


Figure 2. Typical settings for urban Swainson's hawk nests: (A) Deodar cedar (*Cedrus deodara*) in a commercial industrial neighborhood, Stockton, Calif.; (B) introduced pine (*Pinus* sp.) in a residential neighborhood, Davis, Ca

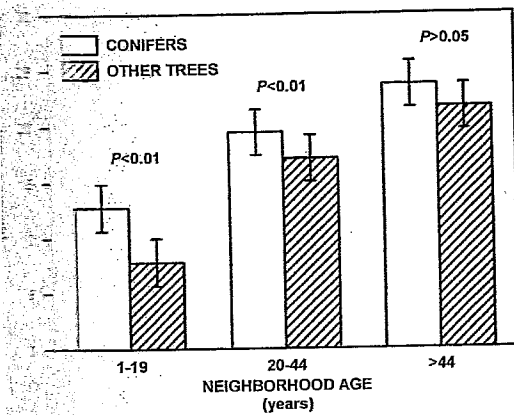


FIG. 3. Height comparison from a random sample of trees stratified by tree type and neighborhood age in Davis, California. Significant effects were due to neighborhood age, and the interaction between these variables (ANOVA,  $F = 83.2$ ,  $P < 0.001$ ).

proportion of nest trees that predated urbanization was inversely related to neighborhood age, with no nesting trees used in neighborhoods >45 yr old. The pattern of nest tree selection is presumed to be due to the absence of potential nest trees of suitable size in younger neighborhoods. In 20-45-yr-old neighborhoods, the mean height of nest trees (22.4 m) differed from a random sample of the

TABLE 2. Distribution of nest trees used by urban-nesting Swainson's hawks in Davis and Stockton, California, compared with age and size of neighborhoods.

NEIGHBORHOOD AGE	AREA (ha)	NEST TREES	PRE-EXISTING NEST TREES <sup>a</sup>
<1950	300 (9.9%) <sup>b</sup>	5 (31.3%) <sup>b</sup>	0%
1951-75	1585 (52.3%)	11 (68.8%)	18%
1976-94	1143 (37.8%)	0 (0.0%)	—
TOTAL	3028	16	
<1950	3494 (24.4%)	11 (45.8%)	0%
1951-75	7464 (52.1%)	10 (41.7%)	40%
1976-94	3364 (23.5%)	3 (12.5%)	100%
TOTAL	14 322	24	

<sup>a</sup> Number of nest trees older than the age of the neighborhood divided by the total area.

Table 3. Proportion of urban nests placed in conifers compared to random samples drawn from all trees and the tallest trees in different age neighborhoods in Davis, California.

NEIGHBORHOOD AGE	PROPORTION IN CONIFERS		
	NEST TREES	ALL TREES <sup>a</sup>	TALLEST TREES <sup>a</sup>
<1950	1.00	0.03 <sup>c</sup>	0.37 <sup>c</sup>
1951-75 <sup>b</sup>	0.67	0.27 <sup>d</sup>	0.56 <sup>c</sup>
1976-94	—	0.20	0.38

<sup>a</sup> Binomial test comparison to proportion of nest trees.  
<sup>b</sup> Excludes two nests in trees that predated development.  
<sup>c</sup>  $P < 0.01$ .  
<sup>d</sup>  $P < 0.05$ .  
<sup>e</sup>  $P > 0.05$ .

tallest (18.7 m;  $t = 2.77$ ,  $P < 0.01$ ), indicating that Swainson's hawks selected the tallest trees in intermediate age neighborhoods. In neighborhoods >45 yr old, this comparison was 24.1 m versus 22.4 m ( $t = 0.75$ ,  $P > 0.46$ ), indicating no significant difference between the height of trees that were selected by Swainson's hawks and a random sample of the tallest trees.

Outside urban areas in the Central Valley, most Swainson's hawk nests have been reported in Fremont cottonwood or valley oak (Schlorff and Bloom 1984, Estep 1989). Urban nests that postdated urbanization were primarily in conifers in Davis (79%) and Stockton (94%). In Davis, conifers were selected more frequently than expected based on their relative abundance in the urban landscape (Table 3). Conifers were taller than other trees in neighborhoods <45 yr old (Fig. 3) suggesting the preference may be for the tallest trees and not specifically for conifers. However, in neighborhoods >45 yr old, conifers were not significantly taller than other tree types (Fig. 3), but Swainson's hawks' nests were found in conifers more frequently than expected based on conifer abundance (Table 3).

James (1992) noted that three of four nest trees in Regina, Saskatchewan, were in conifers. He stated this pattern was opposite of that found in more typical habitats (Schmutz et al. 1980 and Bechard et al. 1990). However, Swainson's hawks will nest in conifers if present. Bechard et al. (1990) provided an unranked list of nest trees that included ponderosa pine (*Pinus ponderosa*) and western juniper (*Juniperus occidentalis*). Bloom (1980) reported that most

Swainson's hawk nests were found in junipers (*Juniperus* sp.) in the Great Basin portion of northeastern California. In the Central Valley, conifers were present only in urban settings and around some farmhouses. We speculate that Swainson's hawks prefer conifers in urban settings because the dense foliage and radial branching pattern provide more complete visual screening from human activities below the nest than trees with leaves only near branch tips and a dendritic branching pattern.

**Reproductive Performance.** Urban-nesting Swainson's hawks in the Yolo County study area fledged fewer young per nesting attempt each year than rural-nesting hawks (Fig. 4). The same relationship was observed in 4 of 5 yr in the San Joaquin County study area (Fig. 4). Analysis of these patterns using a one-tailed Wilcoxon matched-pairs signed-ranks test showed a significant difference in Yolo County ( $T_- = 0, P < 0.05$ ) but not in San Joaquin County ( $T_- = 3, P = 0.16$ ). However, five was the minimum sample size required for this non-parametric test, and the number of young fledged needed to be lower for urban nests in all 5 yr to yield a significant difference. The inability to confirm statistical significance for Stockton was likely a result of small sample size. Pooling the results from the two study sites also showed that fewer young were fledged from nests in urban settings ( $T_- = 7, P < 0.05$ ).

The proportions of successful nests (those that fledged at least one young) in both Davis and Stockton were lower than on adjacent rural lands, and among the lowest when compared to other reported

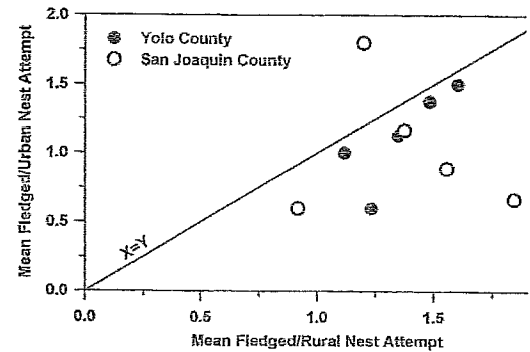


Figure 4. Mean number of young fledged, 1990 through 1994, from urban and rural nests in the San Joaquin-Yolo County study areas. Diagonal line indicates equal reproductive success at urban and rural nest sites.

multi-year studies (Table 4). The number of young fledged per nesting attempt and per successful nest for urban nests were also among the lowest reported values. Rural nests in Yolo and San Joaquin County had similar success rates and number of young fledged per nesting attempt compared with other studies. However, the number of young per successful rural nest was similar to urban nests and lower than values reported at other locations.

**Nesting in Other Central Valley Towns.** Swainson's hawks also nest in the older neighborhoods of several major urban areas in the Central Valley portions of Sacramento, San Joaquin, Solano, and Yolo counties (Table 5). They are conspicuously absent, however, from the City of Lodi and the S

Table 4. Reproductive performance of Swainson's hawks outside California compared to reproductive performance of Swainson's hawks in the Yolo and San Joaquin County study areas. All studies conducted for at least 3 yr.

LOCATION	YEARS	NEST ATTEMPTS	SUCCESSFUL NESTS (%)	FLEDGED/ ATTEMPT	FLEDGED/ SUCCESSFUL	SOURCE
SE Washington	3	48	81.3	1.50	1.85	Fitzner (1978)
NE Colorado	3	119	54.6	1.19	2.18	Olendorff (1978)
SE Alberta	3	153	71.2	1.41	1.98	Schmutz et al. (1980)
SE Washington	5	96	—	1.11	—	Bechard (1983)
SE New Mexico	3	36	81.0	1.67	1.94	Bednarz (1988)
Yolo County <sup>a</sup>	5	492	82.1	1.35	1.64	This study
San Joaquin Co. <sup>a</sup>	5	60	80.0	1.38	1.73	This study
City of Davis <sup>b</sup>	5	31	70.9	1.16	1.64	This study
City of Stockton <sup>b</sup>	5	34	64.7	1.06	1.64	This study

<sup>a</sup> Rural nest sites.

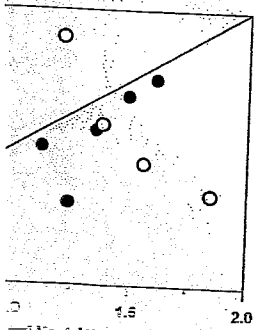
<sup>b</sup> Urban nest sites.

Table 5. Breeding status of urban-nesting Swainson's hawks in major urban areas in the Central Valley portion of Sacramento, San Joaquin, Solano, and Yolo Counties, California.

CITY	1993 POPULATION <sup>a</sup>	URBAN-NESTING SWAINSON'S HAWKS?
Woodland	41 850	Yes
Davis	50 100	Yes
Lodi	53 700	No
Stockton	226 300	Yes
Sacramento <sup>b</sup>	1 068 900	Urban edge only

<sup>a</sup> California Department of Finance 1993.

<sup>b</sup> Sacramento metropolitan area.



Young fledged, 1990 through 1994 in the San Joaquin and Sacramento counties. The diagonal line indicates equal numbers of nest attempts and young fledged.

The number of young fledged per successful nest attempt was the lowest reported in the San Joaquin and Sacramento counties. The number of young fledged per successful rural nest attempt was higher than values reported in other studies.

Central Valley Towns. Swainson's hawks in the older neighborhoods of the Central Valley (Sacramento, San Joaquin, Solano, and Yolo counties) are conspicuously absent from Lodi and the Sacramento metropolitan area.

Productive performance for at least 3 yr.

SOURCE
Ward (1978)
Ward (1978)
Ward et al. (1980)
Ward (1983)
Ward (1988)
Ward study
Ward study
Ward study

ramento metropolitan area. Numerous field surveys ranging from CDFG-sponsored efforts to environmental assessments have failed to detect urban-nesting Swainson's hawks in either of these locations. Both communities were established before the turn of the century and have old neighborhoods with apparently suitable habitat for urban nests.

Besides providing suitable nesting habitats, the cities that support urban-nesting Swainson's hawks are surrounded by crops that are suitable Swainson's hawk foraging habitat. However, Lodi is nearly surrounded by vineyards for 8-10 km, a crop type not used for foraging by Swainson's hawks (Estep 1989). The older neighborhoods of Sacramento are similarly encompassed by at least 5-8 km of urban development. Swainson's hawks do nest in Sacramento, but are limited to a narrow band of riparian vegetation along the Sacramento River. Along most of its course through the city, the Sacramento River is at the interface between urban development and agricultural lands, and these nests are adjacent to suitable foraging habitat.

Estep (1989) and Babcock (1995) have shown that Swainson's hawks in the Central Valley of California will forage more than 15 km from a nest site. While these distant sites may be critical at times, long-distance foraging bouts are generally limited to periods when suitable foraging habitat is not available nearby due to crop phenology. Babcock (1995) observed prey caught at long distances from nest sites frequently was consumed by adult birds near the point of capture. Prey brought back to the nest to provision young or a mouse was generally caught near the nest. Presumably, this pattern is due to the energetic inefficiency of transporting prey long dis-

tances. Similarly, Swainson's hawks are extremely rare in the northern and southern portions of the Central Valley where potential nest sites in urban and rural settings are surrounded by vineyards, orchards, rice, and cotton, all unsuitable Swainson's hawk foraging habitat (Estep 1989). The energetic cost of transporting prey these distances throughout the nesting cycle apparently is too great.

**Land Use Changes and Urban Nesting.** As urbanization continues in the Central Valley, the availability of Swainson's hawk foraging habitat will decline and the remaining foraging habitat will be at greater distances from older neighborhoods with suitable nest sites. These two trends will typically increase the distance between foraging areas and urban nest trees. Thus, the energetic costs of nesting will increase and reproductive success may decline. The only foreseeable change counteracting these trends is that newer neighborhoods will mature and may become nesting habitat. If urban expansion occurs too quickly, urban-nesting birds may be lost as the distance from nest sites to foraging habitat becomes too great, typically >5-8 km in the study area. If the mixture of agricultural crops next to cities such as Davis or Stockton becomes less suitable for foraging, urban-nesting birds could be expected to decline if the distance to foraging habitat becomes too great. Agricultural land uses are typically dictated by market conditions and are not as easily predictable as future urbanization.

**Why Urban Nesting?** Why do Swainson's hawks nest in urban settings where reproductive success is lower? Two alternative hypotheses could explain this paradox. First, rural nesting habitat may be saturated. Competition for nest sites could force some birds into the less productive, urban habitat. This hypothesis is consistent with the observation that the highest concentrations of Swainson's hawks in the Central Valley are in Sacramento, San Joaquin, Solano, and Yolo counties (Bloom 1980, Estep 1989). However, a portion of rural nest sites are unoccupied each year. In neither study area was the number of urban nesting attempts correlated with the number of rural nesting attempts. This relationship might be expected if birds were forced into urban settings when the number of rural nest attempts was high. Second, reproductive success might be comparable or better in urban than in rural settings if parameters such as lifetime reproductive success or post-fledging survival are considered. For example, if the mortality of adults in urban settings is lower due to decreased

predation or a lower likelihood of being shot, then the expected lifetime reproductive success would be higher.

#### ACKNOWLEDGMENTS

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January 10, 2014

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Dana Allen, Associate Planner, City of Sacramento  
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**RE: Draft Environmental Impact Report (DEIR) for the McKinley Village project**

Dear Ms. Allen,

I am writing on behalf of Breathe California of Sacramento-Emigrant Trails regarding the Draft Environmental Impact Report (DEIR) for the McKinley Village Project. The proposal includes development of a 328-unit residential project along with parks and a neighborhood recreation center on a roughly 48-acre vacant site in the City.

Breathe California of Sacramento-Emigrant Trails has been active in the greater Sacramento area for close to 100 years. We are dedicated to healthy air and preventing lung and other air-pollution related diseases by partnering with youth, advocating for public policy, supporting air pollution research, and educating the public. With the 6th worst ozone pollution in the nation, 70% of the Sacramento region's air pollution comes from mobile sources. Premature deaths linked to particulate matter are now at levels comparable to deaths from traffic accidents and second-hand smoke. We encourage infill development within existing neighborhoods with access to transit in order to keep vehicle miles traveled, and resulting pollution, low.

Having reviewed the Draft EIR, further air quality mitigation steps such as installing vegetation barriers and high efficiency filters should be taken for buildings adjacent to highway, since proximity to highways is associated with adverse health impacts. We support the addition of trees on the alleys, since they will cool and beautify the alleys for pedestrians and bicyclists, in addition to providing air quality and energy-use benefits. Tree selection should consider allergens since we have such a high rate of seasonal asthma triggered by allergies.

Pedestrian and bicycle access within the project area, at the neighborhood entrances, and at the bicycle-pedestrian tunnel at Alhambra Blvd. is a high priority to us so that this does not become a car-centric community. We therefore fully support the recommendations made by WALK Sacramento and Sacramento Area Bicycle Advocates (SABA).

Thank you for your time and consideration. If you have questions or need additional information, please contact me at (916) 444-5900 or ktitus@sacbreathe.org.

Sincerely,

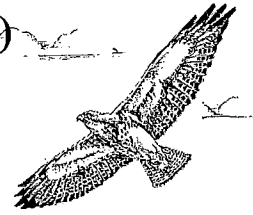


Kori Titus, CEO



## Friends of the River Banks (FORB)

PO Box 162644, Sacramento, CA 95816



January 10, 2014

Ms. Dana Allen, Associate Planner  
Community Development Department  
City of Sacramento  
300 Richards Blvd., 3<sup>rd</sup> Floor  
Sacramento, CA 95811

Re: Comments on the DEIR for McKinley Village

Dear Ms. Allen:

Friends of the River Banks (FORB) has been leading walks at Sutter's Landing Park (Park) for 7 years, since 2007. During that time we have documented the rich diversity of wildlife and the great beauty of that stretch of the American River and helped develop a vision of what it could become (see our website at <http://www.friendsoftheriverbanks.org> for a complete species list, vision, and other information). Also during that time, the American River and its wildlife have experienced numerous threats, including increased degradation from illegal uses, fires, and development.

The wildlife that call the American River home and those that use it for migration and other stopovers have specific habitat requirements. Some need one type of habitat for nesting and another for foraging. Many need large expanses of undisturbed habitat. Others need corridors of undisturbed habitat to move from one area to another. Many species are shy of humans, dogs, and noise. Sutter's Landing Park provides a variety of habitats and is an important corridor to other parts of the American River Parkway.

The Sutter's Landing area is one of the few remaining large tracts of river parkway in an urban area. It is a treasure for our community. Although the area avoided development due to its past use as a landfill, there is an opportunity now to restore its natural resource values and create a nature oasis in the midst of our city. **We are concerned that the proposed McKinley Village development will impact Sutter's Landing Park in numerous ways, limiting the options for Park recovery and restoration in the future.**

The Draft Environmental Impact Report (DEIR) for McKinley Village downplays the impacts on Sutter's Landing Park from the proposed development, but there are many, both direct and indirect. **The DEIR should include a section on Sutter's Landing Park, documenting the cumulative impacts of the proposed development on the Park and the onsite mitigation that would be undertaken for those impacts.**

Many of the species that use Sutter's Landing Park also use the proposed McKinley Village site, which is adjacent to Sutter's Landing. Wildlife don't recognize human property boundaries so this larger area can be considered one from a wildlife perspective. Swainson's Hawks and other raptors forage on the project site. The loss of this site for wildlife is a loss to the wildlife at Sutter's Landing Park. Mitigation for this loss must occur on or adjacent to the Park and benefit the natural resource values at the Park.

The increased use of the Park by McKinley Village residents is another direct impact from the proposed development. In addition, the pets that residents of the proposed development bring to the area will directly threaten the wildlife as cats and dogs are natural predators and also carry diseases that can infect wild populations.

The DEIR estimates that 1800 additional vehicles will go through Sutter's Landing Park each day from the proposed development. This is a severe impact to the Park and to the safety of people who walk or bike to Sutter's Landing. The access on 28<sup>th</sup> Street is already inadequate and unsafe; the additional vehicle use will compound this problem.

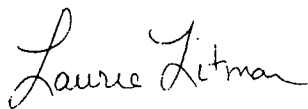
The logical solution is to **create an access point at Alhambra Blvd.** The A Street access should be a bike/pedestrian road only. We do not accept the developer's argument that an Alhambra access is unfeasible. If it is not possible to create safe, appropriate access to the development then the development shouldn't be approved.

**All mitigation must occur on-site or directly adjacent to the Park**, not "within 10 miles of the project site" as is currently proposed in the DEIR. There are opportunities to mitigate the direct and indirect losses to Sutter's Landing Park in ways that would enhance the remaining natural values of the Park. Some actions that could be taken: purchase and restore adjacent private parcels, remove the skateboard park and corp yard to another area, restore more of the Park to its natural state.

The DEIR goes to some length to justify the proposed project over other alternatives. However, it leaves out one very important alternative, that of restoring the property to its natural values as part of Sutter's Landing Park. According to Councilman Steve Cohn, the city was interested in purchasing and annexing the proposed project site to the Park quite recently. The site could be restored for wildlife with space for active recreation, reserving most lands in the current Park area for restoration to their natural resource values. The DEIR needs to **consider the alternative of annexing the proposed McKinley Village site to Sutter's Landing.** This use of the proposed site is clearly the superior environmental alternative.

Finally, we ask that the **DEIR be revised and recirculated** because it does not address the comments that were made (through Friends of Sutter's Landing) on the NOP dated July 8, 2013, specifically requesting the EIR include ALL the cumulative impacts to Sutter's Landing Park (listed clearly in the letter). This is a serious omission that needs to be addressed and rectified.

Sincerely,



Laurie Litman  
for Friends of the Riverbanks



# Save the American River Association

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Leo Winternitz

January 8, 2014

Dana Allen, Associate Planner  
Community Development Department  
300 Richards Boulevard, Third Floor  
Sacramento, California 95811

Subject: **Draft Environmental Impact Report for the McKinley Village Project (P08-086)**

Dear Ms. Allen,

Save the American River Association (SARA) is submitting the following comments for your consideration on the above subject dated 12 November 2013. SARA was founded in 1961 to establish the American River Parkway and we remain, since that time, as lead advocate for the protection and preservation of the lower American River and Parkway.

We are requesting that the Draft Environmental Impact Report be recirculated to address the issues we raised during the NOP process in our letter dated July 9, 2013. In summary, the DEIR failed to analyze the potentially significant cumulative impacts from adjacent/nearby current and future developments already approved and contemplated by the City of Sacramento on the American River and Parkway in regards to, but not limited to, public safety and the ability of the Parkway's natural and recreational resources to withstand potentially significant increases in use. The DEIR also failed to address the already significant impacts on the River and Parkway's natural and recreational resources and public safety from increased use at Sutter's Landing Park in light of the proposed project. Just one example of the increased use that is having negative effects on Sutter's Landing Park/American River Parkway is the City's permitting of large special events such as the Moustache Run and the Zombie Run. These events often require closure of some part of the park and/or bike trail, and bring hundreds of people, often in cars, to Sutter's Landing Park/American River Parkway. Congestion, noise, trash, damage to resources, etc. are side effects of these special events and the City, in partnership with the County, has not addressed the issue of providing adequate resources to insure public safety and protection of the natural and recreational resources. The increase in park facilities, such as the dog park, have also increased the public's awareness of the American River and Parkway adjacent to Sutter's Landing. This part of the River and Parkway have become major attractions, drawing more and more people. The City, to date, in partnership with the County, has not identified financial and human resources for handling the problems created by people and their often

illegal activities, such as off leash dogs. As the City grows, the pressures on parks and nature areas in the urban core will only escalate. The proposed project is a part of the extensive development planned for this part of the City. The EIR plainly states that "The project site is located in the East Sacramento Community Plan Area, which is one of the City's most park-deficient Community Plan areas."

By example, the following is the woefully inadequate analysis provided in the DEIR addressing "The proposed project's potential to accelerate the physical deterioration of existing parks or recreational facilities or create a need for construction or expansion of recreational facilities beyond what was anticipated in the General and/or Community Plans..." (DEIR, 4.7-4, Page 29)

The DEIR identifies the closest City parks to the project site as River Park, McKinley Park, and Bertha Henschel Park. It fails to include Sutter's Landing Park, coincidentally the only city park that will be directly linked to the proposed project. It also fails to mention the American River Parkway, while not a Sacramento City Park, a regional amenity serving city residents, and counted in the City's parkland inventory. The Parkway will be linked to this project through Sutter's Landing Park. Without considering these already heavily used parks and their substantial natural and recreational resources the DEIR cannot conclude that the proposed project will have a less than significant impact, requiring no mitigation, on existing parks and/or recreational facilities.

We further agree with the comment submitted by ECOS regarding noise. ECOS stated that "Due to noise levels, we believe outdoor use within this community will be severely limited." These impacts call into question the value of the project's three parks totaling approximately 2.4 acres, and an approximately 1-acre neighborhood recreation center and pool. A real potential exists that the future residents of McKinley Village will be leaving the project site for the convenience and appeal of Sutter's Landing Park and the American River and Parkway, each, in their own way, providing an oasis, or as is often said of the American River Parkway, a slice of the wild, in the middle of a highly urbanized area.

Furthermore, the DEIR states that the project does not meet the 4.43 acres of parkland currently required by the City of Sacramento Code (the proposed project includes the dedication of 2.4 acres of parkland). There is no substantiation in the DEIR for the statement that "an in-lieu fee to the City to meet the remaining parkland requirement would ensure the impacts to parks would be less than significant." (DEIR, 4.7-4, Page 30) Sutter's Landing Park and the American River Parkway, as previously stated, were not listed in the parks closest to, never mind linked to, the proposed project, and therefore were not analyzed for "The proposed project's potential to accelerate the physical deterioration of existing parks or recreational facilities..."

## **4.2 BIOLOGICAL RESOURCES**

Others, in particular, Friends of the Swainson's Hawk, have submitted comments on the wildlife values that will be significantly impacted by the proposed project. SARA strongly agrees with these comments. In particular, we feel that the DEIR's conclusion that the project site is not part of a regional wildlife corridor is inaccurate. (DEIR, 4.2, Page 22) The connection between the American River Parkway, the 100 acres of wildlife foraging habitat at Sutter's Landing Park, and the 48 acre proposed project site constitute a highly productive corridor supporting a vibrant community of birds, in particular raptors, some of which include the threatened Swainson's

Hawk, the Fully Protected White-Tailed Kite and the Northern Harrier, a Species of Special Concern. The loss of any one of these habitats creates a potentially significant impact on the continued viability of these and other birds. As the DEIR points out, there is already limited habitat for breeding, foraging and shelter. Taken alone, the project site may appear too small to have wildlife value, but added to the 100 acres at Sutter's Landing Park, and the several hundred acres of adjacent Parkway lands and the River, the project site takes on exponential value, especially because open grasslands for foraging are at a premium.

The City of Sacramento General Plan 2030, adopted March 3, 2009, states that "The City shall develop the Sutter's Landing Park as a regional park in accordance with an adopted Park Master Plan for the area." (CC.ERC1.3-CC-10) The proposed project's development of A/28<sup>th</sup> Streets through the park, adjacent to the 100 acres of the wildlife foraging habitat (the Mound), is not consistent with the current Sutter's Landing Park Master Plan. Such a thoroughfare is not contemplated or planned.

Furthermore the City of Sacramento's General Plan provides for the following:

The City shall develop the Sacramento River Parkway and Sutter's Landing Park facilities in conjunction with American River Parkway and trail linkages." (CC.ERC.1.5, Page 3-CC-11)

"The City shall promote the preservation and restoration of contiguous areas of natural habitat throughout the city and support their integration with existing and future regional preserves." (ER2.1.3, Pages 2-307)

"The City shall retain plant and wildlife habitat areas where there are known sensitive resources (e.g. sensitive habitats, special status, threatened, endangered, candidate species, and species of concern). Particular attention shall be focused on retaining habitat areas that are contiguous with other existing natural areas and/or wildlife movement corridors." (ER2.1.4, Pages 2-307)

## **AMERICAN RIVER PARKWAY**

The American River Parkway is a valuable environmental, recreational, aesthetic and economic resource for the Sacramento region. The Parkway spans approximately 32 miles from the confluence of the American and Sacramento Rivers to Folsom Dam providing a vital wildlife corridor and scenic lands hosting more than 8 million visitor days per year.

The American River Parkway is protected under federal law through designation as a National Wild and Scenic River; through state law as a State Wild and Scenic River, and through the Urban American River Parkway Preservation Act (Public Resources Code Section 5840, et al); through the City of Sacramento's General Plan, and other laws. The Parkway uses are governed by the American River Parkway Plan which was adopted by the County of Sacramento in 2008 and subsequently approved by the City of Sacramento. The Parkway Plan recognizes that "...the American River Parkway is often referred to as "the jewel" of the Sacramento Region." (American River Parkway Plan 2008, Chapter 1, Page 9)

The State of California's Urban American River Parkway Preservation Act provides for the following:

"The Legislature hereby adopts the American River Parkway Plan so as to provide coordination with local agencies in the protection and management of the diverse and valuable natural land, water, native wildlife, and vegetation of the American River Parkway."

"Actions of state and local agencies with regard to land use decisions shall be consistent with the American River Parkway Plan..."  
(Public Resources Code 5840, et al)

The American River Parkway Plan serves as the management plan for the lower American River and Parkway under both the federal and state Wild and Scenic River Acts' designations.  
(American River Parkway Plan 2008, Chapter 4, Pages 89-92)

The American River Parkway Plan establishes important goals including:

"To provide appropriate access and facilities so that present and future generations can enjoy the amenities and resources of the Parkway which enhance the enjoyment of leisure activities."

"To preserve, protect, interpret and improve the natural, archaeological, historical and recreational resources of the Parkway, including an adequate flow of high quality water, anadromous and resident fishes, migratory and resident wildlife, and diverse natural vegetation."

"To mitigate adverse effects of activities and facilities adjacent to the Parkway."

"To provide public safety and protection within and adjacent to the Parkway."  
(American River Parkway Plan 2008, Chapter 1, Page 10)

The American River Parkway Plan specifically provides the following policies:

"1.3 Resource Protection  
Limitation on the use of the Parkway through design and management tools to prevent overuse of the Parkway and preserve the environmental quality, thereby ensuring the integrity of the Parkway for future users." (American River Parkway Plan 2008, Chapter 1, Page 11)

"Jurisdictions shall use their authority to reduce, eliminate and/or mitigate potential adverse impacts upon the Parkway caused by adjacent land uses and activities." (American River Parkway Plan 2008, Policy 7.19, Chapter 2, Page 30)

"Structures shall be located so that neither they, nor activities associated with them, cause damage to Parkway plants or wildlife." (American River Parkway Plan 2008, Policy 7.19.1, Chapter 2, Page 30)

#### 4.5 HYDROLOGY, WATER QUALITY AND DRAINAGE

After reading this section of the DEIR, SARA is still unclear if the two required detention basins on site sit on city land or developer land?

The DEIR cannot assert that a separate Combined Sewer Detention Project planned, potentially, at the southwestern edge of the project site within City-owned property, can undergo a separate environmental review process. This project may be absolutely necessary to mitigating combined sewer surcharging in the CSS within East Sacramento by providing extra storage during peak wet weather flows, given the well documented condition of Sacramento's 100+ year old sewer pipes.

The DEIR should be recirculated to reflect the current state of water reliability in the Sacramento region. The DEIR needs to confirm the water supply for this project. It needs to analyze the projected water demand, available water supply to the City and the region in light of today's drought conditions and to the extent possible, future water availability if the drought extends beyond 2014/15. See The Sacramento BEE articles, Thursday, January 9, 2011, "City may order water cuts, Meter monitoring, Patrols, Fines Likely", and "Curb on fishing urged, As the American River declines due to drought, a group asks state officials to halt fishing." Both articles are in the Our Region section of the newspaper.

The City is also a signatory to the Water Forum and should be reviewing water usage and conservation measures in conjunction with other signatories.

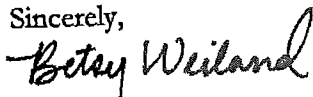
On the topic of water conservation, the proposed project is relying heavily on extensive landscaping to mitigate for its less than ideal location. The project should relook at the proposed landscaping design to incorporate more drought tolerant trees and vegetation. What percentage of native plants are being used? Look to the existing project site for clues as to the native plants and trees that want to naturally grow on this site (biological resources, 4.2, Table 4.2-1, Pages 5-6). For starters, the use of redwoods along the project edge that borders the freeway should be eliminated. Not only are redwoods out of context and place, look across the freeway at the recently completed tree mitigation site for an example of appropriate plantings for our region, they are not adapted to dry and polluted conditions. Their health and life span are questionable in this location. Even using all native plants and trees, the newly planted landscape would have to be watered for 3 years to insure a good survival rate. If Fall and Winter rains are absent, the supplemental water will be year around, not just in the dry months. Balancing human needs and the needs of the American and Sacramento Rivers' fisheries, is this a necessary water "expenditure" during severe drought times?

In closing, the proposed project appears to be half-baked, judging by all of the comments received regarding Air Quality, Transportation, Sustainable Communities Design, and wildlife, parks' and wildlands' issues. It appears that a large part of these problems could be mitigated by moving the A/28<sup>th</sup> Streets access to Alhambra Boulevard. Lack of funding is no excuse for building a project the community and region will have to live with for the next 100 years. Before this project moves forward, the City and the developer should put the horse back before the cart. Work together on finding the ways and means to fund and permit the Alhambra Street access. What grants and other pots of money can be applied for and received? The City leadership should facilitate discussions with UP to design a cut-through that would meet their criteria and

standards. It can be done – look over at the 40<sup>th</sup> street access. SARA proposed other mitigations in our original letter commenting on the NOP. It is attached for your convenience.

We urge the City to recirculate the DEIR to include an accurate analysis of potentially significant cumulative impacts to Sutter's Landing Park and the American River Parkway from current and proposed City core developments, including this project. It appears this project, if contemplated at all, needs a major redesign to be compatible with all of the City's planning goals for walkable, bikeable communities with access to services including well maintained, safe parks, and nature.

Sincerely,



Betsy Weiland  
Land Use Chairperson  
Save the American River Association

cc: SARA Board of Directors  
Phil Serna, County Supervisor, District 1  
Jeffrey R. Leatherman, Sacramento County Regional Parks Director  
Jude Lamare, Friends of the Swainson' Hawk  
Ron Maertz, Environmental Council of Sacramento





# Save the American River Association

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July 9, 2013

Dana Allen, Associate Planner  
Community Development Department  
300 Richards Boulevard, Third Floor  
Sacramento, California 95811

**Subject: Notice of Preparation of an Environmental Impact Report for the MCKINLEY VILLAGE PROJECT (P08-086)**

Dear Ms. Allen,

Save the American River Association (SARA) is submitting the following comments for your consideration while reviewing the subject project.

The American River Parkway, a regional treasure receiving 8 million visits annually, is located 0.5 miles east of the proposed 48 acre, 328 residential units, McKinley Village development. Your project analysis for potentially significant impacts to the American River Parkway should include:

- Analyzing and evaluating the carrying capacity on the south side of the American River Parkway from Discovery Park to California State University at Sacramento. Current and future developments, such as the completion of Two Rivers Trail, the Railyards, and the River District contribute to cumulative impacts, besides the impacts from the subject project itself, on the natural and recreation resources of the Parkway and River. Refer to the American River Parkway Plan 2008.

**Potential mitigation:** Purchase additional land from willing sellers at Sutter's Landing Park for nature study and passive recreation. Fund an updated Master Plan for Sutter's Landing Park.

- Evaluating the already significant impacts to the Parkway and River's natural resources and public safety from increased use at Sutter's Landing Park in light of the proposed project.


**Potential mitigation:** Work with the County of Sacramento, City of Sacramento and the project applicant, Encore McKinley Village, to develop and implement an agreement of shared management and operations responsibilities in the part of the American River Parkway bordering Sutter's Landing Park.

- Evaluating increased impacts from light pollution on the wildlife living and hunting in the Parkway and Sutter's Landing Park.

- Evaluating increased impacts from noise, both short term and long term, on the wildlife living and hunting in the Parkway and Sutter's Landing Park.
- The NOP states that two groundwater monitoring wells and six soil gas probes will be moved. Who is paying for their relocation and where are they going?
- The NOP states that the project will require the construction of a stormwater detention basin on 1.33 acres of city-owned property in the southwestern portion of the site. Is the project applicant purchasing this land from the City? At what price?

SARA sincerely appreciates the opportunity to provide scoping comments for the Environmental Impact Report. We look forward to continued participation as the project moves through the review and planning process.

Sincerely,



Betsy Weiland

Land Use Chairperson

Save the American River Association

[flweiland@yahoo.com](mailto:flweiland@yahoo.com)

Cc: SARA Board  
Phil Serna, Sacramento County Supervisor, District 1  
Jeffrey R. Leatherman, Director, Sacramento County Parks Department



VIA EMAIL

1/10/2014

Dana Allen, Associate Planner  
City of Sacramento, Community Development Department  
Environmental Planning Services  
300 Richards Boulevard, Third Floor  
Sacramento, CA 95811

**RE: Draft Environmental Impact Report for the McKinley Village Project (P08-086)**

Dear Ms. Allen:

Thank you for the opportunity to comment on the Draft Environmental Impact Report for the McKinley Village Project (P08-086). WALKSacramento offers the following comment based on our review of section 4.9 Transportation and Circulation.

**Figure 4.9-12 Project Access**

The figure on the right depicting the C Street/Project Access intersection doesn't show a crosswalk on the east leg. The omission of the crosswalk contradicts the mitigation text on page 4.9-93, which indicates that crosswalks will be installed on all approaches. We recommend that the figure be revised to conform to the mitigation text and to the City of Sacramento Pedestrian Safety Guidelines which calls for marked crosswalks at stop signs. Further, C Street is a collector with a traffic volume of about 5,000 vehicles per day and the intersection will be the primary route, and effectively the only route, for children between McKinley Village and Theodore Judah Elementary School. The marked crosswalk on the east leg will be critical to remind drivers that crossings are likely to occur there.

WALKSacramento is working to support increased physical activity such as walking and bicycling in local neighborhoods as well as helping to create community environments that support walking and bicycling. The benefits include improved physical fitness, less motor vehicle traffic congestion, better air quality, and a stronger sense of cohesion and safety in local neighborhoods.

Thank you for your consideration of these comments and recommendations. If you have questions or need additional information, please contact me.

Sincerely,

Chris Holm  
Project Analyst



**SACRAMENTO AREA  
BICYCLE ADVOCATES**

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January, 10, 2014

Dana Allen, Associate Planner  
City of Sacramento, Community Development Department  
300 Richards Boulevard, 3<sup>rd</sup> Floor  
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[dallen@cityofsacramento.org](mailto:dallen@cityofsacramento.org)

Subject: Draft Environmental Impact Report (DEIR) for the McKinley Village Project (File No. P08-086)

Dear Ms. Allen:

Thank you for the opportunity to comment on the subject DEIR. For the impact analysis, the proposed project will have a significant adverse impact on bicycling if it "fails to adequately provide for access by bicycle." Traffic stress induced by high speed and high volume vehicle traffic is the primary impediment to large numbers of people being willing to use bicycling for everyday transportation (Mekuria et al. 2012; Geller n.d.). Therefore, if the project does not protect bicyclists from high speed and high volume traffic, it will cause a significant adverse impact by failing to provide adequate access by bicycle. Particularly critical is providing safe routes to school for the proposed project's children (and their parents) who attend neighborhood schools like T. Judah Elementary School and Sutter Middle School.

The project developers have met with us several times and committed to a number of design features and measures that will minimize traffic stress for bicyclists both within the project site and in accessing external destinations. Unfortunately, some of those features and measures are not specified in the DEIR. Without those measures, we conclude that the proposed project may cause high traffic stress for bicyclists and therefore that it will have a significant adverse impact. The following paragraphs specify the design features to which the project developers have committed. We request that these project features be adopted as conditions of approval of the project.

**Bicycle Facilities within the Project Site**

Within the project site, bicyclists will share streets with vehicles. Such roadway sharing is acceptable because traffic volumes are predicted to be less than 3,000 vehicles of average daily traffic (ADT) and traffic speeds are expected to be less than 25 miles per hour (mph)(see Figure 4.9-13). Under such conditions of traffic volume and flow, traffic stress for bicyclists will be low and bicycling will be generally comfortable for all ages and abilities of bicyclists (Mekuria et al. 2012). The project developers have committed to a number of traffic calming measures that will further ensure that vehicles are operated slowly and carefully within the project: traffic circles at the intersections of A Street with Street 2 and Street 6 west and east of the central park, respectively; bulb outs at 8 intersections, split medians at 2 intersections, and chokers along most of the project's streets (see traffic calming exhibit provided by Fong, pers. comm.).

Under the cumulative analysis of traffic impacts, traffic volumes at the entrances/exits to/from the project at A Street to the west and 40<sup>th</sup> Street to the east are predicted to reach 3,500-3,600 ADT because of cut-thru traffic between East Sacramento and Sutter's Landing Parkway. If these traffic flows are experienced, the traffic calming measures may need to be enhanced to ensure vehicle speeds on A Street through the project remain below 25 mph.

In some places, the DEIR states that the project will include a separated multi-use Class 1 trail for bicyclists and pedestrian extending through the project along the south-side of A Street (e.g. page 4.9-93). We requested that this feature be deleted from the project because of conflicts at the many side streets along A Street and because the low traffic volumes and speeds on project streets do not justify it. Figure 3-6. Bicycle Circulation does not show such a Class 1 trail through the project which we support.

## **Bicycle Access to External Destinations**

A Street to the west. The DEIR does not provide street cross-sections for the external access streets as we requested in our comment letter on the Notice of Preparation for this DEIR. The project developers, however, provided the Tentative Subdivision Map (TSM, dated 9-25-13) for the project which shows street cross-sections (Fong, pers. comm.) A Street between the bridge over the Business 80 Freeway and 28<sup>th</sup> Street is shown to have 6 ft wide bike lanes on each side along 11 ft wide vehicle travel lanes. These bike lanes are necessitated by the long distance, about ¼ mile, along A Street between its intersection with Street 1 and 28<sup>th</sup> Street. Because vehicles tend to accelerate between stopping points along a street, bike lanes will provide separation of bicyclists from potentially speeding vehicles and restrict the vehicle lane widths to help moderate vehicle speeds.

Intersection of A Street and 28<sup>th</sup> Street. Figure 4.9-12 shows that predicted traffic volumes during peak hours along 28<sup>th</sup> Street under the Cumulative + Project condition will exceed 750 vehicles northbound and 400 vehicles southbound. These traffic volumes (less than 5 seconds between vehicles on 28<sup>th</sup> St) will make it difficult for bicyclists to exit A Street onto 28<sup>th</sup> Street southbound without assistance from traffic controls. This difficult traffic stress will constitute a significant adverse impact on bicyclists and the DEIR must be revised to specify a mitigation measure for this adverse impact.

28<sup>th</sup> Street south across UPRR from A Street intersection. South from its intersection with A Street, 28<sup>th</sup> Street will provide project access to Midtown Sacramento. The TSM shows that this section of 28<sup>th</sup> Street which crosses the UPRR tracks will be provided with 6 ft wide bike lanes next to 11 ft wide travel lanes. These bike lanes are critical because of high traffic volumes along 28<sup>th</sup> Street into Sutter's Landing Park and the steep incline from Midtown up to the UPRR crossing.

We are concerned about freight train blockages of the 28<sup>th</sup> Street rail crossing. DEIR pages 4.6-14 and 4.6-17 present estimates of railroad operations consisting of up to 22 freight trains per day currently and up to 32 freight trains per day under future conditions. Page 4.9-60 estimates that RR crossing gate closures for freight trains would average 89 seconds. In contrast, we roughly estimate that an 80 car freight train at a speed of 10 mph would require more than 5 minutes to clear the RR crossing. We request that the DEIR be revised to more thoroughly document average freight train lengths, speeds, and therefore crossing blockages because long crossing closures by trains passing several times per hour may frustrate bike access to the project by this route. For example, how do predicted RR crossing closures at 28<sup>th</sup> Street compare to those at the Midtown rail crossings?

40<sup>th</sup> Street underpass to the east. The TSM provided by the project developers shows that the underpass of 40<sup>th</sup> St below the UPRR tracks will have 6 ft wide bike lanes on each side of 11 ft travel lanes. The long distance between the intersection of 40<sup>th</sup> and A Street on the project site and 40<sup>th</sup> and C Street necessitates these bike lanes be provided to protect bicyclists from traffic that will tend to accelerate between stopping points. The bike lane stripes narrow the travel lanes to calm traffic flows. It is important that vehicle parking not be allowed along 40<sup>th</sup> St next to the Cannery Business Park towards the C St intersection to protect bicyclists from the hazard of doors opening on parked cars along the bike lanes.

Intersection of 40<sup>th</sup> Street and C Street. Page 4.9-93 of the DEIR presents recommendations for traffic controls at the intersection of the 40<sup>th</sup> Street project access and C Street. We think these recommendations for all-way stop control and a raised pedestrian island are appropriate for pedestrians but fail to adequately protect bicyclists, particularly children and parents trying to travel to T. Judah Elementary School. Project residents bicycling to the elementary school will turn right on C Street and then immediately left on 40<sup>th</sup> Street southbound. Because of the heavy through traffic on C Street during commute hours (see Figure 4.9-12), we request that the pedestrian island be extended westward on C Street and that a median left-turn island be provided for bicyclists to make the left-turn south into 40<sup>th</sup> Street (see attached photo). Likewise, project residents returning from the elementary school will make a right turn onto C Street and then an immediate left-turn onto 40<sup>th</sup> Street northbound. We recommend that a painted bike box in front of the vehicle stop line

be provided for left turning bicyclists at the C Street stop sign (see attached photo). To assist children and parents bicycling to and from the elementary school, we support the recommendations on page 4.9-94 for 36<sup>th</sup> Way traffic controls at the San Antonio Way and 40<sup>th</sup> Street intersections because of their traffic-calming benefits.

Bicyclist – Pedestrian Tunnel to Alhambra Boulevard. We believe this tunnel beneath the UPRR tracks at the west end of the proposed project is a critical feature of the project because it greatly enhances access for project residents to the shopping and other facilities along Alhambra Boulevard corridor (e.g. Sutter Middle School, McKinley Park). We request that this tunnel be constructed early in the project's construction so that the initial residents of the project can adopt non-vehicular travel patterns immediately. We appreciate that the project developers are exploring options to prevent unauthorized vehicle use of the tunnel (e.g. landscape features) that avoid use of bollards which are dangerous to bicyclists because of their lack of visibility (Fong, pers. comm.).

Throughout the DEIR, the project's commitment to construct the bicyclist – pedestrian tunnel is conditioned by the phrase "if approved by UPRR." We are concerned that if such approval is never obtained, the tunnel might never be built which would be a critical loss for non-vehicular access to the proposed project. Therefore, we request that the project be conditioned such that if the tunnel is not built the project developers will be required to finance substitute facilities of comparable value for bicyclists and pedestrians to be able to access the Alhambra corridor (e.g. facilities from 28<sup>th</sup> Street and 40<sup>th</sup> Street to the Alhambra corridor that are more protective than current conditions).

Mitigation measures for Alhambra Boulevard intersections at E Street and H Street. As part of the "Cumulative Plus Project" analysis, the DEIR identifies Impact 4.9-6 whereby the project would worsen functioning of the intersections of Alhambra Boulevard with E and H Streets. To mitigate these impacts, the DEIR recommends restriping and other lane modifications at these intersections. We are concerned that such lane modifications may worsen the already hazardous conditions for bicyclists through these intersections. Therefore, we request that the bicycle community be fully engaged when any such traffic mitigation measures are being designed.

SABA works to ensure that bicycling is safe, convenient, and desirable for everyday transportation. Bicycling is the healthiest, cleanest, cheapest, quietest, most energy efficient, and least congesting form of transportation.

Thank you for considering our comments.

Sincerely,



Jordan Lang  
Project Analyst

CCs: Joseph Hurley, SMAQMD ([jhurley@airquality.org](mailto:jhurley@airquality.org))  
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ECOS

ENVIRONMENTAL  
• COUNCIL •  
OF SACRAMENTO

Post Office Box 1526 • Sacramento, CA • 95812 • (916) 444-0022

January 8, 2014

Dana Allen, Associate Planner  
City of Sacramento, Community Development Department  
300 Richards Blvd., 3rd Floor  
Sacramento, California 95811

Dear Ms Allen,

These comments are submitted on behalf of the Environmental Council of Sacramento (ECOS) on the Draft **Environmental Impact Report for the McKinley Village Project (P08-086)**, dated 12 November 2013. ECOS is a coalition of environmental and civic organizations with a combined membership of more than 12,000 citizens throughout the Sacramento Region. Our mission is to achieve regional and community sustainability and a healthy environment for existing and future residents.

While ECOS supports infill development and would generally wholeheartedly support a project at a location so close in to the urban area, we have concerns regarding the sustainability of the project and the livability of the project site for future residents. We recognize that the project site has significant constraints (access, noise, vibration and toxic air contaminants). While we support development of this valuable infill site, we do not believe these constraints have been adequately addressed in the design of the project. Additionally, the project design proposed is far removed from what could be considered a "smart growth" project and is not affordable by design. The current plan leaves out an important segment of our population: low-income workers and their families. These constraints and their impact will be addressed in the following sections.

#### **Land Use Planning and Population**

The analysis of consistency with General Plan policies contained in the DEIR is superficial and biased at best and misleading at worst, with only those sections of policies with which the project is consistent even mentioned. Examples include:

**Policy LU 2.1.3 Complete and Well-Structured Neighborhoods.** The City shall promote the design of complete and well-structured neighborhoods whose physical layout and **land use mix promote walking to services, biking, and transit use**; foster community pride; enhance neighborhood identity; ensure public safety; are family friendly and address the needs of all ages and abilities.

**Analysis** - The proposed project incorporates four different housing types, 15 house plans, and 45 base elevations (with further material and color variations beyond the base elevations that will meet the needs of a range of ages and abilities).

The analysis indicates a mix of housing types and not a land use mix that would promote

walking to services, biking and transit use. The project must be considered inconsistent with this General Plan policy.

**Policy LU 2.6.1 Sustainable Development Patterns.** The City shall promote compact development patterns, **mixed use**, and higher-development intensities that use land efficiently; **reduce pollution and automobile dependence and the expenditure of energy and other resources; and facilitate walking, bicycling, and transit use.**

**Analysis** - Goal LU 2.6 and Policies LU 2.6.1 and LU 2.6.3 promote development that is more compact with a higher density that uses land more efficiently to help reduce the demand for energy and fossil fuels.

Again, there is no mention of the lack of mixed use and the lack of transit. Transit service is currently far removed from the project site with hourly service. It will not be utilized by the residents of this project unless the route is reconfigured and more timely service is provided. This project is a fairly typical suburban auto-oriented bedroom community. This infill site deserves better planning. Unless provisions are made for mixed use and transit, the project must be considered inconsistent with General Plan policy LU 2.6.1.

**LU 2.8.4 Housing Type Distribution.** The City shall promote an equitable distribution of housing types for all income groups throughout the city and **promote mixed-income developments** rather than creating concentrations of below-market-rate housing in certain areas.

**Analysis** — No analysis of this policy included.  
This General Plan policy was conspicuously omitted from any analysis.

**Policy LU 4.1.1 Mixed-Use Neighborhoods.** The City shall **require neighborhood design that incorporates a compatible and complementary mix of residential and nonresidential** (e.g., retail, parks, schools) uses that address the basic daily needs of residents and employees.

**Analysis** - Policy LU 4.1.1 requires new neighborhoods provide a complementary mix of uses that address the basic needs of the residents. The project includes three parks and a neighborhood recreation center. Retail uses beyond those included within the recreation center were not included as part of the project because it was determined the project does not include enough residences or density to support additional retail, especially since neighborhood-serving retail uses are located within close proximity to the project site.

The analysis implies that the recreational uses associated with the development are adequate to find consistency with this policy. Parks and recreational uses are far from what is necessary to address the basic daily needs of the residents. The residents will be forced into their autos and drive for most of their daily needs. The analysis goes on to say that neighborhood-serving retail is located within close proximity to the project site. This is true only if automobile use is again envisioned. The adjacent existing residential community would appreciate more neighborhood-serving retail and would likely frequent that retail if it was located at this site.

**Policy LU 4.5.6 Connections to Transit.** The City shall require new neighborhoods to include transit stops that connect to and support a citywide transit system and are within a ½-mile walking distance of all dwellings.

**Analysis** – No analysis of this policy included.

This above critical smart growth policy is completely ignored in the consistency analysis.

**Policy H-1.3.4 Balanced Communities.** The City shall encourage a **range of housing opportunities for all segments of the community as part of the community planning and implementation process** for newly annexed, newly developing, re-use and intensification areas.

**Analysis** — No analysis of this policy included.

This important policy was again not even recognized in the consistency analysis. These single family residential units will not be affordable to all segments of the community. Somewhere in the document reference is made to the potential granny flats over the garages providing affordable housing. These are expensive options which are unlikely to be selected by most buyers. There will be no affordable housing in this development.

For us to truly realize the goals of the SACOG Sustainable Communities Strategy in Sacramento, the McKinley Village plan must include affordable units that actually house low-income residents. The “Optional Carriage Units” that are incorporated into the 83 Cottage Green models are only 418 square feet. These are too small to house families. In addition, because there are no rental limits being imposed on these accessory units, their size alone will not guarantee affordability even for lower-income individuals.

The inclusion of accessory units increases the value and sales price of homes in new subdivisions, but provides little to no value to low income families and low wage workers—the very people affordable housing should support.

Additionally, on Page 2-11 the General Plan includes an “Opportunity Area” map on which the project site is classified as “Neighborhoods” with a definition of:

These development opportunity areas contain vacant or underutilized lands that provide opportunities for future growth. Categories include: **Neighborhoods. These areas are expected to contain a diversity of housing types, as well as complementary community supportive uses.**

This development includes only single family residential units and no complementary community supportive uses.

On Page 2-16 the General Plan gives a detailed definition of what “Complete Neighborhoods” entail:

**Complete Neighborhoods**

Complete neighborhoods promote livability and safety for residents of all ages, incomes, and cultural backgrounds. Characteristics of complete neighborhoods include the following:

- *A mix of housing types and housing affordability*
- *One or more nodes or districts of vibrant commercial or civic activity that provide identity for the neighborhood (e.g., shopping district, collection of public buildings)*

- *Neighborhood services and facilities including schools, parks, retail (e.g., grocery store, drug store), restaurants and cafes, and community centers or other public meeting hall*
- *Employment opportunities accessible by transit*
- *Sustainable designs and green infrastructure that respond to climatic demands and conserves scarce resources*
- *Extensive tree canopy and attractive landscaping*
- *A sense of personal safety (e.g., low crime rate, short police and emergency response times)*
- *An interconnected street network with short blocks and few cul-de-sacs*
- *Convenient access to public transportation (e.g., light rail and bus)*
- *A complete network of pedestrian, bicycle, transit, and roadway facilities that are connected to adjacent neighborhoods, centers, corridors, and employment*
- *Well-maintained housing and public facilities*

McKinley Village is not a complete neighborhood and is inconsistent with numerous General Plan policies. One must conclude that the General Plan policy analysis was biased in favor of the project, in that the analysis only included policies, or portions of policies, which the project can meet. CEQA's major intent of disclosure has not been achieved. Therefore, the environmental document must be considered inadequate and incomplete.

The DEIR indicates that the project will have 328 units with 656 residents. With the recent increase in units, one would assume that the numbers are now 336 units and 672 residents. For some unknown reason 2.0 persons per household was used to come up with the number of residents. We can find no justification for utilizing this low number for persons per household. The Sutter Park Project, for which the DEIR was also recently released, utilized 2.54 persons per household. Other references use other persons per household numbers, none as low as 2.0 persons per household.

While persons per household may not have been used in the analysis to determine impacts, this unbelievably low person per household number can only be seen as another part of the biased environmental review of the project. Obviously, when this number is corrected, more residents will be exposed to high noise levels, high vibration impacts and exposure to carcinogenic diesel particulates.

### **Air Quality / Toxic Air Contaminants**

ECOS's comments on the Notice of Preparation for this project included a recommendation for on-site monitoring of Particulate Matter (PM 2.5) including carcinogenic diesel particulates. Because of multiple sources of these emissions, the highly congested freeway and the heavily used railroad right-of-way, typical modeling associated with a Health Risk Assessments (HRA) may not accurately reflect the true impacts. This recommendation was not considered.

The California Air Resources Board's *Land Use and Air Quality handbook: A Community Perspective* basically recommended against locating sensitive receptors, including residential development, within 500 feet of significant sources of diesel particulate matter (DPM), a known carcinogen. The Sacramento Metropolitan Air Quality Management District (District) developed the *Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways* (Protocol) as a screening tool to assist local jurisdictions in assessing potential cancer risk of locating sensitive land uses adjacent to major roadways. The Protocol does not establish an acceptable DPM cancer risk or a threshold of significance, which is left to the local jurisdictions.

First, the DEIR states that the *Impacts of the environment on a project or plan (as opposed to impacts of a project or plan on the environment) are beyond the scope of required CEQA*

review. "[T]he purpose of an EIR is to identify the significant effects of a project on the environment, not the significant effects of the environment on the project." (*Ballona Wetlands Land Trust v. City of Los Angeles* (2011) 201Cal.App.4th 455, 473.) The impacts discussed in this section related to Toxic Air Contaminants associated with the existing Capital City Freeway and UPRR operations are effects on users of the project and structures in the project of preexisting environmental hazards, as explicitly found by the court in the *Ballona* decision, and therefore "do not relate to environmental impacts under CEQA and cannot support an argument that the effects of the environment on the project must be analyzed in an EIR." (*Id.* at p. 475.) Nonetheless, an analysis of these impacts is provided for informational purposes. The California Supreme Court has elected to review this issue (Supreme Court Case S213478); therefore it would not be advisable to use the *Ballona Wetlands* decision as a reason not to review the full impact of toxic air contaminants on future residents of the project.

Secondly, the Air Quality Section of the DEIR uses the 276-in-one million Protocol screening criteria as a threshold of significance. The District purposely stated that it should not be used as a threshold of significance or an indication of acceptable risk. Nevertheless, it is used here to determine that the project would result in a less than significant impact on future residents from toxic air contaminants with an exposure level of 200-in-one million from the freeway and 120-in-one million from railroad operations. The HRA itself states that residents would be exposed to a level of 80 in one million for the majority of the project. While the 276-in-one million is not a significance threshold and not a safe level of exposure, a significance threshold of 10-in-one million has been established.

This same type of analysis was used for the recent Delta Shores environmental document and was challenged in court: *STONE LAKES NATIONAL WILDLIFE REFUGE ASSOCIATION, et al., Petitioners and Plaintiffs, vs. CITY OF SACRAMENTO, a municipal corporation, et al.* As a result of this action, a settlement was reached wherein the City was required to conduct a new Health Risk Assessment with a significance threshold of ten-in-one million.

One must conclude that the ten-in-one million threshold should have been used in this analysis as well and that the impacts associated with this project are therefore significant. ECOS maintains that on-site monitoring is the only means of obtaining reliable data for a comprehensive Health Risk assessment. The analysis contain in this document is inadequate and incomplete.

Recent, well publicized, studies have indicated the living near freeways exposes residents to significant non-cancer health risks. The DEIR did not address non-cancer health risks associated with living near major roadways or other fine particulate generators. The DEIR fails to include any evaluation of the potential non-cancer health risks from constructing residences within 500 feet of the Capital City Freeway and the Union Pacific Railroad right-of-way. Again, this is further evidence that the DEIR is inadequate and incomplete. The DEIR comment letter (attached) from Physicians for Social Responsibility/Sacramento, an ECOS member organization, addresses this issue in detail and is referenced here.

### **Noise and Vibration**

The DEIR appears to indicate the noise and vibration levels meet City standards, but it does propose certain mitigation measures nonetheless. While noise and vibration levels are high, ECOS will not argue they do not meet City standards. However, we must ask the question, do these noise and vibration levels yield a livable and sustainable community? Due to noise levels, we believe outdoor use within this community will be severely limited, further exacerbating health issues associated with obesity. Interior noise and vibration levels will be annoying at best and may be unacceptable to many who choose to locate here. We believe the City should

review its noise and vibration standards to better determine what levels are detrimental to the human psyche. That would be a better standard for determining livability and sustainability of a community.

Mitigation Measure 4.6-6 indicates that:

*Disclosure statements shall be provided to prospective homebuyers for homes located adjacent to the UPRR right-of-way, informing them of the presence of the UPRR tracks and that vibration may be periodically perceptible during train pass bys.*

We recommend that the mitigation measure be revised to read:

*Disclosure statements shall be provided to all prospective homebuyers informing them of the presence of the Capital City Freeway and the UPRR tracks and that noise, vibration, toxic air contaminants and non-cancer causing health risks may be associated with these sources.*

### **Transportation and Circulation**

The fact that C Street between 30<sup>th</sup> and 33<sup>rd</sup> is not classified as a Major Collector has been pointed out many times to City staff, yet here again, this section is erroneously classified. This section of C Street is a Local Street. The traffic analysis must be revised to reflect the correct classification.

Development projects that lead to more walking and active travel are critical to our community's future. Human beings need moderate exercise, such as walking, for about 30 minutes a day in order to prevent the development of chronic disease and overweight. Only 38% of the population in the Sacramento region is active at this minimal level, often due to limitations placed by a built environment not suited to walking and other types of physically active travel. A 30-minute walk is about one and a half miles. If more people could obtain regular exercise by walking and bicycling to their regular destinations, in lieu of driving, it could yield significant health improvements to the resident population of this area.

Reduced driving would also decrease vehicle emissions and the prevalence of asthma, cardiovascular disease, and other air pollution-related conditions. More trips by walking and bicycling could help reduce the current expensive burden on the health care system of providing medical care to more and more people with chronic conditions due to inactivity and poor air quality.

Infill development can contribute to an increase in walking and physical activity when more people live or work close to a variety of destinations. The lack of connectivity to the surrounding area and few nearby destinations to the north suggest that McKinley Village has a mix of infill and edge-of-city qualities. Therefore, it's very important to enhance the limited connectivity proposed for the project. Providing all-mode access at the Alhambra Boulevard undercrossing would greatly improve connectivity and should be considered.

The bridge over the Capital City Freeway at A Street should include sidewalks on both sides of the bridge with at least five feet clear width after subtracting shy distances in each direction, and bicycle lanes on both sides that will accommodate most skill levels.

It is important to provide clear lines of sight to destinations at each end of the railroad track undercrossing at Alhambra Boulevard and at 40th Street. Pedestrians will feel more comfortable

using an undercrossing if they can clearly see the other end. Curves in the street or trail approaches, as shown on the site plans, diminish the line of sight and may discourage use of the undercrossing.

Consider using a roundabout at the intersection of A Street and Street 1. Not only would a roundabout provide better traffic calming than a side-street or all-way stop controlled intersection, but it may also provide improved pedestrian and bicycle mobility. A roundabout should permit removal of the curve in bike/ped trail on the north side of the Alhambra undercrossing. A roundabout should also allow for a safer transition to A Street and Street 1 for bicyclists. ECOS and WALKS Sacramento will be happy to provide a sketch illustrating how this intersection might be configured.

As the last of our concerns, we're not sure there will be much benefit from the 10-foot wide multi-use trail along A Street. It might be better to construct 7.5 foot sidewalks on both sides of A Street, or increase the planter width on each side by 2.5 feet.

We wish to recognize one important change that was made since the 2008 proposal. The conceptual site plan shows many street trees, and the greatest improvement is the addition of trees on the alleys. These trees will cool and beautify the alleys for pedestrians, in addition to providing air quality and energy-use benefits.

Transit service is basically not available for future residents of this project. The walking distance to transit is too far and the transit service is too infrequent. Since there are significant traffic impacts associated with this project, appropriate mitigation would be to provide transit service. ECOS recommends that a mitigation measure be added to either work with Regional Transit to reroute and expand Route 34, including increasing its frequency, or to provide shuttle service for residents of the community.

## **Housing**

The project proponent has indicated that "granny flats" on top of garages could be considered low income housing. We disagree. Accessory dwelling units (ADUs) such as "granny flats" can contribute to a better mix of land uses in new subdivisions and increase the value and sales price of homes, but should not be considered low-income or affordable housing.

ADUs would not necessarily be built; in the project proponent's previous development, Laguna West, "granny flats" on top of garages were an extra cost option which was seldom chosen. When built, ADUs would not be required to be rented; many ADUs are used instead as home offices or for other non-residential purposes. Even when rented, ADUs cannot be assumed to be de facto affordable; accessory units often carry high rents and are used as housing for higher-income young professionals rather than low income households. Even if ADUs are built, rented, and rented at affordable rates, they are still not subject to a recorded affordability restriction, and there is no guarantee they will remain rented and de facto affordable to low income households.

In order to potentially increase the supply and mix of housing stock, a certain percentage of the units which can accommodate garage "granny flats" should be required to have them. Furthermore, as ADUs become more common components of project proposals, city staff should track their construction and whether they are made available for low- and very-low-income households.

## Conclusion

As stated in our introduction to these comments, ECOS supports infill development and would generally wholeheartedly support a project at a location so close in to the urban area. However, we have concerns regarding the livability of the project site for future residents and the sustainability of the project itself. These concerns regarding noise, vibration, toxic cancer causing air contaminants and other health impairing emissions, as well as a lack of affordable housing by design, have not been adequately addressed in this environmental document. We find the document to be biased, inadequate, incomplete and unacceptable under the California Environmental Quality Act.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Richard Guerrero", with a long horizontal flourish extending to the right.

Richard Guerrero, President  
Board of Directors

Attachments: Physicians for Social Responsibility/Sacramento Letter

c: Steve Cohn, Council Member, District 3





09 JANUARY 2014

Dana Allen, Associate Planner  
City of Sacramento, Community Development Department  
300 Richards Blvd., 3rd Floor  
Sacramento, California 95811

Dear Ms Allen,

These comments are submitted on behalf of East Sacramento Preservation, Inc., an East Sacramento neighborhood association of over 300 members, on the **Draft Environmental Impact Report for the McKinley Village Project (P08-086)**, dated 12 November 2013.

While we appreciate the opportunity to comment on the Draft Environmental Impact Report for the McKinley Village project, it is quite clear that this planning process is inherently flawed and broken with regard to citizen involvement in the ability to shape the future direction of our city. Our neighborhood association was granted one printed copy of the DEIR. If we had had to review only the electronic version available on the City's website or had to go to the library to get access to a hard copy, we would never have bothered making these comments. This delivery system has the effect of eliminating input from residents that have no access to the internet versions of the documents, particularly senior citizens, or whose only electronic access is by phone or tablet. Timing the release of the DEIR so that the comment period coincided with three major holidays further reduced the opportunity for meaningful document review.

The hard copy appears to be well over 1,000 pages long. The appendices check in at another 4,000-plus pages. On top of that a reviewer will have to read hundreds of pages of the General Plan to put this project in context. To expect that residents, between their work, family and personal lives, will realistically have the time to read and comment on the volumes of data, assumptions, figures, tables, etc. that supposedly construct an argument that the proposed project will have no significant impacts on the environment is, frankly, ludicrous.

There are numerous citations within the DEIR of personal correspondence, by phone, letters and internal e-mails which are not available to the citizen reviewer of the DEIR. Disturbingly, some of this correspondence occurs between government agencies and the project's representatives and paid consultants. This correspondence is then referenced in each section's Sources page as if these are now facts. Was this information independently analyzed and peer-reviewed? Phone conversations are often misremembered and e-mails can easily be distorted or taken out of context to provide desired outcomes. These lapses in providing all EIR information and correspondence to the public make "a process of full disclosure" (1-1) impossible because it is not a matter of public record or generally available to the public. All of this correspondence, if the City is truly interested in a good faith effort at full disclosure, should be put in letter form, on agency letterhead where applicable, and included in the appendices.

It seems that a document such as this should have no identifiable bias yet the DEIR plainly has a pro-project bent. There are many examples where the text of the document editorializes or minimizes in descriptions of potential impacts. For example, the DEIR constantly measures distances from the edge of the project at the UPRR under-crossings to minimize distances traveled to neighborhood amenities such as schools, parks and shopping. Unless the DEIR assumes that there are people living in these tunnels (which does sometimes occur in similar downtown tunnels) these measurements should be from the center of the project thereby averaging the distances traveled from the actual residential lots. Another example is where the DEIR claims that "there are no major roadways that children would be required to cross to safely access school." This editorializing is completely inappropriate in a document of this nature.

The developers want their project; SACOG, the city and its politicians want their "infill" growth; labor and commerce want the business. As a result, residents throw up their hands in frustration. Most feel that "the fix" is in and there is no benefit in devoting precious hours reading this Thing that they don't fully understand anyway. Since neighborhood input and/or opposition is treated by the process as an obstacle to be overcome on the road to project construction, the only remaining effective neighborhood tool is, unfortunately, to seek expensive legal remedies.

There is rarely any follow-up by the City and its planning staff to this tainted process to see if things actually work out in the real world the way that this data and these documents portray them. For example, has the City ever done a follow-up traffic study to test the assumptions that it continues to make on these large projects?

East Sacramento Preservation, Inc. has concerns regarding the sustainability and livability of the project for current neighborhoods and future residents. We recognize that the project site has serious and difficult constraints; however, we believe that these constraints have not been adequately addressed in either this DEIR or in the design of the project. Based on the tenets of smart growth as espoused by SACOG, the American Planning Association, and the US EPA, the proposed project design fails to meet many of the basic concepts of what is considered a smart growth project.

There are serious problems and environmental issues with this project that have been glossed over in this document by reliance on pro-growth policies, cherry-picking of General Plan goals, contested court decisions, and rosy assumptions. In the following pages we will expound on these issues.

**PLEASE CONSIDER THIS OUR FORMAL REQUEST TO RESPOND TO ALL QUESTIONS, REQUESTS FOR DOCUMENTATION, AND REQUESTS FOR SOURCES IN THE BODY OF THIS COMMENT LETTER BY NO LATER THAN FEBRUARY 21, 2014. THANK YOU.**

s/Ellen Cochrane  
President  
East Sacramento Preservation, Inc.

s/David Edwards  
Vice-President and Land Use Chair  
East Sacramento Preservation, Inc.

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## **EXECUTIVE SUMMARY**

Issues will be addressed in the technical sections.

### **1 - INTRODUCTION AND SCOPE OF THE EIR**

Issues will be addressed in the technical sections.

### **2 - PROJECT DESCRIPTION (pg. no.)**

It appears that all discussion within the DEIR only assumes impacts from railroad operations on the south side of the project and ignores impacts from train operations on the Roseville to Stockton line on the east side of the project. This line has a similar level of train traffic to the line on the south side and is only 200 yards from the project site. Provide documentation and impacts for both lines. (2-2)

Describe, provide information, and demonstrate the claim of how the proposed development, per the overarching goal, is both “integrated” and “sustainable.” (2-8)

How does just “adequate access points for vehicular traffic;” i.e., just two access points satisfy the GP requirement for improved connectivity? (2-9)

The contention (2-9) that the “project is anticipated to generate a total population of approximately 656 residents at build-out” is clearly fallacious whether or not the City has decided to assign a 2.0 persons-per-household (PPH). This number appears to be a MEIR General Plan (GP) dictate but it is not backed up by any other EIR done in this City nor in any of the published PPH figures found from various sources. While the use of the 2.0 PPH figure may be massaged in the various technical sections so that there are not gross errors in impacts, it seems silly to use this number to declare what the population will be for a development of 3, 4 and 5-bedroom houses, with granny flats for potentially 25% of them. How is a 3,150 sf house with two people living it a sustainable project or future? Does the use of this doctored PPH figure reduce any mitigation fees for the developer?

Provide a reference source for the claim that “the City does not consider granny flats to be separate units.” (2-9) The very name implies additional occupants and impacts and, indeed, the General Plan refers to them as “accessory second units.”

Are fossil-fuel burning, greenhouse gas generating fireplaces a “sustainable” feature? Is their use calculated into utility natural gas demands? (2-10) The most sustainable fireplace currently available is electric from a green source and is 100% efficient compared to the 70% efficiency of gas fireplaces. Was this appliance considered?

The document claims that “none of the residences include garages that are the main focal point of the home.” (2-10) This is an example of the editorializing within the document because that supposed statement of fact is just a matter of opinion. We would contend that the front house elevations shown in Figures 2-7, 2-9 and 2-11 have two-car garage doors that dominate those suburban, car-centric elevations and do not reflect the appearance of most houses in East Sac or Midtown.

There are well over 20 references in the EIR that describe the proposed pedestrian/bicycle connection (2-45) from the project to Alhambra Boulevard while immediately adding the qualifier “if approved by UPRR.” Given that so much of this project’s supposed environmental benefits are contingent on that connection, will denial of this tunnel by UPRR be grounds for denying the project? Why is the tunnel not being built in Phase 1?

It is noted that the 150-foot long vehicular underpass (2-45) planned at 40<sup>th</sup> Street will not accommodate the potential width required for High Speed Rail (2-64,) which is currently planned for this route. Have the State and HSR Authority been notified that this project has unilaterally decided to preclude this HSR route option from future consideration?

How will the slope of the railroad berm be modified to accommodate 3 to 4 new rail lines plus maintenance roads without significant retaining walls looming over the backs of the Courtyard units? Who will be responsible for paying for this major engineering project? Will the disruption from this future major project be disclosed to all homeowners? How will construction access be provided to the berm expansion project?

The arguments against the Alhambra Boulevard vehicular connection focus on negative issues while ignoring the benefits. If this is used as a 2<sup>nd</sup> connection while also connecting as planned at 40<sup>th</sup> Street, then the emergency access issue is solved. The A Street bridge could still be maintained as a bike/ped connection. The surge tank could be built in many other locations within the project site. The CS Detention Project is being considered in several possible locations, not just his one. (4.5-29) The arguments against the Alhambra vehicular connection seem to come down to cost, which does not make the connection “infeasible.” Has the City investigated partnering with CalTrans to make the Alhambra vehicular connection into a Business-80 northbound on-ramp to replace the on-ramp at E Street which has been proposed for closure?

How many on-street parking spaces will be available for non-resident users of the community center and park? If the HOA becomes responsible for park maintenance can the City ensure that the parks will still be available for use by the public at large?

“The project may reserve land within the project site” for a surge tank project? (2-55) The technical section on wastewater assumes that this is a given. If not here, where?

For a truly sustainable project, why are proposed homes only pre-wired and not fully solar from the beginning? (2-56) Will the homebuilder make solar panels an option?

Where the DEIR refers to “a goal to exceed state’s current Title 24 requirements” are those the 2013 requirements or the requirements in place when the houses are constructed? This “goal” should be a requirement if the project is to be sustainable. Title 24 residential energy efficiency and requirements changed on January 1, 2014.

Construction staging at the Cannery will create significant traffic impacts as trips are made from there to the A Street overcrossing, a distance of over 1.5 miles through busy residential streets. Staging should occur nearer to A Street until the 40<sup>th</sup> Street undercrossing is completed. (2-58) No construction worker parking should occur in existing neighborhoods and this prohibition needs enforcement.

Verify that it is the project developer, not City/taxpayers, that is responsible for off-site improvements including A Street from 28<sup>th</sup> Street, railroad crossing improvements and 28<sup>th</sup> Street bike/ped access. (2-58)

Who will track the Mitigation Monitoring Plan? (2-65) City Planning is too understaffed to take on this task. Will reports be provided to resident stakeholders? East Sac has recent experience with Mercy Hospital/SHPS that demonstrates that mitigation monitoring is typically abandoned soon after approvals.

### **3 - LAND USE, PLANNING AND POPULATION**

This project is deficient in several of SACOG's seven interlocking principles of the Blueprint. (3-12)

- It does not meet the needs of seniors, empty-nesters, young couples, single-person households and single-parent households due to the two-story product with 3-5 bedrooms at a cost above the City's median home price and affordability.
- It is not a mixed-use development with nearby shopping. It does not offer non-auto transportation modes if the bike/ped Alhambra under-crossing is not approved. Its WalkScore is in the mid-40's (car dependent.) Its TransitScore is an abysmal 18. The #34 bus, which is over ½ mile from the project's center (if the Alhambra tunnel is approved by UPRR,) only runs once per hour and stops running at 5 PM, therefore it is not a viable means of commuting or visiting downtown in the evening.
- It does not reduce growth of demand for water.

This project is deficient in meeting many 2030 City General Plan goals and policies. (3-13)

- It does not reduce auto-dependency nor increase use of other modes of transit.
- It does not create diverse neighborhoods that promote alternative modes of transportation especially public transit.
- It certainly does not integrate mixed uses and housing types for all socioeconomic levels.

I will note that the DEIR has decreed that "it is within the City's decision makers' purview to decide if the proposed project is consistent or inconsistent with any applicable City goals or policies." (3-21) That statement calls into question the entire planning and EIR process not to mention the whole exercise of producing a General Plan if that plan can just be ignored where its policies are inconvenient. However, in the very same paragraph, the DEIR states that "the proposed project could not proceed if determined by the City Council to be inconsistent with the General Plan." Then the DEIR, based on the evaluations within, grants a lukewarm "generally consistent" with the General Plan to

this project. However, to get to that position, the DEIR must skip over many goals and policies of the General Plan that are not supportive of this project in this location. I will note those sections in the following discussion.

GP Goal LU1.1 states that development should provide for the needs of existing residents. This project provides no benefits to existing residents as any benefits that it does provide, such as reduction in VMTs, are strictly regional in nature. (pers. comm. Megan Norris)

GP Policy 1.1.1(skipped): Demonstrate how the project protects habitat, supports transit and diversifies the housing stock. GP page 2-12 clearly shows that, according to SACOG and its Metropolitan Transportation Plan, the project site is not within ½ mile of a major transit stop or high quality transit corridor which is an essential component of smart, sustainable growth.

GP Policies LU 2.1.2 and 2.1.3: Explain how this project preserves, protects and enhances the existing adjacent residential neighborhoods. Describe how the project falls short of being a “Complete Neighborhood” per GP pg. 2-16. How does the project enhance and contribute positively to the existing neighborhoods?

GP Policy LU 2.5.1: Has this new development project “maximized connections and minimized barriers” between neighborhoods with just one connection to Midtown and one connection to East Sac? Is it as well-connected as possible? Has the project minimized the effect of manmade barriers to accessibility between neighborhoods?

GP Policy LU 2.6.3: Given the proximity of the project to two major sources of noise and pollution, how will the houses “facilitate natural ventilation” and will these be “healthy, safe and comfortable” residential properties? Do they only meet those criteria through the extensive use of warnings and disclosure statements to future homebuyers?

GP Policy LU 2.7.5: Is residential development less than 150 feet from the region’s busiest freeway appropriate? The illustration on GP pg. 2-24 indicates that “appropriate uses” along freeways are “employment buildings and parking structures,” definitely not sensitive uses such as parks and residences. What is the justification for this deviation from policy?

GP Policy LU 4.1.1: The City requires that neighborhood design incorporates a mix of residential and non-residential uses, including retail, that address the basic daily needs of residents. Will the City require retail for this project that meets basic daily needs?

GP Policy LU 4.1.5: How does this project promote better connections by all travel modes, including transit, between itself and key destinations?

GP Policy LU 4.1.10: The City requires that “new major residential development provide a balanced housing mix that includes a range of housing types and densities.” How does this project satisfy that policy with only detached, single-family residences?

GP Policy LU 4.1.11 (skipped): Is the lack of senior housing in this project due to the fact that it is not accessible to public transit, commercial services, and health and community services?

GP Goal LU 4.5, New Neighborhoods: Ensure that new neighborhoods are Complete, maintain a mix of residential types and densities, are accessible by transit, are certified as green neighborhoods, and have a neighborhood core that includes shopping areas with access to public transit. How does this project satisfy these policies?

GP Policy LU 4.5.6: “The City shall require new neighborhoods to include transit stops that connect to and support a city wide transit system and are within a ½-mile distance of all dwellings.” This project simply does not meet this requirement.

GP Goal LU 10 addresses Special Study Areas and Planned Development. McKinley Village is expressly called out in the GP and Zoning Code as one of these planned developments. GP Policy LU 10.1.3 (skipped): The City requires that community benefits are achieved as the result of development approvals in any Planned Development Area such as this project. Provide examples of what those benefits are for the community from this project. This project is not a Complete Neighborhood, provides no jobs other than during construction, does not have a range of housing types, does not expand or improve public transit, and does not conserve a potential open space buffer for public use. Demonstrate what the community benefits of this project are per this policy.

The City’s Housing Element calls for new growth to be in Complete Neighborhoods, close to public transit and other urban amenities. This project does not satisfy those goals.

GP Policy H-1.2.1: Encourages a variety of housing tenure, size and shapes such as second units. Does this project satisfy this policy since it is virtually all multi-bedroom, two-story, single-family detached housing? Don’t the granny flats constitute second units? If so, why is the population of these second units typically ignored in determining environmental impacts?

City of Sacramento Mixed-Income Housing Ordinance (3-20) is referenced and then a declaration is made that this “project site is not identified as a “new growth area” in the Mixed Income Housing Code and is therefore not required to include affordable housing.” How was it determined that a completely new, 48-acre greenfield, project of 328 housing units does not constitute a new growth area? Why is the Curtis Park development considered a “new growth area” and this project is not?

Infill Strategy: Infill development is defined in the GP as “development of underused buildings and vacant lots in areas served by existing infrastructure.” This project site is not currently served by existing infrastructure, it is all a considerable distance away; there are no improvements, roads, utilities, lighting, or public transit. Furthermore, the City’s Infill Strategy (Resolution 2007-277) defines infill as occurring on five (5) acres or less, except where designated in the General Plan as an “infill target area.” The Infill Strategy



definitely does not designate the project site as an “infill target area,” does the GP? Given these definitions, on any criteria other than location, is this even an infill project?

Does the density of the proposed project include the second units in the dwelling units per acre figure of 10.9? Provide documentation and methodology for determining the densities of the East Sac and Midtown neighborhoods near the proposed project. (3-22)

Where in City policy is it stated that residential uses adjacent to freeways are considered compatible uses? (3-22) See illustration on GP pg. 2-24 which indicates that “appropriate uses” along freeways are “employment buildings and parking structures” not residences.

Again, how is this project providing “a diversity of housing choices” when all of the houses are relatively expensive, detached, two-story, single-family residences? (3-24)

Explain how “further material and color variations beyond the base elevations” will meet the needs of a range of ages and abilities. (3-24) What does this mean? The home designs are all two-story so it is difficult to see how this meets the needs of seniors and the disabled.

There is not a complementary mix of uses that address the basic needs of the projects’ residents. Provide documentation for the statement that the project does not include enough residences to support additional retail. (3-30) If the project is truly as “well-connected” to adjacent neighborhoods as the document claims, won’t the adjacent residents in existing neighborhoods be potential retail customers? Has the City encouraged the developer to provide retail uses along the proposed 40<sup>th</sup> Street connection on the south side of the railroad berm? This would help make this a Complete Neighborhood. Most of the neighborhood-serving retail in adjacent neighborhoods is beyond what planners consider a walkable distance, particularly from the center of the proposed project. Again, the WalkScore for this project is in the car-dependent range.

As previously discussed, GP Goal LU 4.5 and Policies are generally not adhered to as this is not a smart growth project due to the single residential type, a lack of mixed uses, and the lack of viable public transit. Policy LU 4.5.6, with its required ½ mile walking distance from every dwelling to public transit, is ignored.

The East Sacramento Community Plan (3-31) is just a placeholder and has had no input from the residents who live there nor has a community process been undertaken or scheduled. Therefore it is speculative to state that this project is consistent with that plan.

The project is not consistent with the Sacramento Housing Element as it does not include different housing types. (3-33) In order to claim consistency with Policy H-1.2.1, the DEIR talks of the granny flats as second units. However, much of the rest of the DEIR claims that the granny flats are “optional space” and ignores any future residents of these units and their environmental impacts. The population of this project at build-out will be considerably more than 656 residents even ignoring the second unit/granny flats. The 2.0 PPH rate may be a GP planning tool but it does not reflect the population reality for this

type of suburban sub-division development. The Housing Element (H3-8) of the GP states that the average household size for owner-occupied houses in Sacramento is 2.67. I am sure that 4- and 5-bedroom houses will exceed that figure. Producing houses which average over 1,000 sf per occupant is not a sustainable path for growth. Provide a more realistic anticipated population for the project which also includes the second units.

#### **4 – TECHNICAL SECTIONS 4.1 THROUGH 4.10 (4.9 FOLLOWS SEPARATE)**

The DEIR seems to place a *caveat emptor* burden on the future residents of this project. A partial list of disclosures to homebuyers that are ~~required~~ recommended by the mitigation sections of this document include the proximity to the landfill and its gases and odors, the proximity to the railroad and its noise and vibration, and the flood risks of the site. It seems that the risks of health problems due to proximity to the toxic emissions from the busiest highway in the region and the DPM of the railroad should be disclosed as well as the risk of a rail car crashing through the wall of your house. Should the future rail expansion/retaining wall project be disclosed? Will future residents also receive these disclosures or just the initial homebuyers? Is there any liability for the City and/or County for knowingly placing residents in these health hazardous locations?

In the Project Description (4.0-2) the granny flats are no longer described as second units and are assumed to have no occupants. In an apparent nod to reality, however, the traffic analysis then assumes that this non-occupied space does create “a small number” of vehicle trips somehow. This lack of consistency is consistent throughout the DEIR. A very conservative approach would be to assume that all eighty of the granny flats are built instead of the arbitrary forty of the analysis. How would this more conservative approach effect traffic counts and LOS?

Why are the “additional 40 units” considered to be extensions of the main house (4.0-2) when elsewhere in the DEIR they are called “second units?” What is the basis for this assumption? Despite the claim that they will not have separate utility connections, could they not be rented to, for example, college students with the homeowner paying the utility bills and adjusting the rent accordingly? Would not these students create impacts that the DEIR is ignoring?

The DEIR erroneously claims that the delta sea breeze arrives around noon in the summer. (4.1-2) (We could only wish that this was so!) Does the use of a more realistic time for this phenomenon, say 6 PM, increase the likelihood of violating federal and state standards for air quality due to the “Schultz Eddy?” Does the air quality analysis account for the bowl-like nature of the project site?

The Health Risk Assessment only looks at potential cancer outcomes and concludes that the impacts on residents are insignificant. It dismisses or ignores other health risks, in particular, increased respiratory diseases and heart disease. Will the City require the developer to provide disclosure statements to homebuyers informing them that there are increased risks of respiratory, heart and other health issues due to the proximity of their new homes to toxic air contaminant generators? Is the Sacramento County Department of

Health aware that residential uses are knowingly being located in a site that is at risk of producing significant health issues, particularly for pregnant women and infants? Does this City's reliance on controversial air-quality health thresholds expose it to another possible lawsuit similar to the one filed regarding toxic exposures at Delta Shores?

The DEIR cites the Ballona Wetlands decision (4.1-33) in several locations as a rationale for only analyzing impacts on the new residents by the environment as an informational courtesy. This court decision is currently being appealed and there are bills in the state legislature that seek to overturn the ruling. Would not the most conservative course of DEIR analysis be to assume that the decision will not stand these tests and proceed accordingly? I assume that requirements and policies of the GP should trump any reliance by this DEIR on the Ballona decision to avoid mitigating for negative impacts of the environment on the future residents of this project. Is that assumption correct?

The model shows that McKinley Village's reactive organic gas emissions are just 2% below the regulatory limits in winter. (4.1-43) There is no mention of the need for possible mitigation of this problem if things don't go perfectly as modeled. Would not the prudent approach be to incorporate at least some additional emission features in accordance with GP Policy ER 6.1.3? Does the model take into account the gas-burning fireplaces in each of the units? Does it factor in the daily influx of about 50 "gardeners" with their emission-spewing, two-stroke blowers which this air-quality challenged City does nothing to mitigate or manage? This activity will ensure that toxic contaminants from other sources will be blown back into the air every day of the year for ingestion by sensitive receptors whose respiratory issues have been glossed over by this report.

The HRA states that the nominal cancer risk is calculated by using the bogus population figure of 656 persons. (4.1-48) It would not surprise me if the true population was actually close to twice that number. Does a near doubling of the cancer burden for future residents make a difference to the analysis (or to the authors of this report?) Figure 4.1-1 clearly shows that the contributions of DPMs to cancer risk from the Stockton-to-Roseville rail traffic were not modeled in this study. Does the study use future levels of both freeway and railway traffic for its analysis; i.e., will not a fourth freeway lane and at least three additional rail lines create much more DPMs?

Will the 10% better Title 24 energy efficiency requirements for the project be written into the PUD guidelines? (4.1-53) How will this be enforced and monitored? Mitigated emissions show a 10% improvement in annual GHG emissions yet the CAP goal is a 55% reduction by 2030 and a 90% reduction by 2050. The City will never meet these ambitious goals if projects such as this are repeatedly given a pass with minor mitigations.

Again it must be emphasized that this project does not create a Complete Neighborhood and, without the ped/bike tunnel at Alhambra (if approved by UPRR,) it is not within walking distance to commercial land uses, and most residents will be much more than ¼ mile from transit stops with some houses over 0.6 miles from the #34 bus. The #34 bus is not a viable option for commuting or going anywhere in the evening due to its one hour

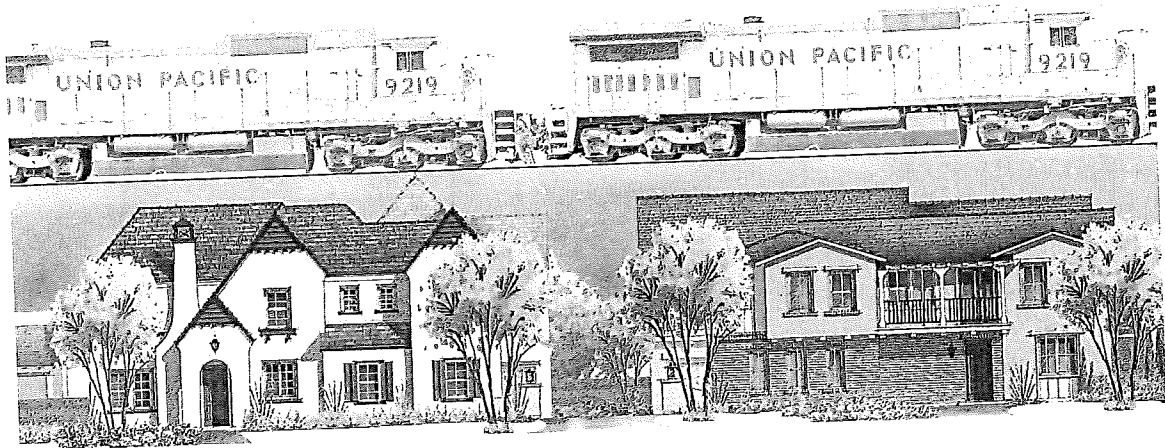
headways and suspension of service at 5 PM. Reliance on this bus to get to light rail is totally unrealistic. (4.1-54)

How did the initial 17 clusters of elderberry shrubs, potential VELB habitat, get reduced to just 4 since May, 2008? (4.2-33) Do City and state and federal wildlife agencies want to look the other way and reward landowners and developers who take matters into their own hands by reducing annoying habitat issues pre-project? Should not the landowner mitigate for the loss of these 13 VELB clusters off-site in a suitable location?

There were only ten surface samples analyzed along Business 80 to measure aerially deposited lead. These samples revealed a mean concentration and a median concentration of lead that are 7 time and 4.5 times more, respectively, than the maximum concentration for residential CHHSLs. (4.4-10) Yet, there was only one sample taken proximate to Business 80 for the 2007 ESA to measure lead concentrations and only 4 metals samples were taken over the entire 48.75 acre site. Is this a sufficient amount of sampling to conclude that there is no indication of lead impacts from the freeway when there are ten previous lead samples with very high concentrations?

Why did GeoSyntec not conduct an interview with the previous property owner, Angelo K. Tsakopoulos? This is a data gap which should be addressed and rectified.

There is potential for a release of hazardous materials from the east of the site as well as just the south. The DEIR states that "derailed rail cars can travel as much as 100-feet from the tracks." (4.4-44) How far can rail cars travel when more than 1/2 of that 100-foot is a slope of 2.3/1? In addition, the distances of the residences nearest to the railroad tracks will decrease from 90-feet to 45-feet if all the proposed tracks (even minus HSR) are built as planned. That will necessitate retaining walls. (pers. comm., Ryan Fong) The risks from derailment here are not primarily from hazardous material spills as much as they are from rail car impact, both from freight and passenger trains, on house structures. An extra layer of gypsum board will not mitigate that risk. Will this risk be disclosed to future residents within 100' of the toe of the railroad berm? Will the future rail expansion projects be disclosed? See the graphic below for a more accurate depiction of the Courtyard street scene and the elevation relationship between railroad and houses.



The accident rate discussion (4.4-45) is not conservative in its assumptions under the derailment impact scenario. If the tracks are expanded as planned and train traffic significantly increases as expected, then there could be as many as 60 train pass-bys per day. This could potentially increase the derailment accident rate to 1 in 61 years, likely within the expected lifespan of these homes. What are the mitigation measures in this case? The DEIR does not consider the impact scenario and future residents should be informed.

According to Appendix H, arsenic was detected in 15 sample locations on the project site ranging from 8.2 to 11.0 mg/kg. CHHSL maximum level is 0.007 mg/kg, up to 1,570 times less than the sampling. How is this toxic issue mitigated?

How will the City monitor the requirements of Mitigation Measure 4.4-1(a) to verify compliance with the measure regarding discovery of on-site soil contamination? Will there be daily and/or weekly reports? Will there be a public record of the monitoring? (4.4-36)

Have the construction, soil bearing and settling concerns of WKA, soils engineers, in their report of September 2006, which resulted in a recommendation for soil densification by removal and replacement as engineered fill been anticipated with regard to generation of fugitive dust? (App. L)

The fact that there are "numerous at-grade railroad crossings throughout the Midtown and Downtown areas of the City" is another example of editorializing that has no place in a DEIR document. (4.4-47) That fact is irrelevant to the proposed project unless it is the City's policy to justify a less-than-ideal situation by pointing to a different less-than-ideal situation *aka* "two wrongs make a right."

Describe how Low Impact Development applications to reduce runoff work in a 6-foot wide planter as illustrated in Appendix K-3 figure. (4.4-38) Will there be concrete walls in the sidewalk stormwater planters? How will this measure be integrated with street trees without putting their roots in constantly wet environments? Since the design is not finalized and these measures will create a much different street appearance than East Sac or Midtown, it will be very tempting for the developer to abandon these measures as impractical.

The HOA will be responsible for the maintenance of stormwater and infrastructure not located within a public ROW or public easement. (4.5-40) How will that be enforced and monitored by the City? Will the City train the HOA? What if the HOA votes to stop maintaining these essential components to the runoff reduction system?

Confirm that the sewage detention tank and pumps will be designed, installed and paid for by the developer. (4.5-41) Will the City maintain it or will that also be another HOA responsibility?

This project should be financially responsible for an electrical upgrade of Sump 99. (4.5-47)

UPRR requested that the City require disclosure to future homeowners of the noise and vibration associated with the adjacent UPRR tracks yet the Mitigation Measure only recommends this disclosure. (4.6-1) Why is the weaker "recommends" being used instead of making it a requirement?

The DEIR claims that wildlife living in the City has adapted to the urban noise environment. Is there a source for this contention or did the City take a survey? What about transient wildlife that is passing through Sacramento on, for example, the Pacific Flyway? Have they been excluded from historical habitat due to noise problems?

Vegetative noise barriers (4.6-4) are virtually useless to attenuate freeway noise (pers. comm., Joe Benassini, City of Sacramento)

If an average of 41 total trains pass through the 28<sup>th</sup> Street crossing, according to the FRA website, why does Table 4.6-6 only use 23 and 27 for the total trains passing the project? The train counts also ignore the Roseville to Stockton rail line which has a similar amount of traffic as the rail line on the south side of the project. From personal observation, it is apparent that it is not unusual for there currently to be 60 trains if both lines are included in the train count. This S-E rail line is just as noisy and is as little as 300 feet from the nearest proposed residences. The noise contours of Figure 4.6.4 show that this rail line was ignored.

Table 4.6-7 uses 90-feet as the representative distance from the nearest rail lines. When the future rail lines are constructed, this distance will shrink to 45-feet. However, Table 4.6-8 for Vibration Measurement Results uses the more conservative and appropriate 45-foot distance. Why are two different modeling methods utilized? Table 4.6-8 only provides 11 trains as the basis for determining Peak Vibration, three of which are the quieter passenger trains. Why would the vibration be the same for a freight train at 45, 65 and 90 feet? How many of these trains had multiple locomotives? Was the data cherry-picked? There should be a lot more data collected before any determination is made as to peak vibration.

The GP identifies the acceptable exterior noise environment for residential land uses as 60 to 70 dB. (4.6-22) For this project, 60 dB is the highest level of noise that is acceptable according to Table 4.6-9.

GP Policy EC 3.1.4 should take precedence over Ballona. (4.6-24)

GP Policy EC 3.1.6 (**skipped**): Vibration Screening Distances. "The City shall require new residential projects located adjacent to major freeways and hard rail lines to follow the Federal Transit Administration (FTA) screening distance criteria." FTA vibration screening distance criteria states that 200 feet is the appropriate setback distance for residences adjacent to conventional commuter railroad traffic. It follows that it should be

considerably more for louder freight trains. The FTA criteria also states that for "freight tracks close to sensitive sites... vibration impact will be very difficult if not impossible to mitigate." How will this GP Policy be followed and why was this Policy skipped in this DEIR?

Have the noise impacts and vibration from Business-80 been adequately adjusted to account for the future fourth lane of highway traffic? (4.6-31) More lanes will equal more vehicles will equal more noise and the DEIR assumes that the traffic noise will only increase by 0.3 dB. (4.6-62) Provide a reference for this measurement. Without the fourth lane, the analysis shows that the exterior, mitigated, post-sound-wall noise level will be right at the maximum permitted by the city of 60 dB which, the DEIR states (4.6-37), will interfere with "outdoor communication unless the distance between the persons conversing is relatively small." The cumulative number, while alleged to be imperceptible, will exceed the 60 dB threshold.

Total future railroad noise exposure at the nearest residences would be 73 dB. (4.6-32) This greatly exceeds the allowed exterior noise level of 60 dB per Table 4.6-9.

Any resident of East Sac can tell you that there is no quiet zone being followed or enforced with regard to warning horn usage. (4.6-33) Warning horns appear to be blown every time a train approaches the Elvas Wye. In one recent 24-hour period, 270 warning horn blasts were counted at the site. There can be no assumption that this noise source has been or ever will be mitigated. Ask Steve Cohn or Stacia Cosgrove whether East Sac is currently enjoying the benefits of a warning horn quiet zone. Has this noise study ignored that fact?

The entire argument (4.6-36) that this project can construct an effective noise barrier between the development and the railroad is ludicrous due to the fact that the rails, the rail cars, the horn and the locomotive are all near or above the tops of the houses. Refer again to the graphic on page 12. Given the 18' to 26' height of the railroad berm and the 16' height of a locomotive, it would require at least a 30' high wall to start to create a noise barrier. It is comparable to building a wall to mitigate overhead airplane noise. Describe how "an accepted noise barrier insertion loss prediction methodology" takes this difference in elevation into account. Provide the modeling method and data for confirmation through independent peer review that exterior sound levels are reduced to 60 dB (or the level of a conversation at 5-10 feet.) Will the entire private yard be at 60 dB or just up close against the wall? Has the DEIR studied the possibility that the proposed 16' walls will have the effect of reflecting railroad noise back into East Sac?

Provide a source for the Threshold of Significance of 0.5 inches per second of vibration peak particle velocities. (4.6-37) Table 4.6-3 shows that that level is between Threshold of Human Annoyance and Architectural Damage to Structures. Is that a reasonable standard?

Discussion of railroad noise generated and mitigation measures (4.6-41) is based on Table 4.6-7 which sets the distance to the rail tracks at 90 feet. However, the DEIR

acknowledges that future rail lines will be as close as 45 feet. Will the mitigation at that distance still be adequate to reduce interior levels to the 45 dB City requirement?

Figures 4.6-6 through 4.6-8 call-out a 10-foot wall between residences. This wall is not drawn to scale and distorts the impact of the wall on mitigating railroad sound from the tracks above. If this wall is made of wood it will be less than effective and just become a big bass drum.

Disclosure statements should be required, not just recommended, for all future residents of the project to warn them of the potential for sleep-impairing, conversation-stopping and health-impacting railroad and highway noise and vibration, not just those directly adjacent. (4.6-42) (4.6-4(f))

For the relative increase in cost, why shouldn't all windows for the first row of lots adjacent to the UPRR tracks have an STC Rating of 35 instead of STC 30, especially every bedroom window? (4.6-51) The type of insulation should be specified for the south-facing walls, a blown-in foam would be best. (4.6-4(c)) Concrete roof tile should be required. (4.6-4(e))

Provide the data source, wall construction details, project name and distances from the highway for the Dixon, California project used to claim the 25 dB noise reduction. (4.6-52) How was it determined that that particular project is applicable to this one?

Again, given the relative increase in cost, why shouldn't all windows near the highway have an STC Rating of 30 instead of the typical STC 27? Mitigation measures which are only "recommendations" are simply meaningless and are often not followed. (4.6-52)

Provide the source of the City's 0.5-inch per second vibration threshold. According to Table 4.6-3, this level is many times above the threshold of human annoyance. (4.6-59) The vibration will be perceptible to residents according to the DEIR but then it is declared to be less than significant because annoyance is too "subjective." (4.6-60) This entire paragraph is a pro-project exercise in rationalization that does a disservice to future residents.

Wouldn't Root Mean Square Velocity (RMS) be more suitable for evaluating human response to ground-borne vibration? Would raised floor construction in lieu of slab-on-grade be better for vibration dampening?

Mitigation Measure 4.6-6 is confusing in its use of the word "recommended" followed by the use of the word "shall." Is this a recommendation or a requirement? (4.6-60)

It is clear that the residence (4.6-62) referred to in Mitigation Measure 4.6-9 is much closer than 200 feet (probably about 130 feet) from the centerline of Business 80 based on Figures 4.6-5 and 4.6-12. Since this is incorrect, the claim that this worst-case scenario means that the combined noise levels from highway and railroad will be lower



throughout the rest of the site is also incorrect. This residence will have the highest cancer risk however.

The statement (4.7-5) that "there are no major roadways that children would be required to cross to safely access either school" (Theodore Judah or Sutter Middle School) is another example of pro-project editorializing. Ask any parent or second-grader if McKinley Blvd., C Street or H Street are not major roadways. McKinley Blvd. is a Minor Collector with lots of rush hour traffic (plus very occasional buses) that currently sees 4,540 VDTs. C Street is a Major Collector with close to 5,000 VDTs, much of it driving at 40 to 50 mph or more. H Street is an Arterial with over 18,000 VDTs, very busy rush hour traffic, and a significant speeding problem. Future VDTs for C Street and McKinley will be 50% to 60% higher with the project plus cumulative traffic conditions. Provide justification for the statement that there are no major roadways that children will cross to get to school.

Would the increased capacities for the schools per Table 4.7-2 meet CA school design and playground standards within the existing facilities? There is close to zero capacity without school renovations and loss of support and playground space to meet these projections since TJ and SMS are currently operating at capacity. Ask a parent if there is space at TJ for 278 (+47%) more students. Do these schools currently have vacant, idle classrooms? Note that TJ is still using "temporary" portable classrooms that were installed in the 1980s. Has the DEIR accounted for the cumulative school impacts of new students generated by this project and the Sutter Place residential project in East Sac?

The statement that both TJ and SMS are 0.5 driving miles from the project is obviously false. (4.7-11) (4.7-28) TJ is 0.75 driving miles from the project center. SMS is approximately 1.25 driving miles from the project. Again, these measurements should be made not from the edge but from the center of the project which is a much more accurate depiction of the driving distances.

Will residential fire sprinklers be required for the project per GP Policy PHS 2.2.3?

While I have been told that the 2.0 PPH figure is only a planning tool, the analysis of the project's increase in demand for police services should require that a more realistic figure be used. (4.7-26) That number is likely to be closer to 1,000 new residents (especially since this same document claims that there will be over 230 school age children alone.) This more realistic figure would require the addition of 2 sworn officers and 1 support staff. Would this make the impact to police services more than less-than-significant?

What is the Fire Department's estimated response time to the farthest residential lot within the project, not just the edge of the development, taking into account the tight, sub-standard turns and street sections of this project? (4.7-27)

The word-salad footnote on page 4.7-30 is a poor justification for blatantly underestimating the future population of this project. In fact almost every section of the DEIR has to rely on more accurate PPH figures from other agencies and departments

(schools, parks, traffic, etc.) to calculate impacts. The City should admit that the population for this project will be significantly more than 656 and provide a better number. What is the City's motivation for not doing so? There are no other recent DEIRs, including the comparable, active Sutter Park project, that use this 2.0 PPH figure.

GP Policy U6.1.7 states that the City shall ensure "that sites, subdivisions, and buildings are configured and designed to maximize solar access." Were the buildings, houses and lots laid out on the site for maximum solar access? Will the proposed 2,000 trees when fully grown, especially those on the southern buffer of the site, compromise the ability of homeowners to use solar panels?

How will this project assist in meeting GP Policy U5.1.1 that states that the City shall achieve zero waste to landfills by 2040? How will the City monitor and enforce the requirement for recycling and reuse of construction waste from this project per Policy U5.1.16?

GP Policy LU 2.7.5, Development Along Freeways, states that "the City shall... protect the public from the adverse effects of vehicle-generating air emissions, noise and vibration." (4.10-13) Trees do very little for noise attenuation, even less when they are freshly planted and for the first several years. How are any exterior functions, including those of the parks/community center (such as the swimming pool,) compatible with this GP policy?

Require that the project provide acorn-style lighting that is consistent in height, scale and light intensity with the historic acorn lights of East Sacramento, not the much larger, taller, brighter and glare-inducing fixtures that have recently been installed adjacent to Mercy hospital.

#### **4.9 – TRANSPORTATION AND CIRCULATION (TRAFFIC)**

The project will generate approximately 1.25 million vehicular trips yearly accounting for over 8 million vehicular miles traveled. Granted that the "infill" nature of the project means that commuter miles traveled should be less than what they would be if these houses were to be built in the eastern portion of the county. However, the fact that these 328 dwelling units are being built on this "infill" site does not mean that there will be 328 fewer houses built in more suburban locations. Therefore any supposed air-quality mitigations produced by this project should be measured against the impacts of literally tens of thousands of homes planned in outer portions of the region in just the next ten years. Growth is growth and this project is no panacea. Excuse me for questioning the will of this region's political bodies to manage this growth in a way that does not negatively and permanently impact the environment and its residents. After all, this is a County that approves projects such as Cordova Hills and a City that doesn't seem to mind the air quality impacts of hauling all of its solid waste by truck over the Sierra Nevada to a landfill in Nevada for the next 20 years.

While the project is envisioned within the DEIR as one that will reduce commuting miles traveled due to its proximity to downtown and its supposed "infill" characteristics, the fact remains that many residents of East Sac and Midtown enjoy reverse commutes because they work in suburban locations. Several of my neighbors work at Intel in Folsom or at employment centers in Roseville or Rancho Cordova. Many other Sacramento area residents and presumably some future residents of this project work as far away as the Bay Area. If this was not the case then there would be no need for Amtrak's Capitol Corridor service. There has been a long tradition of Bay Area workers buying homes in the Central Valley due to affordability. This project will house many employees that work in and drive to far-flung workplaces thereby offsetting a not-significant percentage of the supposed benefits of this project's location next to a major highway and proximity to downtown Sacramento workplaces. The complete lack of viable transit simply exacerbates the air-quality problem. In addition, the majority of VMTs in the region are non-commute miles for shopping and other trips that this "infill" project really does not address.

The footnote on page 4.9-3 again is inconsistent in that it envisions an arbitrary half of the potential "granny flats" as secondary units with occupants separate from those of the main household. Other sections of the DEIR declare that the "granny flats" are auxiliary spaces to the main house and that they will generate no additional population or impacts on services or the environment. The rest of the document should be consistent with this footnote.

Why was the intersection of McKinley Blvd. and 39<sup>th</sup> Street excluded from the study per Figure 4.9-1? This is an important local intersection as it is adjacent to Theodore Judah school and is at the start of the only major north-south roadway in East Sac, one that connects all of the way to Stockton Blvd. and Oak Park beyond. This route also leads to Sacred Heart Parish School and the central J Street business district. This intersection should be studied for impacts.

C Street from 30<sup>th</sup> to 33<sup>rd</sup> Streets is not a collector according to 2030 GP Figures M-2A and M-2B. As the DEIR acknowledges, it is a "narrow two-lane roadway with on-street parking, fronting residences with driveways and a posted speed limit of 25 mph." (4.9-9) With those characteristics, this Local residential street and its occupants should not be subjected to the traffic volumes and truck traffic that the City has permitted nor should additional traffic be sent that route from this project. Please correct this false statement (and Table 4.9-4) and revise the analysis to reflect the correct "Local" classification according to the 2030 GP.

The DEIR again uses the deceptive distances to transit stops as measured from the entrances to the project not the actual lots within the project. (4.9-15) Distances should be measured from the center of the project, not the edges. The "quarter mile south of the proposed bicycle/pedestrian access point" only starts to work if this tunnel is approved by UPRR as the DEIR makes clear in over twenty instances within the report. Furthermore this tunnel is not planned until later phases of the project when vehicle-driving habits have been well established by the new residents.

As required by GP Policy LU 4.5.6, transit stops must be within ½ mile of all dwellings in the development. This is far from the case for this project. (4.9-15) In addition, the #34 bus has one-hour headways and stops running at 5 PM, making it worthless for commuting and nighttime activities. Weekend and holiday service is non-existent. The #67 and #68 buses are only useful for trips to Florin and Arden Fair Malls and will be ignored by the car-dependent homeowners of this project especially since they are over ¼-mile farther from the project than the #34; i.e., not within walking distance.

Impacted existing neighborhoods are worried about traffic volumes and speeds plus livability and safety concerns, rarely, if ever, LOS grades, which, as the document concedes, only “represent the perspective of drivers and are an indication of the comfort and convenience associated with driving.” (4.9-25) How does this document measure livability concerns for existing residents?

A 48-acre, 328 residence development that only has two vehicular means of access is almost by definition not “well-connected” as required by GP Policy M 1.3.1. (4.9-36) Policy 1.4.3 (skipped) encourages residential developments “to participate in or create Transportation Management Associations.” Why was mention of this policy skipped and will the City require a TMA for this development?

The most conservative approach to the “granny flat” trip calculations would be to assume that all of these secondary units get built instead of the arbitrary 40 that the report uses. (4.9-39) Should not this more conservative number be used (around 80) for impacts?

Figure 4.9-9 for the Peak Hour Traffic Volumes for Existing Plus Project Conditions shows virtually no increase from existing turns for Theodore Judah school traffic on the streets that connect from the 40<sup>th</sup> Street under-crossing to the school site. How is that possible if there are at least 95 elementary school kids going to TJ not to mention others going to Sacred Heart? Peak AM traffic shows turns increase by only two at 39<sup>th</sup> Street and C Street, only one at San Miguel/C Street, only two at San Antonio/C Street and only one at 40<sup>th</sup> Street/C Street. According to 4.9-55, all 95 kids are arriving by car individually at TJ during peak hours so how or by what route are these kids getting to school in the morning? What about the kids that are going to other schools such as David Lubin, Sacred Heart and Sutter Middle? Where are their traffic impacts addressed?

The project will fail to adequately provide access to transit, by bicycle and by pedestrians due to the distances that must be traversed of over ¼ mile particularly if the Alhambra tunnel is not approved by UPRR and constructed in a timely manner. (4.9-46) It is generally accepted that ¼ mile is the furthest that people will walk for transit and shopping. Virtually all of the lots will be further than that to local amenities and transit. A condition of approval for this project must be that the Alhambra bike/ped undercrossing be built (and be built in the first phase of the project.)

Will the new pedestrian sidewalk at the 28<sup>th</sup> Street railroad crossing have enough right-of-way available to meet ADA standards for ramping? (4.9-58)

Mitigation measures for construction traffic impacts should include parking locations and numbers of vehicles anticipated for construction workers. (4.9-62)

Why is it assumed that a Capital City/Sutter's Landing Parkway interchange can not provide access to the project site? (4.9-63) The existing neighborhood streets are being burdened with up to 100% increases in traffic from current conditions with the cumulative plus project conditions. Wouldn't our new neighbors within this project want to share that burden? What is the anticipated volume of the SLP at 28<sup>th</sup> Street?

Justify the statement that all roadways within the study area are "low-volume, low-speed streets conducive to bicycle and pedestrian travel." (4.9-87) What are the thresholds for this editorial comment? Speeds on Elvas Blvd. and much of C Street in particular are not safe for bicycle traffic.

What is the mitigation for the project plus cumulative impacts due to queuing of PM northbound traffic at the 28<sup>th</sup> Street rail crossing? (4.9-89) This queuing is based on the average freight train which implies that half of the freight trains will cause a back-up beyond C Street.

Why is it appropriate to unilaterally remove a NTMP measure that was voted on and approved by local residents, the bulb-out at the NW corner of E Street and Alhambra Blvd., for the benefit of this project? (4.9-90) This bulb-out was one of the most critical installed NTMP measures as it decreases the speed of drivers racing to make the stop light at that corner. Removing rush-hour, on-street parking will only exacerbate that problem. The paltry increase in peak-hour south-bound traffic in existing plus project conditions at this intersection does not warrant the removal of this traffic calming device. This bulb-out should remain.

What will trigger the installation of a traffic signal at the McKinley 33<sup>rd</sup> Street intersection? (4.9-91) What is the developer's fair share contribution for this and all other mitigation measures?

This neighborhood knows that when a DEIR "recommends" mitigation measures the developer will frequently ignore them. Strengthen all "recommended"s on 4.9-93 to "required"s. Similarly, change "the City should monitor" to "the City will monitor" on pg. 4.9-94. Change the "recommended" on pg. 4.9-47, first paragraph, to "**required** that the project applicant coordinate..."

Describe the source for the "cut-through traffic within the project site." Why is it a conservative assumption that this traffic not be analyzed for impacts to the south of the project site? (4.9-97) Would not the conservative analysis include this traffic? Note that this additional traffic would not be there if not for this project.

## 5 – PROJECT ALTERNATIVES

Why has the No Project/Existing Zoning alternative chosen to analyze a heavy industrial use as a rail maintenance yard, possibly the most noxious option available? (5-6) This proposal was only briefly considered by CalTrans and the difference in elevation between the project site and the adjacent rail lines make it a very unlikely candidate for such a use. Standard grade for rail lines is 1.5% maximum therefore it would take about 1,600 feet of rail to descend from the top of the berm to the project site.

What other uses were considered using the existing Heavy Industrial zoning? This zone permits the manufacture or treatment of goods from raw materials. Other possible permitted uses include a community market, a plant nursery, a museum, a vocational school, a vet hospital, a commercial solar energy system, or other much less noxious uses than a railyard maintenance facility.

While the Existing Zoning alternative would not put new residential uses near existing jobs it would put new jobs near existing residences which would make East Sac and Midtown more sustainable communities. Either should have the same impact on VMT. This alternative could also incorporate a park or, more likely, open space into the project design at the east end of the site. Neither this alternative nor the proposed project develops any new bicycle access to downtown as more direct routes already exist in East Sac and Midtown. Trip generation would be considerably less with the Existing Zoning alternative as will wastewater, solid waste and ROG and NO emissions. (5-12)

Explain how the Lower Density Alternative, with 200 fewer residents, generates more water demand yet 30% less wastewater than the proposed project? (Table 5-4)

Residences adjacent to the rail lines cannot provide an effective sound barrier when the track and trains are higher than the tops of the households. (5-16) Why is it assumed that a bike/ped access at Alhambra, if approved by UPRR, can not be done under the Lower Density Alternative?

Why is it assumed that the housing footprint for the Lower Density Alternative would be the same as the proposed project? (5-19) If the houses are built at the same density as the proposed project (a smaller housing footprint) then there would be acreage left over for open space and/or parks or other uses. In addition, the alleged sound barrier effect would still be in place. Why is it assumed that this alternative “would reduce the range of single family homes and lot types? (5-21)

Why is it assumed that there will be 20,000 sf of commercial use under the Higher Density Alternative? (5-21) Was just the higher density only considered? The commercial use is not found on Figure 5-3.

Does the analysis consider that the addition of commercial and retail uses should encourage more walking, biking and internal driving that stays on-site, reducing VMT? (5-22)

Why does the Higher Density project reduce the range of single family home types (just as the Lower Density project did) and also not incorporate the design qualities of McKinley Park and East Sac neighborhoods? It should be noted that there are many, many multi-family properties (“attached units”) in both East Sac and Midtown. (5-26)

With regard to the High Density alternative, possible additional mitigation for air quality impacts is the only impact shown in this analysis which justifies the proposed project’s alleged environmental superiority. Is this impact not offset by the supposed regional benefits of increased density? (5-28)

Is the Economic Study by EPS available for review by the public? Its claims and the magnitude of the economic benefits of the project were not verifiable. This study was done for the developer’s benefit only.

Is this a complete list of the HOA responsibilities for this project?:

- Maintain landscaping in buffer zones.
- Maintain access to groundwater monitoring wells and soil gas probes.
- Maintain stormwater utilities not located within public right-of-ways.
- Review emergency evacuation routes and communicate to residents every 3 years.
- Maintain project parks. (to be determined)

If the HOA becomes responsible for park maintenance, will the City require that general public access is retained? Why does the City assume that this new HOA and/or their agents will have the requisite skills to manage these tasks in perpetuity? Who will train them? What liabilities will the HOA and the City be exposed to once the developer and builders have moved on to other projects?

# MARSHALL SCHOOL/NEW ERA PARK NEIGHBORHOOD ASSOCIATION

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January 10, 2014

VIA EMAIL

Dana L. Allen, Associate Planner  
Environmental Planning Services  
City of Sacramento  
Community Development Department  
300 Richards Boulevard, 3rd Floor  
Sacramento, CA 95811

RE: McKinley Village – Comments to Draft Environmental Impact Report (“Draft EIR”)

Dear Ms. Allen:

The attached comments are offered to the McKinley Village Draft Environmental Impact Report by the Marshall School/New Era Park Neighborhood Association (“MSNE”). This is the residential neighborhood located in the northeastern corner of Midtown Sacramento and the neighborhood whose livability will decrease because of its proximity to the A Street vehicle access to the McKinley Village project.

Much has been said by Phil Angelides and the development team for McKinley Village that the project is “smart growth” and “good infill development.” We look to the General Plan to tell us what we can expect for new developments. As an example, Policy LU 2.1.3 Complete and Well-Structured Neighborhoods states:

“The City shall promote the design of complete and well-structured neighborhoods whose physical layout and land use promotes walking to services, biking and transit use and foster community pride; enhance neighborhood identify; ensure public safety; are family friendly and address the needs of all ages and abilities.”

How does McKinley Village fit this standard? There are only two vehicle access points, not remotely near commercial development, and its location will not promote walkability. This project will bring at least 1,800 vehicle trips per day into Midtown without a thorough and comprehensive analysis of how this increased traffic will actually impact our neighborhood. As the attached comments will reflect, important sections of Midtown were forgotten in the traffic analysis for this project.



In addition, a subdivision like McKinley Village may not actually help to reduce greenhouse gas production. A study was released this week from UC-Berkeley's Energy and Resources Group and the Sacramento Bee article summarizing the study states the following:

Increasing the population density of California's urban areas is a key component of the state's plans to reduce greenhouse gas emissions to 1990 levels by 2020 - but it may not be the most effective strategy, new research at the University of California, Berkeley, indicates.

...

What Jones and his co-researcher, Dr. Daniel Kammen, suggest is that one-size-fits all strategies to reduce greenhouse gases give way to locally designed plans based on local circumstances.

"Cities are not islands," Kammen said. "They exist in a complex landscape that we need to understand better both theoretically and empirically."

<http://blogs.sacbee.com/capitolalert/latest/2014/01/increasing-density-may-not-work-in-cutting-greenhouse-gases.html##storylink=cpy>

The conclusions expressed in the article echo the comments residents have made about this project from the outset. How does the environment benefit by creating a subdivision with no meaningful public transit access and no commercial infill development? This subdivision is as car-dependent as any subdivision in Elk Grove.

Urban infill development works when the development uses existing services, such as the R Street development corridor. Those projects run along a transit line or within walking distance of job centers. McKinley Village share neither of those traits. If the City of Sacramento is committed to creating sustainable infill communities, it must hold developers like Phil Angelides accountable for creating transit opportunities and creating truly walkable communities. Without that level of accountability, we are doing nothing to improve our environment and everything to degrade the livability of existing neighborhoods.

In addition, the community, in its comments to the Notice of Preparation ("NOP") of the environmental document, called for a thorough analysis of the benefits of including vehicle access at Alhambra Blvd. On its face, this project is destined to be very auto-centric. Including vehicle access at Alhambra Blvd. would, at least, lighten the traffic load that Midtown and East Sacramento will suffer. The Draft EIR simply dismissed the idea of vehicle access at Alhambra Blvd. Mr. Angelides and his team have represented that Union Pacific Railroad has required them to change the design from "a box design that was 12 feet high by 12 feet wide to an arch design that is 12.5 feet high and 25 feet wide." This

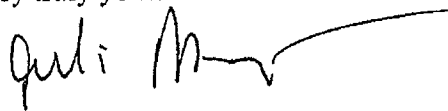
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design modification should allow for one-way vehicle access and this alternative should be studied and seriously considered. This is a vital element of this project and the Draft EIR should be revised to include a comprehensive, unbiased analysis of the feasibility of any type of vehicle access at Alhambra Blvd. Not providing any type of comprehensive analysis of this option signals to the voting public that the project applicant does not care about preserving the livability of the heritage neighborhoods of Midtown and East Sacramento and the City of Sacramento is not interested in holding Mr. Angelides accountable for decreasing the livability of our neighborhoods.

An issue raised in the NOP notice, by the City of Sacramento, related to increasing the diversity of housing options at various price points for the community. The City is moving away from requiring developers to build affordable housing and moving towards paying fees for the development of affordable housing. Mr. Angelides' group has indicated that "affordable housing" could be built if buyers select the option to build an optional unit over the house. Considering the lot size, how will this be accomplished? Also, even if the unit is built there is no assurance from the builder that the community will receive the benefit of affordable housing for those in need. How does the City plan to hold Mr. Angelides accountable for providing affordable housing options at McKinley Village?

Our greatest disappointment in this process is that the Draft EIR the community was given to review is not an unbiased, scientific document. The tone, findings, and contents of the Draft EIR are very developer-centric. Please carefully review the comments of the community and revise this Draft EIR to address the concerns expressed by the community. Ultimately, we are the ones who will live with the outcome of this project. This sliver of land was created due to bad planning over 50 years ago. Please do not compound bad planning by not considering how McKinley Village will influence the livability of our community.

Very truly yours



Julie Murphy  
Co-Chair

jam  
Attachments: Comments to Draft Environmental Impact Report  
33125

Marshall School/New Era Park N.A. ("MSNE")  
 McKinley Village - Comments to Draft Environmental Impact Report

Page	Section	Comment
		<p>The findings in the Draft EIR are not presented in language that is easy for the lay person to understand. The Draft EIR is considered an opportunity for the public to offer its concerns regarding a project that could have significant environmental impacts our on community. The Draft EIR, as written requires extensive scientific knowledge and the tables are not written in a manner that someone without extensive expertise would be able to understand.</p>
2-1	<p><b>PROJECT DESCRIPTION</b></p> <p>Project Location</p>	<p>APN 001-0170-13 and 003-0061-011</p> <p>Please clarify the ownership of the land at the western portion of the project.</p> <p>According to Sutter's Landing Area Master Plan Background Report dated 10/1/08, pg.19), the land is owned by the City of Sacramento and identified as a part of Sutter's Landing Park. How will the Sutter's Landing Park be compensated for this loss of land?</p>
2-10	<p>2.5 Project Components - Access &amp; Circulation</p>	<p>This section does not provide specific information as to the improvements to be made on A Street bridge.</p> <p>Will there be come type of fencing or barrier be erected to ensure pedestrian safety? Also, what measures will be taken to ensure the safety of drivers on the Capital City Freeway?</p>
2-45	<p>2.5 Project Components - Access &amp; Circulation</p>	<p>The applicant has not done a sufficient job to describe the efforts to secure permission from Union Pacific to construct the bicycle/pedestrian access at Alhambra Blvd.</p> <p>The applicant provides a detailed description of efforts to obtain data regarding the daily train count (pg 4.6-14) but provides the community with no information regarding efforts to secure permission to construct the bike/pedestrian tunnel that is lauded as the alternative access for residents of McKinley Village.</p> <p>The applicant states that "[L]ighting would be provided and would adhere to the City's minimum lighting intensity for pedestrians, bicycles and safety." The application, however, does not provide a detailed description as to what that means. There is a bike tunnel at 14<sup>th</sup> and C Streets that was closed over a decade ago because of safety issues for pedestrians and bicyclists. It is important the developer not be allowed to create an unsafe tunnel which would be harmful to our community. If this tunnel allowed vehicle access then safety concerns would be addressed.</p>

Marshall School/New Era Park N.A. ("MSNE")  
 McKinley Village - Comments to Draft Environmental Impact Report

Page	Section	Comment
		<p>At a minimum, a plan to ensure the safety of tunnel users should be more thoughtfully articulated.</p>
2-45	Recreation & Landscaping	<p>The applicant states that the plan includes the planting of 2000 trees throughout the project and "adjacent residential neighborhoods." Has the city arborist endorsed this plan? Considering the density of the site, will the trees have enough room to thrive and survive?</p> <p>Also, this section does not provide any specific information regarding the location of the plantings for the "adjacent residential neighborhoods."</p>
2-57	Project Phasing	<p>In order to encourage residents of McKinley Village to actually use the proposed bicycle/pedestrian tunnel, it must be constructed in the first phase of the project. If there is any hope of reducing the trips generated from this project, the bicycle/pedestrian tunnel must be constructed in the first phase.</p> <p>Again, this section provides no information as to the efforts the applicant has made to secure the permission of UPRR to even construct the tunnel. The community is left no certainty of the applicant's intention to construct the tunnel, as proposed.</p>
2-58	Grading and Construction	<p>This section details the impacts the construction workers will have on the surrounding community.</p> <p>"Daily construction round trips would range from approximately 38 to 66 vehicle trips, including construction employees and deliveries. The majority of this traffic would use the 28th Street and the A Street Bridge access until the 40th Street underpass is complete."</p> <p>During Phase 1 of the project, 28<sup>th</sup> Street will be unduly burdened by the increase of truck traffic related to the Grading and Construction at the site. The proposed "traffic management plan" should require the trucks leaving the project from 28<sup>th</sup> Street use 29<sup>th</sup> Street to access the freeway and 30<sup>th</sup> Street to access the project.</p> <p>Further, the applicant should institute a ride share for employees to lessen the impact on the neighborhoods surrounding both access points. The applicant should secure off-site parking for the construction workers and shuttle them to and from the work site.</p> <p>The applicant does not specify if this job site will be operating seven days a week or five days during the week. Truck traffic seven days a week will have a greater impact the air quality for the surrounding communities.</p>

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2-63	Off-Site Improvements	<p>Again, this section does not provide specific information as to the improvements to be made on A Street bridge.</p> <p>Will there be some type of fencing or barrier be erected to ensure pedestrian safety? Also, what measures will be taken to ensure the safety of drivers on the Capital City Freeway?</p> <p>In addition, the applicant does not provide specific details as to the proposed improvements in the area immediately adjacent to the at-grade crossing.</p> <p>Currently, there is no sidewalk and the area is not ADA compliant. It is currently a dangerous area for pedestrians and bicyclists using Sutter's Landing Park. Adding the proposed 1800 cars per day from McKinley Village will decrease the overall safety of someone with disabilities trying to negotiate that area.</p> <p>The applicant needs to provide a more detailed explanation as to the plans to improve 28<sup>th</sup> and B Streets.</p> <p>In addition, there is a monument sign for Sutter's Landing Park immediately adjacent to the A Street access. There is a concern that this sign will block the view of drivers leaving the McKinley Village at A Street. There is no description of the monument sign and its potential impact of vehicle, pedestrian and bicycle safety.</p> <p>Further, 28th Street, going over the train tracks, is about a 12% grade has a poor sight line and is not safe for bicyclists or pedestrians in its current state.</p> <p>With this poor sight line, the project applicant should widen 28th Street enough to create separate bike lanes and pedestrian access. The introduction of 1800 cars to a poorly developed area will compromise the safety of the current and future park users.</p> <p>The project applicant and the City of Sacramento have not addressed this issue in a manner that the lay person can understand how this issue would be addressed.</p> <p>In addition, the applicant fails to address issues related to Stanford Park at 28<sup>th</sup> and C Street. The park's sidewalks are not currently ADA</p>

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		<p>compliant. The increase of automobile traffic from McKinley Village, and future park users, will further compromise pedestrian safety.</p> <p>Also, B Street is currently unimproved and lacks ADA compliant sidewalks. Please estimate how much auto traffic will use B Street. In addition, ADA compliant sidewalks to be installed to improve pedestrian safety.</p>
3-4	<p><b>LAND USE PLANNING &amp; POPULATION</b></p> <p>Population</p>	<p>The Draft EIR notes the following regarding the proposed population for the project:</p> <p>"The project is anticipated to generate a total population of 656 new residents at build out, based on the City's rate of 2.0 persons per household."</p> <p>Since the release of the Draft EIR, the design of the project has changed to 328 units to 336 units. This will increase the number of residents at the project. The designation of 2.0 persons per household is not consistent with other projects and City documents regarding population projects. As an example,</p> <p>The Curtis Park Village project EIR states: "the 2008-2013 Housing Element Update indicates the average household size in the City of Sacramento as 2.54 persons per household." ("PPH")</p> <p>The City's Climate Action Plan states in Chapter 2, GHG Inventories, Forecasts and Targets: "Compared to 2005, when it is estimated that there were about 2.56 people per housing unit, by 2020 that ratio is expected to drop to about 2.37 and hold steady through 2030 at about 2.32 persons per housing unit."</p> <p>In addition, according to SACOG, the PPH projection data that applies to the McKinley Village site are as follows: 2008 - 2.20 PPH; 2020 - 2.14 PPH; 2035 - 2.23 PPH.</p> <p>The California Department of Finance, the City of Sacramento, has 2.66 persons per unit (1/1/2013)</p> <p>The US Census Bureau, for Sacramento County, states that there was an average of 2.70 PPH for the years 2007-2011.</p> <p>Another East Sacramento project, The Sutter Park project, is using 2.54 for their environmental review.</p>

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		<p>The population estimates for McKinley Village are wildly inconsistent with other projects and City policies. Why is the McKinley Village PPH lower than the Sutter Park PPH? These projects are within one mile of each other.</p> <p>At minimum, the McKinley Village PPH should be using the same number as Sutter Park.</p> <p>This underestimation of the population of McKinley Village project will greatly impact the trip generation numbers in the traffic study. Inaccurate trip generation numbers in turn compromise the analysis of the traffic impacts as a whole.</p> <p>The "per person household" number should be changed to reflect a higher number and be more consistent with public policy.</p> <p>Also, the traffic study analysis should be redone to accommodate a higher population at McKinley Village</p>
3-22	3.3 Physical Division of an Established Community	<p>The applicant fails to describe the current status of the area formerly known as the "28<sup>th</sup> Street Landfill."</p> <p>This area is currently known in the community as "Sutter's Landing Park." Sutter's Landing Park is a community park that someday may become a regional park. Sutter's Landing Park includes many amenities such as a very popular dog park, basketball courts, bocce ball courts, a skateboard park, and finally access to the American River. To call it a landfill inadequately describes the role of this property in the Community.</p> <p>In addition, the City of Sacramento has received a \$1.5 million grant from the California Natural Resources Agency for future improvements to Sutter's Landing Park.</p> <p>The following improvements will be made at Sutter's Landing Park:</p> <ul style="list-style-type: none"> <li>- Extend the Two Rivers trail three-quarters of a mile from the park east of the Union Pacific mainline tracks next to the Business 80 highway, according to the release. Currently the city's Two Rivers trail starts at Tiscornia Park and ends at State Route 160, totaling two miles.</li> </ul>

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		<p>– Construct a turnaround loop with interpretive panels and seating at the end of the Two Rivers trail. The city expects a future phase will connect the trail from the railroad tracks to CSU-Sacramento.</p> <p>– Restore more than three acres on the banks of the American River with native plants.</p> <p>– Make entry enhancements to define the site as a recreation destination "by making the entry to the river trail welcoming and by emphasizing the river connection.</p> <p>This section of the Draft EIR does not adequately describe the current status of the surrounding area. Please revise this section to accurately describe Sutter's Landing Park.</p> <p>In addition, by failing to correctly describe the surrounding area, the community questions whether the impacts of McKinley Village on the surrounding areas have actually been correctly studied.</p> <p>Please study the impacts of 1800 cars per day at A Street and the increased park user-ship on Sutter's Landing Park and the wildlife.</p>
4.1	<b>Air Quality and Climate Change</b>	Please see attached comments.
4.2	<b>BIOLOGICAL RESOURCES</b>	<p>The construction of the McKinley Village project will cause the loss of 48 acres of Swainson's Hawk foraging area.</p> <p>"Policy ER 2.1.9 Wildlife Corridors. The City shall preserve, protect, and avoid impacts to wildlife corridors. If corridors are adversely affected, damaged habitat shall be replaced with habitat of equivalent value."</p> <p>The developer needs to provide habitat closer to the project site than 10 miles away.</p>
	Mitigation Measure 4.2-1	<p>We concur with comments provided by the Friends of Swainsons Hawk and ask that Mitigation Measure 4.2-1 be amended to:</p> <p>1) require foraging habitat mitigation land within <b>two miles</b> to ensure preservation of 50 acres within the American River Parkway corridor;</p> <p>2) any easements to be approved by the CDFW;</p>



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		<p>3) maintenance and enforcement of mitigation values to be funded through endowment and agreement with third party conservation non-profit approved by CDFW and City; and</p> <p>4) location shall not have the potential to be surrounded by urban development and shall be part of a larger landscape of lands suitable for wildlife use and expected by the City to be permanently retained as open space.</p>
4.6-1	Noise & Vibrations  Introduction 4.6.1	<p>The introductory remarks describe community concern regarding impact of noise and vibration from the project on the wildlife at Sutter's Landing Park and specifically at "the Mound." The Draft EIR states the following:</p> <p>"A few comments requested that the increase in noise associated with the project be evaluated to determine its potential effect on wildlife living along the American River Parkway and in Sutter's Landing Regional Park. Most of the wildlife living in these areas of the City have adapted to an urban environment that includes noise from traffic, airplanes, and trains. Common wildlife living along the American River and Sutter's Landing Regional Park have adapted to urban noise, and noise associated with project operation would not be any different than the existing ambient environment. Therefore, this issue is not further evaluated in this section."</p> <p>It is very disappointing the community's concerns regarding impacts of Sutter's Landing Park are summarily dismissed by the applicant without providing a scientific basis for the lack of impact.</p> <p>Telling the reader that wildlife adapts without providing any supporting evidence is insulting and demeaning to the community members that experienced their concerns.</p> <p>This section must be revised to include scientific data supporting the conclusion that the wildlife will adapt.</p>
4.9-1	4.9.1  Introduction Project Description	<p>Again, the applicant has not done a sufficient job to describe the efforts to secure permission from Union Pacific to construct the bicycle/pedestrian access at Alhambra Blvd.</p> <p>The applicant provides a detailed description of efforts to obtain data regarding the daily train count (pg 4.6-14) but provides the community with no information regarding efforts to secure permission to construct the bike/pedestrian tunnel that is lauded as the alternative access for residents of McKinley Village.</p>

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		<p>All references to the construction of the bike/pedestrian tunnel should be revised to document the efforts made by the applicant to secure permission to build this tunnel.</p>
4.9-4	<p>Section 4.9  Study Area - Study Intersections</p>	<p>The draft EIR fails to include traffic data for F Street and G Streets, along 28<sup>th</sup> Street. The half- street closures at D and E Street prohibit westbound travel. The first western point of access is F Street and the half street closure is located at 25<sup>th</sup> Street. This allows for three blocks of westbound travel until the auto is diverted north or south.</p> <p>The second westbound access from 28<sup>th</sup> Street is at G Street. Since the half-street closure is located at 29<sup>th</sup> Street, G Street provided the project occupants unencumbered westbound access.</p> <p>Failing to include F and G Streets in the study intersections does not provide the community a clear understanding of the potential traffic impacts for residents.</p> <p>The Downtown Business District of Sacramento is a major employment center with both private businesses and the State of California, one of the largest employers in the region. Specifically, "the 151,282 jobs in the downtown [Sacramento] circle represent nearly 20% of all employment in Sacramento County, in 1% of the land area, with 5% of its population. Sacramento also has a very high job density, with 53 jobs per acre in the central city grid, 25 per acre within a half-mile, and 18 per acre within a mile."  <a href="http://sacramentoexpress.com/2013/12/29/redefining-downtown-sacramento/">http://sacramentoexpress.com/2013/12/29/redefining-downtown-sacramento/</a></p> <p>Without a clear study of the additional intersections proposed above, the community will not be provided a clear understanding of the potential traffic impacts.</p> <p>Please revise the study to include intersection counts for F and G Streets and revise the traffic study to describe the impacts and possible mitigation.</p> <p>Please recirculate the traffic study for comment.</p>
4.9-4	<p>Study Area - Study Roadway Segments</p>	<p>The study does not provide any specific explanation regarding data collection for C Street other than studying "west of 28<sup>th</sup> Street."</p> <p>The study failed to study any intersections on the western side of the Midtown Traffic Calming project area. With one of the largest</p>

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		<p>employment centers to the west of Midtown, it is likely that McKinley Village will employ Midtown streets to access the project. Specifically, "the 151,282 jobs in the downtown [Sacramento] circle represent nearly 20% of all employment in Sacramento County, in 1% of the land area, with 5% of its population. Sacramento also has a very high job density, with 53 jobs per acre in the central city grid, 25 per acre within a half-mile, and 18 per acre within a mile."  <a href="http://sacramentopress.com/2013/12/29/redefining-downtown-sacramento/">http://sacramentopress.com/2013/12/29/redefining-downtown-sacramento/</a></p> <p>As an example, residents could access Midtown from 21<sup>st</sup> Street northbound to enter the Midtown and then take E, F, G or H Streets to make their way to 28<sup>th</sup> Street, the only western access to the project.</p> <p>Please revise the traffic study to include the above-described conditions and revise the traffic study to describe the impacts and possible mitigation.</p> <p>Also, please recirculate the traffic study for comment.</p>
	Alhambra Blvd. as a vehicle access.	<p>MSNE is very disappointed that the applicant did not provide any data as to how the traffic impacts could be lessened for Midtown or East Sacramento. Instead, the proposition was summarily dismissed. There is great support for a vehicle access point at Alhambra and the applicant should be made to provide the community with scenarios so that we can evaluate the proposal.</p>
	4.9-5 - Project build out could cause potentially significant impacts due to construction related activities	<p>As the onset of the project, A Street will provide the only vehicle access to the project and 28<sup>th</sup> Street will be used by the construction workers to access the project.</p> <p>The Draft EIR does not explain how these impacts will be mitigated by the applicant. By not provided a Construction Traffic and Parking Management Plan during the draft EIR process, the community has no information regarding the burden 28<sup>th</sup> Street will bear.</p> <p>The proposed "traffic management plan" should require the trucks leaving the project from 28<sup>th</sup> Street use 29<sup>th</sup> Street to access the freeway and 30<sup>th</sup> Street to access the project.</p> <p>Further, the applicant should institute a ride share for employees to lessen the impact on the neighborhoods surrounding both access points. The applicant should secure off-site parking for the</p>

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		<p>construction workers and shuttle them to and from the work site.</p> <p>The applicant does not specify if this job site will be operating seven days a week or just five days during the week. Truck traffic seven days a week will have a greater impact the air quality for the surrounding communities.</p>
4.9-15	Transit	<p>The Draft EIR fails to address the NOP comments submitted by Regional Transit.</p> <p>Specifically, the Draft EIR fails to address the comment relating to offering a shuttle to the 29<sup>th</sup> Street Lite Rail Station and how that would reduce daily trip generation numbers from McKinley Village.</p> <p>With "151,282 jobs in the downtown [Sacramento] circle represent nearly 20% of all employment in Sacramento County, in 1% of the land area, with 5% of its population. Sacramento also has a very high job density, with 53 jobs per acre in the central city grid, 25 per acre within a half-mile, and 18 per acre within a mile."  <a href="http://sacramento.press.com/2013/12/29/redefining-downtown-sacramento/">http://sacramento.press.com/2013/12/29/redefining-downtown-sacramento/</a></p> <p>Please include the comments from Regional Transit regarding the shuttle and study how this amenity would reduce daily car trips to the nearby work centers.</p> <p>It is baffling why the applicant has not offered transit options for this project.</p> <p>Merely reducing "miles traveled" is striving for the lowest rung on the ladder. This alleged "infill project" should, at minimum, include some type of transit plan to help connect McKinley Village residents with transit opportunities.</p>
Figure 4.9-7	Inbound Trip Distribution	<p>The figure does not provide a percentage for the amount of traffic 28<sup>th</sup> Street will experience from C Street to H Street.</p> <p>At A Street, the number 52% and then the number 4% is noted at I Street. The Figure leaves the reader to make assumptions regarding the percentage of inbound traffic on 28<sup>th</sup> Street.</p> <p>In addition, this table does not provide an actual car count. Instead it provides a percentage and requires the reader to calculate the actual daily car trips.</p>

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		Please re-do this table to accurately reflect the number of daily car trips 28 <sup>th</sup> Street will experience.
Figure 4.9-7	Inbound Trip Distribution	<p>The figure does not provide any data for westbound traffic into from the project from F and G Streets.</p> <p>In addition, this table does not provide an actual car count. Instead it provides a percentage and requires the reader to calculate the actual daily car trips.</p> <p>Please revise this table to accurately reflect the number of daily car trips 28<sup>th</sup> Street will experience.</p>
Figure 4.9-8	Outbound Trip Distribution	<p>This figure references a "3%" increase at 28<sup>th</sup> and G Street but provides no additional information regarding how that number was arrived at in the study.</p> <p>No "intersection study" was noted for this intersection. The figure does not provide any data for westbound traffic from the project from F Street.</p> <p>Please revise this table to accurately reflect the number of daily car trips 28<sup>th</sup> Street will experience.</p>
Figure 4.9-8	Outbound Trip Distribution	<p>This figure references a "3%" increase at 28<sup>th</sup> and F Street but provides no additional information regarding how that number was arrived at in the study.</p> <p>No "intersection study" was noted for this intersection. The figure does not provide any data for westbound traffic from the project from F Street. Please include the actual vehicle count data for this intersection and not a percentage.</p>
Figure 4.9-8	Outbound Trip Distribution	<p>This figure references a "3%" increase at 28<sup>th</sup> and G Street but provides no additional information regarding how that number was arrived at in the study.</p> <p>No "intersection study" was noted for this intersection. The figure does not provide any data for westbound traffic into from the project from G Street.</p> <p>Please include the actual vehicle count data for this intersection and not a percentage.</p>
4.9-39	Table 4.9-8 Roadway	The introductory paragraph for this table states 28 <sup>th</sup> Street (north of E Street) will experience "approximately 1,100 [car trips]." This number

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	Segment Capacity Utilization - Existing Plus Project Conditions	<p>is confusing and misleading to the community.</p> <p>According to the Trip Generation Chart at Table 4.9-8, 3,507 trips will be generated by McKinley Village residents and 52% of those trips will utilize 28<sup>th</sup> Street for access. Therefore, approximately 1,823 car trips will originate from the 28<sup>th</sup> Street access, not 1,100.</p> <p>By reporting a lower number, this information creates confusion as to the nature of the impact for members of the community trying to understand the true impacts of this project.</p> <p>Please add the correct information to this paragraph.</p>
Table 4.9-6	Table 4.9-6	<p>This figure does not list the existing traffic volumes for the intersection of F and 28<sup>th</sup> Street.</p> <p>In addition, the figure is written in such a way that the lay person cannot easily understand the data being presented. Without a thorough and thoughtful study of all of intersections along 28<sup>th</sup> Street, the community will not have a clear understanding of the impacts.</p>
4.9-16	Truck Route	<p>C Street is incorrectly designated as a truck route. C Street was de-designated as a truck route by City Council on 3/16/99 (Attached). Attached is a letter submitted by Duane J. Wray from the Department of Public Works. It was recently discovered that the City never revised the truck route map to reflect this change.</p> <p>Please revise the Draft EIR to reflect this correction and revise any data that was generated using this information.</p>
4.9-40	Trip Distribution/Assignment	<p>The applicant's analysis fails to account for the fact that the Central Business District for Sacramento is located in Downtown Sacramento, [w]ith "151,282 jobs in the downtown [Sacramento] circle represent nearly 20% of all employment in Sacramento County, in 1% of the land area, with 5% of its population. Sacramento also has a very high job density, with 53 jobs per acre in the central city grid, 25 per acre within a half-mile, and 18 per acre within a mile."  <a href="http://sacramento.com/2013/12/29/redefining-downtown-sacramento/">http://sacramento.com/2013/12/29/redefining-downtown-sacramento/</a></p> <p>Midtown Sacramento is located between McKinley Village and Downtown Sacramento. Due to the half-street closures, access to Midtown streets in the northeastern corner of Midtown is very limited.</p> <p>The only westbound access to Downtown Sacramento is available at C</p>

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		<p>Street, F Street and G Street.</p> <p>The Draft EIR fails to include data regarding employment centers in this analysis and that will impact the trip generation analysis for this project.</p> <p>Please revise this section to accurately describe the impacts of westbound traffic from McKinley Village.</p>
Table 4.9-6	Table 4.9-6	<p>This figure does not list the existing traffic volumes for the intersection of G and 28<sup>th</sup> Street.</p> <p>In addition, the figure is written in such a way that the lay person cannot easily understand the data being presented.</p> <p>Without a thorough and thoughtful study of all of intersections along 28<sup>th</sup> Street, the community will not have a clear understanding of the impacts.</p> <p>Please revise the traffic study to include the existing traffic volumes at this intersection.</p>
4.9-40	Trip Distribution/Assignment	<p>The applicant's rationale regarding the trip distribution is flawed. The Draft EIR states the following:</p> <p>"As shown in Figures 4.9-7 and 4.9-8, local streets in Midtown located west of 28th Street are expected to carry between 1% and 5% of project trips depending upon the street. The number of project trips on east-west local streets between C Street and I Street is somewhat limited due, in part, to the previously discussed half street closures in place on these roadways, with the exception of C Street, which does not have a half street closure. Other factors that contribute to limiting through travel on east-west streets in the northern portion of Midtown include the lack of one-way streets, presence of multiple stop controlled intersections, and the presence of traffic circles; all of these factors assist with maintaining relatively low travel speeds on these roadways. One-way streets located south of the study area provide for faster east-west travel times due in part to the provision of multiple lanes in one direction and coordinated traffic signal timing plans to facilitate the progression of traffic."</p> <p>The half-street closures do not prohibit westbound traffic entering Midtown but sends the traffic down alternate routes. By not studying adjacent streets, the potential traffic impacts have not been adequately studied. The inbound traffic distribution only includes 28<sup>th</sup> Street. With "151,282 jobs in the downtown [Sacramento] circle represent nearly 20% of all employment in Sacramento County, in 1% of the land area, with 5% of its population. Sacramento also has a very</p>

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		<p>high job density, with 53 jobs per acre in the central city grid, 25 per acre within a half-mile, and 18 per acre within a mile."  <a href="http://sacramento.com/2013/12/29/redefining-downtown-sacramento/">http://sacramento.com/2013/12/29/redefining-downtown-sacramento/</a></p> <p>A percentage of McKinley Village residents will work downtown and will use Midtown streets to travel to their jobs.</p> <p>Please revise the study to include the streets adjacent to the half-street closures along 20<sup>th</sup> Street.</p> <p>Also, the study of 28<sup>th</sup> Street intersections is incomplete cause of the failure to include data for F Street (westbound) and G Street (westbound).</p>
4.9-51	Figure 4.9-9	<p>The introduction to this figure estimates approximately 1100 daily trips from the 28<sup>th</sup> Street access for McKinley Village. This is inconsistent with Figure 4.9-13 called "On-Site Circulation." That figure estimates daily traffic volume from the A Street access as 1,800. The "Rail Crossing" paragraph also referenced 1800 car trips generated by the project. Why is 1100 cars reported? This is inconsistent with the balance of the section.</p> <p>Also, according to the Tentative Subdivision Map dated 12/3/13, A Street has been designated a "Minor Collector" street instead of a "Local Residential Street." 28<sup>th</sup> Street is a "Local Residential Street." How does this change in designation impact traffic on 28<sup>th</sup> Street?</p> <p>Why has the street designation changed and how does that impact the traffic analysis?</p> <p>Will the project generate additional traffic that has not been reported in the Draft EIR?</p> <p>Please revise and recirculate the traffic analysis for comments.</p>
4.9-64	Traffic Forecasts	<p>The analysis of the construction of the Sutter's Landing Parkway will have a devastating impact upon the northeastern corner of Midtown. The Draft EIR states:</p> <p>"A large increase in traffic on 28th Street as a result of the construction of Sutter's Landing Parkway and the Capital City Freeway/Sutter's Landing Parkway interchange."</p>



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		<p>A projected increase of 6500 cars per day at 28<sup>th</sup> and C Street will devastate and forever change the residential character of this neighborhood. In addition, the City has designated C Street west of 27<sup>th</sup> Street as future residential development.</p> <p>Approximately 8000 cars per day are projected for C Street. These are local residential streets and must be protected and preserved.</p>
4.9-94	28th Street Traffic Volumes	<p>The addition of 1,800 cars per day traveling to and from the McKinley Village project will greatly impact the general livability of 28<sup>th</sup> Street which is designated as a local street.</p> <p>The Draft EIR makes the following observation:</p> <p>"[T]his roadway is categorized as a local street within the 2030 General Plan and is fronted by residential land uses. Given these findings, the City should monitor 28th Street traffic volumes after construction of the project to determine if a half street closure is necessary at the C Street/28th Street intersection to prevent traffic from continuing southbound on 28th Street at this location. Installation of a half street closure would result in lower traffic southbound traffic volumes on 28th Street by diverting traffic onto C Street (eastbound), where drivers would then continue southbound on 29th Street (which is designated as an arterial roadway in the 2030 General Plan).</p> <p>It should also be noted that B Street provides a connection between 28th Street and 29th Street 400 feet to the north of C Street. However, the proximity of B Street to the 28th Street at-grade railroad crossing (approximately 135 feet) and the vertical curvature of the B Street approach to 28th Street makes this location less suitable for a half street closure. Additionally, B Street currently lacks standard improvements including curb, gutter, and sidewalks."</p> <p>In order to preserve the livability of residents on 28<sup>th</sup> Street, a half-street closure should be included in the first phase of the construction of McKinley Village project. The truck traffic generated by the construction of the project will negatively impact the livability of our community. Constructing a half-street closure at 28<sup>th</sup> and B Street is preferred because B Street is a business street and there will be little impact to residents. Safety concerns could be addressed by using a stop sign to restrict northbound traffic on 28<sup>th</sup> Street and allow southbound traffic an unimpeded turn on to B Street. Improved signage and visual cues regarding the half-street closure would also need to be employed to further address safety concerns.</p> <p>Improvements to curbs and sidewalks at B Street need to occur as well.</p>

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		A half-street closure at C Street will have a greater impact upon residents living on C Street. Installation of a closure at this intersection would need to include additional traffic calming devices on C Street to slow traffic.

Marshall School/New Era Park N.A. – Comments on Chapter 4.1 of the Draft Environmental Impact Report (Air Quality and Climate Change) for the proposed McKinley Village development:

Reviewer: Tom Leffingwell

General: The great majority of this chapter is devoted to the construction of the project, rather than the on-going effects of air pollution on McKinley Village residents, once it has been built out. Nonetheless, it is appropriate for the air pollution consequences of the construction phase to be assessed; however, I believe that it is not the major concern for our neighborhood association, mainly because it will be a relatively short-term facet of the McKinley Village development.

A second observation I have to offer is that this document is, as are all EIRs, put together by consultants whose purpose it is to please the person/organization that is paying for their services. Therefore, this document consists of a series of sections examining individual parts of the air pollution or climate change issues associated with the McKinley Village development, that strive to come to the conclusion: No Problem. I characterize it as “hand waving.” In fact, I commented to a friend that the hand waving here is so vigorous that, at times, I expected the document to fly out of my hands.

The issue of air pollution control is complicate by the fact that there many regulatory entities involved, from the federal (EPA), state (Air Resources Board), regional (Sacramento Metropolitan Air Quality Management District), the county, to the city. Each entity has its particular issues of concern and a corresponding set of laws, executive orders, regulations, rules, and guidelines. This creates both a problem for the developer in terms of compliance and an opportunity for the EIR author to find a path to No Problem.

In regard to the major air pollutants of concern in relation to this project, the authors have emphasized particulate matter (especially diesel exhaust particulates) and ozone precursors (known as reactive organic gasses, or ROGs) in their analysis. This pertained to the construction phase and the ongoing residency, as well. Oxides of nitrogen (NO<sub>x</sub>) and carbon monoxide are additional transportation-related air pollutants of concern. Of course, the conclusions were in all cases, No Problem or No Mitigation Needed.

Project Siting: In both the Air Quality and Climate Change chapter and the Health Risk Assessment appendix, it was pointed out that the Air Resources Board’s “Air Quality and Land Use Handbook: A Community Health Perspective” recommends that residential uses be sited no closer than 500 feet from freeways or other high-traffic roadways. This project will have extensive portions of its residences placed about 50 feet from the Capital City Freeway (SR-51), not to mention the Union Pacific railroad tracks. In both documents, the consultant dismisses this discrepancy as No Problem, because this part of the Air Board’s recommendations is “strictly advisory” and can be ignored by the City and the developer.

Again, no mention was made of the fact that the project site consists of a bowl formed by the surrounding area, namely, the railroad track berms to the south and east, the

Marshall School/New Era Park N.A. – Comments on Chapter 4.1 of the Draft Environmental Impact Report (Air Quality and Climate Change) for the proposed McKinley Village development:

Reviewer: Tom Leffingwell

Business 80 (SR-51) roadway and the former dump to the west and north. During low wind or stagnant air conditions, this “bowl” will trap locally generated air pollutants, thus increasing their concentrations above those modeled by the software simulations (California Emissions Estimator Model) used to divine the potential health risks to McKinley Village residents. (More on this topic in the Health Risk Assessment segment)

Attached is a copy of the STIPULATION FOR ORDER DISMISSING ACTION BASED ON SETTLEMENT AGREEMENT AND ORDER THEREON for Stone Lakes National Wildlife Refuge Association v. City of Sacramento, Sacramento Co. Superior Court Case No. 34-2009-80000166. This court case challenged the environmental document for the Delta Shores project in South Sacramento. Specifically, there was a challenge of the Delta Shores EIR’s Toxic Air Contaminants analysis. This case settled in 2010 and the City should be using the “ten-in-one million” analysis to be consistent with this settlement. Considering this project site is located between one of the busiest sections of freeway in the region and an extremely active rail line, it is imperative the environmental review be consistent with the lawsuit settlement the City entered into in 2010. Why is this analysis not being used?

Construction Phase: Particulate matter will be generated both in the form of fugitive dust (grading and excavation) and diesel exhaust from equipment used to prepare and construct the project. The pertinent regulations and guidelines only require that a construction site be watered twice daily, drive equipment below 15 mph, minimizing vehicle idling, covering haul trucks transporting soil, and cleaning paved roads; that is all it takes to mitigate fugitive dust.

The diesel exhaust particulate problem with the construction equipment is waved away by two approaches to its mitigation: 1) They use a complicated mix of suppositions about how the many regulations and rules regarding construction projects apply and 2) they made a bland statement that proper exhaust controls on the projects construction equipment will be used (following the SMAQMD Basic Construction Emission Control Practices as well as Enhanced Exhaust Control Practices).

Using those same proper exhaust controls on the construction equipment, oxides of nitrogen are projected to exceed regulatory limits only during the construction of the tunnel under the railroad tracks at 40<sup>th</sup> Street. The developer plans to pay a “mitigate fee” to the Air Quality Management District’s off-site mitigation program. See, No Problem. Of course, a like tunnel at Alhambra was not considered in this document, since the developer has declined to excavate one there.

Carbon monoxide levels were below regulatory limits in the modeling exercises used to assess the projects air quality impacts, so no mitigation is foreseen.

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Reviewer: Tom Leffingwell

Operational Phase: That means McKinley Village as a residential neighborhood. Generation of air pollutants from stationary sources within the neighborhood are expected to be fairly small compared to regulatory limits. This includes such sources as energy generation, heating and cooling, and use of consumer products. However, the model shows that McKinley Village's reactive organic gas emissions might come very close to the regulatory limit. No mention of the need for possible mitigation of this problem was made.

Falsehood: The EIR states the following: "Further, the project includes measures to support pedestrian and bicycle activity; and by its location, the project supports use of alternative transportation." (p. 43) This statement is proffered as some of the features that would reduce the emissions of reactive organic gasses and oxides of nitrogen expected to emanate from the project. As has been discussed within our association, as well as comments by East Sacramento groups, this project is unusually automobile-dependent by virtue of it's being isolated from the surrounding city with only two vehicle access points and a single pedestrian and bicycle access point at the far north end of Alhambra Boulevard, eight to ten blocks from the nearest retail businesses on Alhambra or J Street. There is a smattering of specialty retail businesses at Alhambra and H Street and a deli and a restaurant on C Street at 34<sup>th</sup> and 35<sup>th</sup> Streets, respectively. The developer specifically plans for no retail operations within the McKinley Village complex.

Oxides of nitrogen and carbon monoxide are associated with mobile sources, mainly automobiles and trucks and diesel-powered vehicles. The authors of the EIR see no problem with the increased traffic emanating from within the McKinley Village project, because the consequent emissions will be dispersed over a large area and few "hot spots" are expected. Thus, a "no significant impact" conclusion was rendered in the EIR for these vehicle-generated pollutants.

---

Outcomes: The Health Risk Assessment only looks at potential cancer outcomes. It dismisses or ignores other health risks, in particular, increased respiratory diseases and heart disease. Thus, the only toxicant to be examined in this document is diesel particulate matter (DPM). The Air Quality and Climate Change chapter of the EIR discusses such air contaminants as ozone, oxides of nitrogen, and carbon monoxide, however almost exclusively in the context of the construction phase of the project. The consultants dismissed these air contaminants as insignificant, due to ready dispersion and a largely "offsite" source, in that vehicle trips originating and ending in the McKinley

Marshall School/New Era Park N.A. – Comments on Chapter 4.1 of the Draft Environmental Impact Report (Air Quality and Climate Change) for the proposed McKinley Village development:

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Village project will mostly be away. In addition, the modeling used in this exercise does not indicate that any Toxic Air Contaminant “Hot Spots” will develop within the project. Thus, non-carcinogenic toxic air contaminants associated with the project will not affect the McKinley Village residents so much as their neighbors outside the project – No Problem.

Topography – In neither the site description nor the inputs to the computer model used to characterize exposure did the authors take into account the fact that the project site sits in a bowl formed by the railroad berms to the south and east, the SR 51 highway to the west, and the former city dump to the north. This feature of the site's topography is of little consequence under wind conditions that can move air out of this relatively shallow basin; however, the report reveals that about 18% of the time, winds are calm, and for an additional, undisclosed amount of the time, winds are very low. (The wind-speed information provided was in the form of a “wind rose” depicting air speeds logged at Sacramento International Airport, and the lowest, non-zero wind speed range was 0.5 to 2.1 meters per second.) It seems to me that treating the project site as though it were flat, unobstructed plane like the region around the airport, without wind-calming features, such as trees and structures, erroneously underestimates the accumulation of TACs, be they DPM or any other toxicants.

Six Lanes: In the description of the inputs to the model, the authors broke the contribution of DPM from heavy-heavy-duty trucks and medium-heavy-duty trucks along SR 51 into six linear inputs, corresponding to the six individual lanes that make up the highway. Intuitively, this seems to be an unnecessary step, since the total of the six is the same as the aggregate number the modelers started with. However, it is possible that by dividing the DPM input from trucks into smaller subunits, the model could discard values that fall below some *de minimis* value, thereby allowing the model to ignore quantities that would otherwise be included if the aggregate input were used. The authors need to justify breaking the DPM inputs into individual lanes, since doing so appears to add no improvement to the modeling process.

Six Lanes: Another problem with breaking the highway-related DPM input for the model into six individual lanes is that heavy-duty trucks are required to use only the two right-most lanes on a multi-lane highway; thus, if dividing the DPM inputs into individual lanes somehow has a significant impact on the model's results, four lanes should have been used, rather than six. Again, the consultant for the Health Risk Assessment, Dudek, needs to justify not using a single line source for SR 51 past the project site, rather than subdividing the truck emissions into six individual sources.

Twenty Freight Trains per Day: Although, according to the Health Risk Assessment, a Federal Railroad Administration database lists the grade crossing at 28th Street as having 20 freight trains a day (by inference, 20 freight trains a day go past the project site) Other, higher freight train counts are cited in the Health Risk Assessment, but

Marshall School/New Era Park N.A. – Comments on Chapter 4.1 of the Draft Environmental Impact Report (Air Quality and Climate Change) for the proposed McKinley Village development:

Reviewer: Tom Leffingwell

ignored in the modeling process. For one, the contractor for the noise impacts assessment, in a brief, non-scientific sampling over six days in August 2013, counted up to 22 freight trains a day. Another number cited in the Health Risk Assessment is "an estimated daily average of 41 total trains pass[ing] through the 28th Street crossing." That number, by the way, was also taken from the Federal Railroad Administration Web site, and presumably includes the 8 daily passenger trains (leaving 37 freight trains a day). I have heard numbers as high as 44 freight trains a day, but that, to the best of my knowledge, is only anecdotal information. Nonetheless, it appears the modelers/risk assessors chose to use the smallest number of freight trains they could cite, namely 20. This impact minimization is unacceptable for the purposes of a Health Risk Assessment that is purportedly "conservative" in its approach and assumptions.

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18 SUPERIOR COURT OF THE STATE OF CALIFORNIA  
19 COUNTY OF SACRAMENTO  
20

21 STONE LAKES NATIONAL WILDLIFE  
REFUGE ASSOCIATION, et al.,

22 Petitioners and Plaintiffs,

23 v.

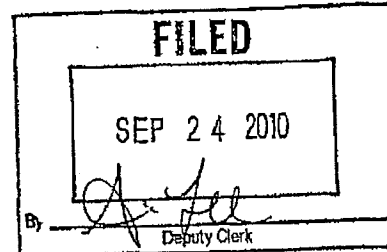
24 CITY OF SACRAMENTO, a municipal  
25 corporation, et al.,

26 Respondents and Defendants.

27 M & H REALTY PARTNERS, L.P.,

28 Real Parties in Interest

A/73507320 2



No. 34-2009-80000166

STIPULATION FOR ORDER  
DISMISSING ACTION BASED ON  
SETTLEMENT AGREEMENT AND  
~~PROPOSED~~ ORDER THEREON

Assigned to Hon. Michael P. Kenny  
Department 31

Action filed: February 13, 2009  
Judgment entered April 22, 2010

STIPULATION FOR ORDER DISMISSING ACTION



1           A.     Background

2           1.     This proceeding, filed on February 13, 2009, involves a challenge to the  
3 Environmental Impact Report certified by the City of Sacramento for the Delta Shores project  
4 In its ruling on the merits, the court found the EIR deficient in one respect: the standard used to  
5 assess the significance of potential impacts to project residents due to toxic air contaminants  
6 generated by traffic on I-5. The court rejected all of the other claims raised by Petitioners  
7 regarding the adequacy of the EIR.

8           2.     On April 22, 2010, the court entered judgment ordering that a peremptory  
9 writ of mandate issue requiring Respondents to take certain actions to correct the deficiency  
10 relating to the analysis of Toxic Air Contaminants identified in the judgment. Petitioners  
11 subsequently filed an appeal from the judgment and Respondents and Real Party in Interest then  
12 filed a cross-appeal from the judgment.

13           3.     The parties have since entered into a Settlement Agreement which fully  
14 resolves all claims in this proceeding. The Settlement both cures the deficiencies in the EIR's  
15 Toxic Air Contaminants analysis that were identified in the Court's Judgment and includes  
16 additional measures to protect the environment above and beyond what was required in the  
17 Judgment. Pursuant to the terms of the Settlement Agreement, all parties have dismissed their  
18 appeals. The Settlement Agreement further provides for the parties to submit a joint application  
19 to the court for issuance of an appropriate order disposing of the case in accordance with the  
20 terms of the Settlement Agreement.

21           B.     Summary Of Substantive Provisions Of Settlement Agreement

22           4     Toxic air contaminants. To correct the deficiency in the EIR's treatment  
23 of the impacts of toxic air contaminants the judgment requires that the city conduct further  
24 analysis to determine whether freeway mobile source TACs would substantially increase the  
25 health risks to future project residents and whether any identified significant impacts can be  
26 avoided or minimized through adoption of feasible mitigation measures. Under the terms of the  
27 settlement agreement, the following steps will be taken with respect to TAC impacts:  
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- a. A new health risk assessment ("HRA") will be prepared for the Project by a qualified expert to evaluate the cancer risk from future Project residents' exposure to the mobile-source TACs specified in the court's ruling.
  
- b. With respect to any residential units where the HRA determines that the potential additional cancer risk above background levels to residents from TACs is more than ten-in-one million over a 70-year exposure period, the following mitigation measures will be implemented:
  - (1) Trees will be planted along Interstate 5 on those parcels zones for residential development adjacent to Interstate 5. The trees will be of a type that is considered to be effective in reducing particulates;
  - (2) All multi-family residential buildings located within 500 feet of Interstate 5 will have building air intakes located as far away from Interstate 5 as feasible;
  - (3) All residential development on parcels located within 500 feet of Interstate 5 shall include air filtering systems designed and to filter particulates; and
  - (4) Any windows with a view facing Interstate 5 in residences located within 500 feet of Interstate 5 shall be non-operable.
  
- c. The requirements relating to TACs described above will be enforceable as conditions of project approval through amendment of the Development Agreement for the project to incorporate them as landowner obligations under the special conditions in Exhibit C of the Development Agreement.

5 The Settlement Agreement also contains provisions that address several other issues raised by Petitioners in the litigation. These include an agreement about interpretation of the term "fallow fields" in the definition of suitable foraging habitat in the mitigation measure relating to Swainson's hawk foraging habitat; a commitment to construction of the wetland biofiltration drainage system if it is approved by the Army Corps of Engineers; and funding for restoration of the Victory Trees Memorial in Freeport. The agreement also resolves Petitioners' pending motion for an award of attorneys' fees.


1 C. Order Sought By The Parties

2 6. The Settlement Agreement provides that within ten days after the appeal  
3 and cross-appeals are dismissed, counsel will submit a joint application to this court for an order  
4 dismissing the case with prejudice based upon the Settlement Agreement. Accordingly, the  
5 parties to this proceeding stipulate and jointly request that the court enter the order of dismissal  
6 accompanying this stipulation.

7 DATED: September 22, 2010

CITY OF SACRAMENTO

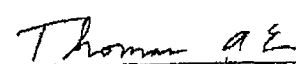
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By:   
SHERYL N. PATTERSON  
Attorneys for Respondents/Defendants  
CITY OF SACRAMENTO and  
CITY COUNCIL OF SACRAMENTO

12 DATED: September 22, 2010

ADAMS BROADWELL JOSEPH & CARDOZO


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By:   
THOMAS A. ENSLOW  
Attorneys for Petitioners/Plaintiffs  
STONE LAKES NATIONAL WILDLIFE  
REFUGE ASSOCIATION, et al.

18 DATED: September 22, 2010

BINGHAM McCUTCHEN LLP

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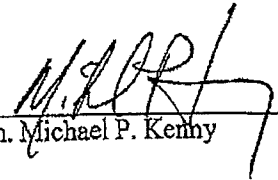
By:   
STEPHEN L. KOSTKA  
Attorneys for Real Party in Interest  
M&H REALTY PARTNERS, VI, L.P.

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ORDER

The parties having jointly stipulated to an order dismissing this case with prejudice based upon the terms of a settlement agreement entered into by the parties, and good cause appearing therefore, it is hereby ordered that this case be dismissed with prejudice.

Dated: 9/24/10

  
\_\_\_\_\_  
Hon. Michael P. Kenny

*Stone Lakes National Wildlife Assn., et al. v. City of Sacramento, et al.*  
Sacramento County Superior Court No.: 34-2009-80000166

**PROOF OF SERVICE**

I am employed in the County of Sacramento, California. I am over the age of 18 and not a party to this action. My business address is 520 Capitol Mall, Suite 350, Sacramento, CA 95814.

On September 23, 2010 I served the foregoing document described as

**STIPULATION FOR ORDER DISMISSING ACTION BASED ON  
SETTLEMENT AGREEMENT AND [PROPOSED] ORDER THEREON**

on the parties listed below by placing a true and correct copy thereof in a sealed envelope and by causing the envelope to be sent by U.S. Mail addressed to:

EILEEN M. TEICHERT  
SHERYL N. PATTERSON  
Office of the City Attorney  
City of Sacramento  
P.O. Box 1948  
Sacramento, CA 95812

*Attorney for Respondents  
and Defendants*

STEPHEN L. KOSTKA  
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3 Embarcadero Center  
San Francisco, CA 94111-4507

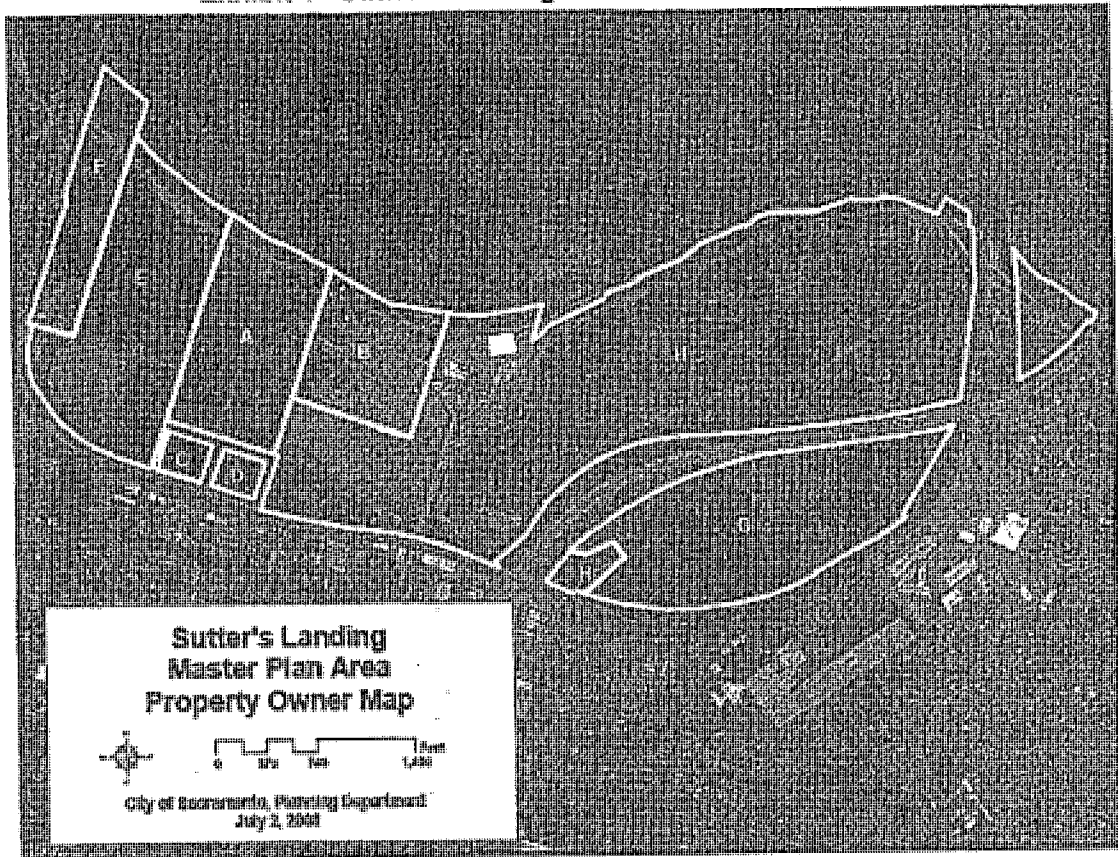
*Attorney for Real Party in Interest*

I declare under penalty of perjury of the laws of the State of California that the foregoing is true and correct and that this was executed on September 23, 2010 in Sacramento, California.



Carol N. Horton

Exhibit 4 - Sutter's Landing Area Land Ownership Map



Map	Property Name	Acreage
A	Dellar Family Trust	25 acres
B	Harbor Sand & Gravel (Bell)	16 acres
C	Cannon Family Trust	2 acres
D	Scollan Family Trust	2 acres
E	Blue Diamond / Almond Growers Exchange	38 acres
F	SMUD	11 acres
G	McKinley Village	47 acres
H	Sutter Regional Park	172 acres



11.2

APPROVED  
BY THE CITY COUNCIL

AUG 24 1999

OFFICE OF THE  
CITY CLERK

DEPARTMENT OF  
PUBLIC WORKS

CITY OF SACRAMENTO  
CALIFORNIA

927 10th STREET  
SUITE 300  
SACRAMENTO, CA  
95814-2702

TECHNICAL SERVICES  
DIVISION

PH 916-264-8300  
FAX 916-264-7903

August 9, 1999

City Council  
Sacramento, California

Honorable Members in Session:

**SUBJECT: MIDTOWN NEIGHBORHOOD PRESERVATION TRANSPORTATION PLAN  
(PN:TG86) – FOLLOW-UP ISSUES FROM MARCH 16, 1999 COUNCIL  
HEARING**

**LOCATION/COUNCIL DISTRICT:**

Area bounded by 16<sup>th</sup> Street, Alhambra Boulevard, C and L Streets. Council District 3.

**RECOMMENDATION:**

This report recommends that the City Council adopt the attached resolution approving:

- Additional traffic calming measures for I Street, 28<sup>th</sup> Street, and C Street;
- Maintaining, at its present location the half-street closure on 16<sup>th</sup>/H Streets; and
- Removal of truck route designation on C Street and re-affirm that D Street is not a truck route

**CONTACT PERSON:**

Ken Grehm, Supervising Engineer, 264-7531

**FOR COUNCIL MEETING OF:**

August 24, 1999

**SUMMARY:**

On March 16<sup>th</sup>, 1999, City Council adopted the Neighborhood Preservation Transportation Plan (NPTP) EIR Addendum and approved the final NPTP configuration. The City Council also directed staff to work with the community to recommend additional traffic calming measures on 28<sup>th</sup>, C, D and I Streets and evaluate options to move the H Street eastbound half-street

City Council  
Midtown Neighborhood Preservation Transportation Plan (PN: TG86) -  
Follow-up Issues from March 16, 1999 Council Hearing  
August 9, 1999

closure from 16<sup>th</sup> to 21 Street. After several community workshops, staff is recommending installation of additional calming measures, removal of the truck route designation on C Street, and maintaining the half-street closure on 16<sup>th</sup>/H Street at its present location.

**COMMITTEE/COMMISSION:**

None.

**BACKGROUND:**

The Midtown Neighborhood Preservation Transportation Plan (NPTP) was approved by the City Council in June 1996 with the goals of reducing traffic speeds, enhancing safety, maintaining good access, and dispersing traffic over the downtown street grid. The project included construction of five new traffic signals, the conversion of G and H Streets from one-way to two-way traffic, and installation of over 100 new traffic-calming features, including, half-street closures, traffic circles, intersection portals, pedestrian islands, and high visibility crosswalks.

On March 16<sup>th</sup>, 1999, City Council adopted the NPTP EIR Addendum and approved the final NPTP configuration. The City Council also directed staff to work with the community to recommend additional traffic calming measures on 28<sup>th</sup>, C, D and I Streets and evaluate options to move the H Street eastbound half-street closure from 16<sup>th</sup> to 21<sup>st</sup> Street.

Since Council approval, staff has conducted workshops with interested stakeholders discussing possible refinements. A comprehensive list of recommendations (including a map) developed by workshop participants and staff, is attached as Exhibit A. A summary of these recommendations are as follows:

**C and D Streets**

- Approve abandonment of C Street (17<sup>th</sup> to 19<sup>th</sup> Streets) at Blue Diamond Growers, including installation of half-street closures on D Street (Council approved 7/20/99);
- Remove truck route designation from C Street;
- Install additional pedestrian islands and hi-visibility crosswalks at various intersections;
- Convert the intersection of 28<sup>th</sup> and C Streets to a 4-way stop; and
- Reaffirm that D Street is not a truck route.

**28<sup>th</sup> Street**

- Install intersection portal at the southwest corner of 28<sup>th</sup>/C Streets;
- Add signage encouraging southbound truck traffic to use 29<sup>th</sup> Street;
- Install additional pedestrian islands and hi-visibility crosswalks at various intersections; and
- Reconstruct handicap ramp at 28<sup>th</sup>/E.
- Nominate 28<sup>th</sup> Street for inclusion in a fire department compatible speed hump pilot program if test program is successful.



City Council  
Midtown Neighborhood Preservation Transportation Plan (PN:TG86) -  
Follow-up Issues from March 16, 1999 Council Hearing  
August 9, 1999

### **I Street**

- Remove portal on south side of street (keep portal on north side of street) at 29<sup>th</sup>/I Streets;
- Install angled parking on the south side of I Street from 27<sup>th</sup> to 28<sup>th</sup> Streets;
- Place additional speed limit signs and markings at several locations;
- Install additional pedestrian islands and high visibility crosswalks;
- Place additional directional downtown guide signs on 29<sup>th</sup> Street discouraging use of I Street;
- Trim shrubbery at 27<sup>th</sup> and I Streets;
- Install bike lanes on I Street between 21<sup>st</sup> and 27<sup>th</sup> Streets;
- Request temporary focused traffic enforcement on I Street; and
- Nominate I Street for inclusion in a fire department compatible speed hump pilot program if test program is successful.

### **Relocation of half-street closure at 16<sup>th</sup>/H Streets**

When the NPTP was approved on March 16, 1999, staff recommended that the half-street closures remain in their existing locations. Upon Council direction, staff explored the possibility of relocating the half-street closure at 16<sup>th</sup>/H Streets to 21<sup>st</sup>/H Streets. The intent was to provide easier access to businesses located on H Street, particularly, those located between 19<sup>th</sup> and 21<sup>st</sup> Streets. Staff analyzed five alternatives, including no change. Exhibit B provides graphical representations and expected traffic flow changes due to each alternative. Alternatives were developed at a community meeting and the attached information was shared at a subsequent community meeting. This proposed change will lead to increased traffic volumes on portions of G, H and 21<sup>st</sup> Streets. Staff recommends that the half-street closure at 16<sup>th</sup>/H not be relocated, but that the City install directional signage for the businesses in the H Street corridor. This recommendation is based on:

- Project is meeting its original objectives.
- Lack of consensus within community (residents and businesses).

### **FINANCIAL CONSIDERATIONS:**

The current budget for the NPTP project is \$2,414,536. The estimated cost to construct the recommended improvements is approximately \$81,000. As of July 29, 1999, \$65,149 remains unencumbered. Additional funds, if required, will be identified at the time a contract is awarded.

### **ENVIRONMENTAL CONSIDERATIONS:**

The Neighborhoods, Planning and Development Services Department, Environmental City Section, has reviewed this report and has determined that the proposed additions to the NPTP are exempt from the California Environmental Quality Act (CEQA) under Section 15301. The project is expected to result in slower traffic speeds and will not significantly affect traffic volumes.

City Council  
Midtown Neighborhood Preservation Transportation Plan (PN: TG86) -  
Follow-up Issues from March 16, 1999 Council Hearing  
August 9, 1999

**POLICY CONSIDERATIONS:**

The recommended actions are consistent with City Council priorities of Neighborhood Revitalization and Public Safety.

**ESBD CONSIDERATIONS:**

Any construction contracts related to this action will include measures to encourage ESBD participation.

Respectfully submitted,

*Ren Dreyer*  
for Duane J. Wray, Manager  
Technical Services Division

RECOMMENDATION APPROVED:

*Robert P. Thomas*  
ROBERT P. THOMAS  
City Manager

P/CIP/TG86/Council/follow-up

APPROVED:

*Michael Kashiwagi*  
for Michael Kashiwagi  
Director of Public Works

**Exhibit A**  
**Staff Recommended Refinements to Midtown Traffic Calming Project**

**C & D Streets**

- Closures: On July 20, City Council approved the abandonment of C Street (17<sup>th</sup> to 19<sup>th</sup> Street) and half-street closures on D Street (eastbound at 20<sup>th</sup> and westbound at 28<sup>th</sup>). These improvements will be installed by Blue Diamond Growers.
- Truck Route: Remove truck route designation on C Street and re-affirm that D Street is not a truck route.
- 22<sup>nd</sup>/C: Install a pedestrian island on C Street (west side of 22<sup>nd</sup>).
- 23<sup>rd</sup>/C: Remove pedestrian islands and replace with high-visibility crosswalks.
- 24<sup>th</sup>/C and 25<sup>th</sup>/C: Install pedestrian islands on both sides of C Street.
- 26<sup>th</sup>/C: Install high visibility crosswalk on C Street (east side of 26<sup>th</sup>).
- 28<sup>th</sup>/C: Add stop signs to create 4-way stop.

**28<sup>th</sup> Street**

- 28<sup>th</sup>/C: Add an intersection portal at the southwest corner (southbound on 28<sup>th</sup> Street) to discourage eastbound C Street trucks from turning south on to 28<sup>th</sup>. Also add signage at 28<sup>th</sup>/C to encourage eastbound C Street and southbound 28<sup>th</sup> Street truck traffic to use 29<sup>th</sup> Street.
- 28<sup>th</sup>/D: Add pedestrian islands on 28<sup>th</sup> Street and high-visibility crosswalk on D Street (west side of 28<sup>th</sup>).
- 28<sup>th</sup>/E: Reconstruct curb ramps at northeast corner (to discourage trucks from cutting corner). Add a pedestrian island on E Street on east side of 28<sup>th</sup>. Add high-visibility crosswalks on 28<sup>th</sup>.
- 28<sup>th</sup>/F: Add high-visibility crosswalks on 28<sup>th</sup>.
- 28<sup>th</sup>/H: Add pedestrian island on 28<sup>th</sup> (north side of H Street).
- 28<sup>th</sup>/I: Add pedestrian island on 28<sup>th</sup> (north side of I Street) and high-visibility crosswalks on 28<sup>th</sup> Street.
- Speed Humps: Provide residents with information from test program of "fire equipment-compatible" speed humps. Depending upon success of test and resident reaction to results, staff will nominate 28<sup>th</sup> Street as one of the locations for pilot program.

**I Street**

- 29<sup>th</sup>/I Street Portals: Remove the portal on the south side of the intersection to allow eastbound vehicles to move closer to the curb to allow fire equipment to more easily pass when turning from southbound 29<sup>th</sup> to westbound I Street.
- Speed Humps: Provide residents with information from test program of "fire equipment-compatible" speed humps. Depending upon success of test and resident reaction to results, staff will nominate I Street as one of the locations for pilot program.
- Angled Parking: Install angled parking on south side of I Street between 27<sup>th</sup> & 28<sup>th</sup> Streets to provide additional parking for Hart Senior Center.
- Pedestrian Islands with Zebra Crosswalks: Install for westbound and eastbound approaches on I Street at 23<sup>rd</sup> and 25<sup>th</sup>.
- Speed Limit Signs: Install speed limit signs and pavement markings at the ends of I Street residential corridor (21<sup>st</sup> and 29<sup>th</sup>).
- Downtown Directional Signs: Install additional "downtown" directional signage on 29<sup>th</sup> to discourage use of I Street.
- Bike Lanes: Install bike lanes on I Street between 21<sup>st</sup> and 27<sup>th</sup> (reducing the effective width of travel lanes).
- Visibility at 27<sup>th</sup>/H: Check the visibility and trim bushes as necessary at 27<sup>th</sup>/H.
- Focussed Police Enforcement: Request increased temporary traffic enforcement and provide information to residents on number of citations.

EXHIBIT A

GREY = EXISTING OR APPROVED  
 BLACK = PROPOSED

LEGEND

- Intersection Point (Corner Bulb)
- Zebra Crosswalk
- Pedestrian Island
- Textured Crosswalk
- Shop Sign
- Traffic Chado
- Traffic Signal
- Half-Street Closure
- Two-Way Street
- Speed Limit Sign
- Bike Lane
- Closure Associated With Blue Diamond

ADDITIONAL NOTES:

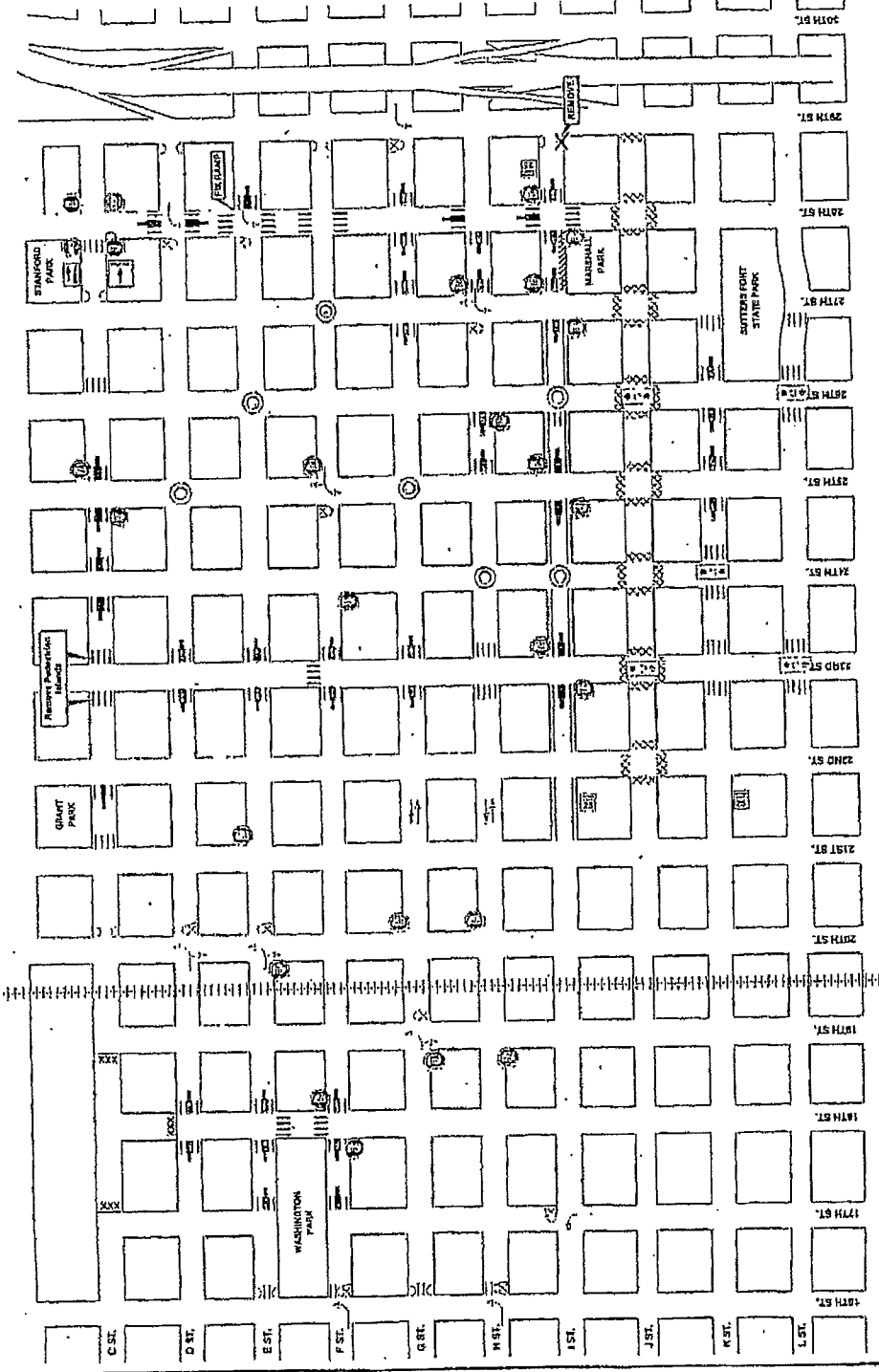
- Install additional "downtown" directional signage on 28th St. to encourage use of I St.
- Check the visibility and turn business as necessary at 27th St.
- Consider C St. as a truck route and re-affirm that D St. is not a truck route.
- Depending on results of test, nominate 28th and I St. for "two department compatible" spaced hump pilot program.

ITEMS FOR FUTURE CONSIDERATION:

- Red-light running camera at 28th and H
- De-designate 28th St. as a truck route
- Install portal at E and 28th
- Coordinate SB left-turn from 28th and E with the EB left-turn from E to 30th
- Look at ways to ease the merge for southbound 28th St. traffic with E St. off-ramp traffic.



NOT TO SCALE



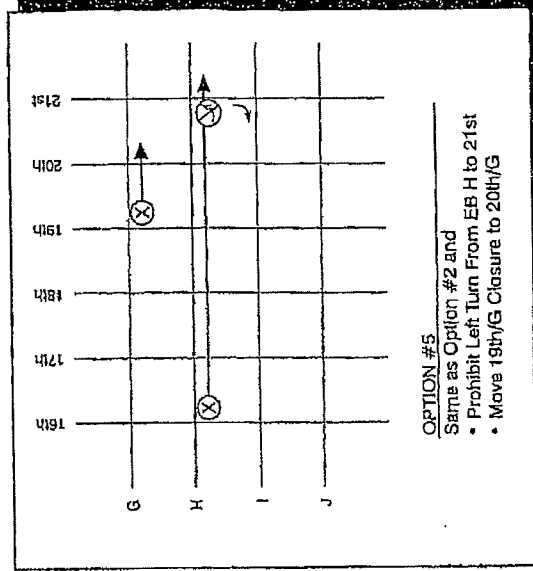
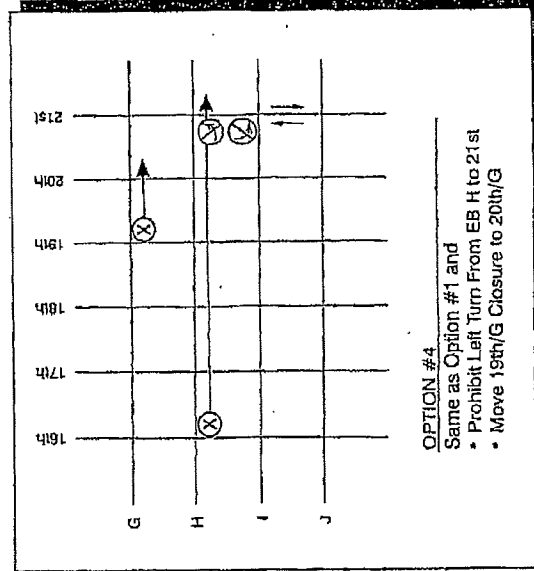
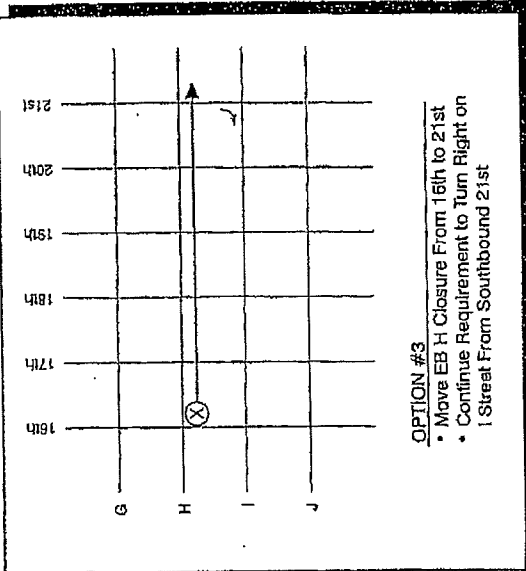
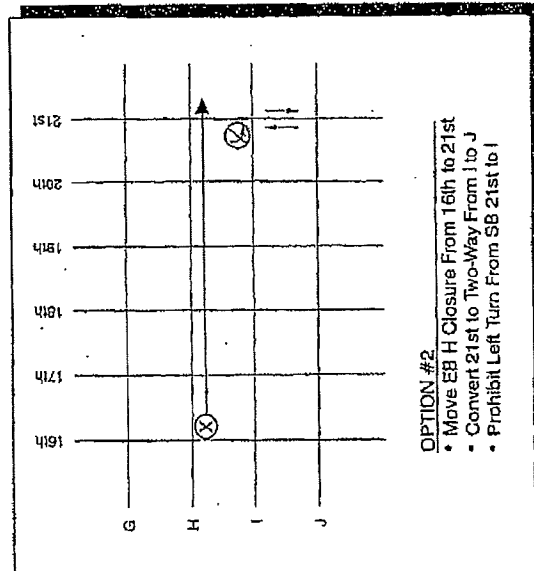
PROPOSED CHANGES

MIDTOWN NPTP

EXHIBIT B

OPTIONS FOR H ST. CLOSURE

Option #1 (Not Pictured) is No Change



Other Options Mentioned by Community:  
 Move H Street Closure to 20th, 22nd, or 25th as Alternative to 21st

EXHIBIT B

Probable Outcomes of Potential H Street Closure Relocation

Options*	provides 2-way access on H Street (16 <sup>th</sup> to 21 <sup>st</sup> )	traffic volume on H Street (16 <sup>th</sup> to 21 <sup>st</sup> )	traffic volume on 21 <sup>st</sup> Street (north of H)	increases traffic volume on G Street (east of 20 <sup>th</sup> )	increases traffic volume on 21 <sup>st</sup> Street (H to I)	increases traffic volume on 21 <sup>st</sup> Street (I to J)	increases traffic volume on J Street (east of 21 <sup>st</sup> )	Estimated Construction Cost	
Option #1	No	1,900**	3,500***	3,400***	4,200	7,700	15,300***	\$0	
Option #2	Yes	5,400-6,900	6,000-7,000	5,400-5,900	5,200-6,200	8,700-9,700	16,300-17,300	\$38,000	
Option #3	Yes	4,900-6,400	6,500-7,500	5,900-6,400	4,200-4,700	7,700	15,300-15,800	\$10,000	
Option #4	Yes	3,400-4,900	3,500	3,400	5,200-6,700	8,700-9,700	16,300-17,300	\$42,000	
Option #5	Yes	2,900-3,900	3,500	3,400	4,200-4,700	7,700	15,800-16,300	\$12,000	
Move Closure to 20 <sup>th</sup>	No	Similar to #2-5 above except that volume increase would shift from 21 <sup>st</sup> to 20 <sup>th</sup> . G Street closure would not need to be relocated in Options #4 & 5							
Move Closure to 22 <sup>nd</sup> or 25 <sup>th</sup>	Yes	Similar to #2-5 above except that volume increase would shift from 21 <sup>st</sup> to 22 <sup>nd</sup> or 25 <sup>th</sup> . Residential portions of H Street (east of 21 <sup>st</sup> to closure) would realize volume increase.							

\* see attached diagram for description of Options  
 \*\* average of two counts (east of 16<sup>th</sup> and east of 19<sup>th</sup>)  
 \*\*\* estimate based upon counts on adjacent segments

**APPROVED**  
AUG 24 1999  
OFFICE OF THE  
CITY CLERK

RESOLUTION NO. **99-484**

ADOPTED BY THE SACRAMENTO CITY COUNCIL

ON DATE OF \_\_\_\_\_

**RESOLUTION REMOVING TRUCK ROUTE DESIGNATION  
ON C STREET BETWEEN 16<sup>TH</sup> STREET AND 29<sup>TH</sup> STREET AND APPROVING  
ADDITIONAL TRAFFIC CALMING DEVICES.**

**BE IT RESOLVED BY THE COUNCIL OF THE CITY OF SACRAMENTO:**

1. That additional traffic calming mitigation measures for I Street, 28<sup>th</sup> Street, and C Street are approved
2. That removing the truck route designation on C Street and re-affirming that D Street is not a truck route is approved.

\_\_\_\_\_  
MAYOR

ATTEST:

\_\_\_\_\_  
CITY CLERK

\_\_\_\_\_  
FOR CITY CLERK USE ONLY

RESOLUTION NO.: \_\_\_\_\_

DATE ADOPTED: \_\_\_\_\_

APPROVED

1988 & 1989

1988 & 1989



~~Amended~~

**RESOLUTION NO. 99-484**

ADOPTED BY THE SACRAMENTO CITY COUNCIL

ON DATE OF \_\_\_\_\_

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\_\_\_\_\_  
MAYOR

ATTEST:

\_\_\_\_\_  
CITY CLERK

\_\_\_\_\_  
FOR CITY CLERK USE ONLY

RESOLUTION NO.: \_\_\_\_\_

DATE ADOPTED: \_\_\_\_\_

Judith Waegell  
7700 Eagles Nest Road  
Sacramento, CA 95830  
(916) 423-1771 phone & fax  
Judy@waegell.org

11.2

August 24, 1999

Council Members  
Sacramento City Council  
915 I Street, Rm 205  
Sacramento, CA 95814

Dear Council Members,

Re: Agenda item 11.2 8/24/99 Midtown Neighborhood Preservation  
Transportation Plan (PN:TG86), located in area bounded by 16th Street,  
Alhambra Boulevard, C and L Streets -  
Follow up issues from March 16, 1999, Council Hearing [Item 11.1] (D-  
3)

The half-street closures are ill-conceived and should be removed.

I represent the small commercial building on the south-west corner of  
20th and H Streets. This building was built by my father and his  
business partner in the late 1950's to accommodate part of their  
business. It is now owned by their widows.

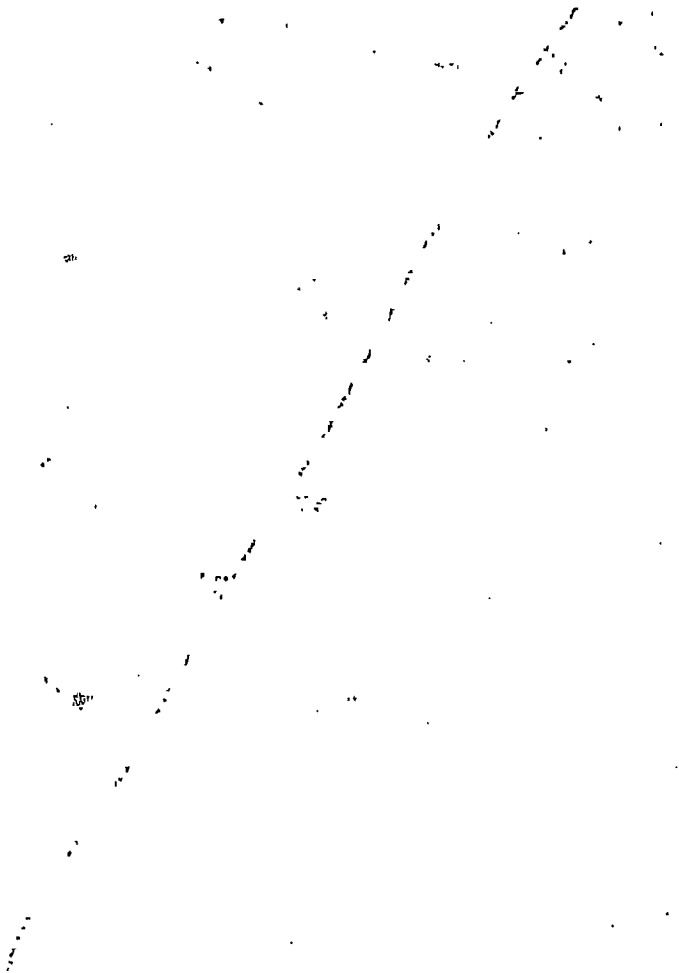
This building currently is leased to CFG Photo and until recently Ray's  
Tacos, a victim of this project. These are retail uses. The effect of this  
project has been to impact these retail uses severely and negatively.

I support the preservation and enhancement of these neighborhoods  
with their wonderful old houses. However the commercial aspect is also  
a part of these neighborhoods with a long history.

There has never been any notice sent to us as property owners on this  
project. Thus we were effectively denied any input into the planning  
process where we would have had the best chance of influencing the  
direction of this project.

On the City's website I found "...the copy from the City of Sacramento's  
Neighborhood Preservation Transportation Plan (NPTP) brochure." In it  
I found the following:

Handwritten signature or initials in the bottom left corner.



"The Neighborhood Preservation Transportation Plan will accomplish three important goals:

- to slow the speed of traffic on midtown residential streets.
- to maintain good access to midtown merchants and downtown commerce.
- to improve pedestrian, bicycle and vehicular safety."

I support these goals. No where do I see a goal of 60% reduction in traffic volume which has been the effect of the project at 20th & H.

Again I quote from this website brochure.

"How will this affect traffic?

"Residents of midtown should experience, on average, about a 10 percent reduction in traffic volume on their streets. ..."

"Business owners in midtown will see about a 10 percent increase in traffic volume on major streets such as J, K and L,..."

I assume that the above goals and projected effect on traffic could have been and probably were achieved by implementing the project without the half-street closures. Where are the traffic counts and other data prior to the half-street closures but after implementation of the other elements? Working with those elements would undoubtedly bring you closer to your stated goals than has been achieved with the addition of these half street closures. At best they are annoying and awkward, not an enhancement to the neighborhoods.

I understand that there are businesses that do not want the half-street closure at 16th and H Streets changed. How much of this is because they do not want these half-street closures and their negative effects closer to their businesses? How would they respond if the choice was to eliminate them all together?

Get rid of these half-street closures.

Sincerely,

Judith Waegell





P.O. Box 160222 Sacramento, CA 95816

January 8, 2014

Ms. Dana Allen, Association Planner  
City of Sacramento, Community Development Department  
300 Richards Blvd., 3<sup>rd</sup> Floor  
Sacramento, CA 05811

Dear Ms. Allen,

The following comments are submitted on behalf of the McKinley East Sacramento Neighborhood Association (MENA) on the Draft Environmental Impact Report (DEIR) for the McKinley Village Project, dated November 12, 2013. Control Number P08-086.

MENA appreciates the opportunity to comment on the DEIR for the above referenced project.

Our comments will focus primarily on Transportation and Drainage.

Regarding Transportation, MENA believes that additional data and analysis is required beyond the boundaries of the current study area. Specifically, we believe that the following road sections within East Sacramento and proximate to the proposed project are needed:

McKinley Blvd. from Elvas Ave to Alhambra Blvd.  
Elvas Ave. from 40<sup>th</sup> St. to Hwy 50  
36<sup>th</sup> Street from McKinley Blvd. to H St.  
Santa Ynez from 39<sup>th</sup> St to H St.  
37<sup>th</sup> St. from McKinley Blvd. to H St.  
38<sup>th</sup> St. from McKinley Blvd. to H St.  
39<sup>th</sup> St. from McKinley Blvd. to J Street  
H St. from Carlson to Alhambra Blvd.

We also believe the following intersections within East Sacramento and potentially impacted by the project must be analyzed:

56<sup>th</sup> and H (including traffic light timing) \*  
Alhambra and McKinley  
McKinley Blvd and D St.  
39<sup>th</sup> and H  
C St. and Alhambra Blvd.  
Elvas Ave. and 56<sup>th</sup> St. \*

\*These intersections will also be potentially impacted by proposed local development projects.

Additionally, MENA believes that the DEIR should explore the potential of increasing the height and width of the proposed bicycle underpass at the south westerly edge of the project (connecting to Alhambra Blvd.) to allow future one-way or two-way ingress and egress by resident vehicles, emergency vehicles, pedestrians and bicyclists. MENA would support a changeable direction or single direction vehicular one lane roadway to help reduce local traffic impacts on the surrounding neighborhoods if it is feasible.

#### 4.9-4 Roadway Capacity:

MENA believes the analysis fails to include Elvas Ave. to 56<sup>th</sup> St., plus the 56<sup>th</sup> and Elvas Ave loop to Highway 50.

#### 4.5-3 Mitigation Measure: On-site Detention Basin

MENA believes the DEIR should explore the potential impacts of the City of Sacramento co-utilizing the proposed detention ponds, water quality ponds and pumping stations which could reduce or eliminate flooding in East Sacramento, north of the elevated U.P. rail lines.

#### 4.9-6 Mitigation Measures: Fair Share Obligation

MENA believes that the Fair Share obligations analysis should be extended to include the 56<sup>th</sup> Street and H intersection.

Thank you for the opportunity to present these comments on the McKinley Village DEIR.

Very truly yours,



Deane Dana, President  
McKinley East Sacramento Neighborhood Association



Brian Holloway, Land Use Chair,  
McKinley East Sacramento Neighborhood Association



# 350

s a c r a m e n t o

PO Box 161677  
Sacramento, CA 95816

January 10, 2014

Ms. Dana Allen, Associate Planner  
Community Development Department  
City of Sacramento  
300 Richards Blvd., 3<sup>rd</sup> Floor  
Sacramento, CA 95811

Re: Comments on the DEIR for McKinley Village

Dear Ms. Allen:

Thank you for this opportunity to make comments on the DEIR for the proposed McKinley Village project.

350 Sacramento is a local grassroots organization working to address the threats of climate change to our community. To do this will require new ways of thinking and creativity. We are proud that the Sacramento area has taken a lead in this effort with the City's Climate Action Plan and SACOG's Blueprint for Sustainable Communities.

We have two major concerns about the proposed McKinley Village development, neither of them adequately covered in the DEIR.

The first is the fact that this development is counter to the tenets of Smart Growth. Except for possibly being considered infill (but more likely greenfields since this area is currently habitat for raptors and other wildlife), the development is not multiuse, is not transit friendly, is not high density, and will encourage more car trips and traffic in the midtown area. The bicycle/ped tunnel is not expected to be built until the last phase of the project, if at all. One of only two access points, through Sutter's Landing Park, includes a railroad crossing that will result in more idling which increases carbon emissions. With 1800 more car trips per day proposed along 28<sup>th</sup> Street there are safety issues that will make it less likely that people will walk or bike. All of these increases in carbon need to be mitigated.

Several creative ideas to reduce the carbon footprint of the development have been suggested by the public. These include putting solar on all roofs in the development, building the bike/ped tunnel in the first phase, running a shuttle to cut down on individual car trips, and making the A Street access bike/ped only. We ask that there be a greater commitment to lowering carbon emissions for this development—the goal should be to

aim for zero emissions. This would not only be good for the climate, but would also add to the value of the project, making it a more desirable place to live.

The other major concern that has not been addressed in the DEIR is the increasing danger to residents from railcars carrying oil from the Bakken Shale and Alberta tar sands to refineries in the Bay Area (*comprehensive reference list available on request*). Bakken oil is highly flammable; tar sands are highly toxic. A railcar carrying Bakken oil blew up in Lac Megantic, Quebec, in July 2013, with a massive fireball that killed 47 people. Just last month in Casselton, North Dakota, a small town had to be evacuated due to an oil train derailment. These fires cannot be put out; they must burn out. The big fire at Richmond Chevron in August 2012 was probably linked to the high sulfuric content of the tar sands they were processing.

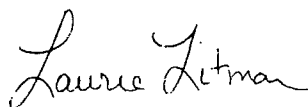
We know that there is a large increase in oil traveling by rail over Class A tracks (like those that border the proposed McKinley Village development). The oil refineries in the Bay Area are all trying to expand their rail deliveries and the CA Energy Commission expects the number of rail deliveries to skyrocket in 2014 and beyond.

We also know that the outdated DOT-111 tanker cars carrying the toxic crude are inadequate for the load they're hauling. They are prone to puncture and rupture on impact and the valves are weak and break, releasing volatile gases. The weight is beyond what the tankers and rails were built for, the loads are top-heavy, and the growing numbers of "unit" trains (oil trains with 50–100 cars) make accidents inevitable. Tar sands bitumen is so dense it sinks in water and can't be retrieved—the spill into the Kalamazoo River is still not cleaned up 3 years later. On the other hand, Bakken crude is so flammable that it explodes, causing enormous toxic fires and smoke plumes.

The proposed McKinley Village site is immediately adjacent to a Class A track that will most likely be carrying these highly dangerous crude oils in ever-increasing numbers of rail cars. The trains go by the site on a curve and one of the two access points (28<sup>th</sup> St) requires cars to go over the rail tracks, increasing the possibility of an accident.

The DEIR downplays any concern about train accidents, without taking this critical information into account. A complete analysis of this issue is necessary to address the increase in flammable toxic rail traffic that is expected to occur and put safety measures and emergency plans in place to protect the residents of the area.

Thank you,



Laurie Litman  
for 350 Sacramento

# Friends of Sutter's Landing Park

<http://www.sutterslandingpark.org/>

January 10, 2014

Ms. Dana Allen, Associate Planner  
Community Development Department  
City of Sacramento  
300 Richards Blvd., 3<sup>rd</sup> Floor  
Sacramento, CA 95811

Re: Comments regarding the (Revised) - Draft Environmental Impact Report (DEIR) for the McKinley Village Project (P08-086)

Dear Ms. Allen:

Thank you for the opportunity to submit comments on the DEIR for the proposed McKinley Village project. This project would be located adjacent to Sutter's Landing Park, which is used by many for recreation and for enjoying its natural resource values.

Friends of Sutter's Landing Park (FOSL) is a community-based organization of Sacramento area residents with a deep commitment to establishing a nature-oriented regional park at Sutter's Landing. FOSL envisions that Sutter's Landing Park will function as Sacramento's gateway to the American River Parkway. Sutter's Landing Park can provide park amenities to the public while protecting, maintaining, and enhancing the natural resource values there.

To those ends, FOSL worked with the City to be awarded a \$1.5 million dollar grant for Sutter's Landing Park (Park) improvements and, more recently, to appropriately site a solar project proposed by Conergy. Earlier, FOSL worked with the City to avoid placing a solar project on the landfill mound, an area documented to be important foraging habitat, as well as a corridor, for a wide diversity of wildlife including sensitive species.

Sacramento residents made it clear they want the City to prioritize natural parklands when the City surveyed voters. According to the City's own report:

"The top priority (for voters) was large habitat areas for walking and hiking, where interpretive and educational programs can take place... Second priority is to develop parklands and areas along the American Riverbank."  
(2006 public opinion survey commissioned by the City of Sacramento for the City's Parks and Recreation Master Plan)

The City currently has very few parklands that meet these needs along the south side of the American River Parkway. Sutter's Landing provides the only feasible

area along the south side of the river where the City can add parklands that meet the top two priorities expressed by the City's residents.

There is a Master Plan in place for the Park but it is not being followed; instead, there has been a piecemeal approach with disparate projects placed on Park land without a larger vision. FOSL has offered one vision, and wants to work with the City and community members and organizations to revisit the Master Plan and define a larger vision before proceeding with projects that will impact the future potential of this Park.

Friends of Sutter's Landing Park comments on the DEIR for McKinley Village follow:

FOSL requests that the DEIR be recirculated to address issues that were raised during the NOP process in the letter submitted July 8th 2013 and elsewhere in the public record. The DEIR failed to address the already significant impacts on the River and Parkway's natural and recreational resources and public safety from increased use at Sutter's Landing Park in light of the proposed project. The DEIR also failed to analyze the potentially significant cumulative impacts from adjacent/nearby current and future developments already approved and contemplated by the City of Sacramento on the American River and Parkway in regards to, but not limited to public safety and the ability of the Parkway's natural and recreational resources to withstand a potentially significant increase in use.

The DEIR for the proposed project has not done an adequate job of identifying existing natural values at Sutter's Landing Park or taking actions to avoid unnecessary impacts to those values. It has not done an adequate job of fully mitigating impacts to the park and its natural resources when avoiding impacts is deemed not possible. As proposed, the McKinley Village project would have significant impacts to Sutter's Landing Park and the parkway. These include both temporary and long-term impacts to sensitive wildlife species, their nesting and foraging habitat, and open space that provides a corridor for their movement throughout the parkway. The enjoyment and recreational values the public receives from these natural resources would also be impacted, which is not adequately mitigated by the proposed project.

Throughout the DEIR, Sutter's Landing Park is not accurately described or represented. "...the former City of Sacramento 28th Street Landfill to the north across Capital City Freeway (the former landfill site has been designated as a regional park-Sutter's Landing Regional Park..." It is more accurate to identify Sutter's Landing as a park and former landfill, not the reverse which unnecessarily downplays its designation and the long-term vision for it.

The use of city-owned land on the proposed project parcel for stormwater infrastructure is inappropriate unless those features would be needed for Sutter's Landing Park and/or the existing landfill. Any conversion of this land for project use must be adequately mitigated for in the immediate area. The area in question

now serves as wildlife habitat, open space, and a corridor connecting the parcel the Sutter's Landing Park.

The rezoning discussion in the DEIR does not include any mention of options to zone the project site for parkland, which could be added to Sutter's Landing Park to provide additional open space, wildlife habitat, and areas for active recreation.

The "off-site" improvements described for A Street are not adequate and don't include the loss of this area as a wildlife corridor connecting the property with the rest of Sutter's Landing Park. It would also eliminate plans to restore this area for increased wildlife nesting and foraging habitat consistent with the long-term vision for this area of the Park. Mitigation is necessary to fully mitigate for this impact and should be required to return these natural resource values to Sutter's Landing Park.

The DEIR does not do an adequate job of describing the long-term vision for Sutter's Landing Park, including conserving and restoring sensitive wildlife species habitat. To say the area is "slated for development as a park" is not accurate and is actually misleading. It downplays the need to fully mitigate for impacts to the natural values at Sutter's Landing Park, and limits the options for the long-term vision for the park if the proposed project is approved as currently described. As proposed, the project is not consistent with the SACOG Blueprint and would actually be a development into "greenfields," as Sutter's Landing Park and the American River Parkway provide a richer biodiversity by conserving natural resources in sensitive areas.

Project alternative analysis should include an option to rezone the property as an addition to Sutter's Landing Park directly adjacent to it, and enhance the habitat conservation and restoration values. Such an alternative would clearly be preferred from an environmental standpoint and would not require any mitigation. These lands could serve as mitigation for other proposed projects in the area and for previous impacts as well. There are opportunities to secure public funds as grants for such a purpose. The proposed project, as described, most certainly is not environmentally superior when alternative zoning is considered as should be done.

Local wildlife observations made at Sutter's Landing Park and on the project area and vicinity have not been included or adequately addressed. This information is available but was not requested or referred to in the DEIR.

The DEIR includes an analysis of suitable foraging habitat within 10 miles of the project site. This analysis does not take into consideration that there are documented multiple Swainson's hawk and White-tailed kite nests in the immediate area. The American River Parkway, including Sutter's Landing Park and the project area, provide valuable foraging and nesting opportunities. The area functions as a viable wildlife corridor important to mobile species such as

these raptors as well as others. The analysis provided in the DEIR is flawed. The fact that there is limited suitable foraging habitat within 5 miles of the project site actually increases the value of what is present including at the project site. Further reduction of such habitat, as would result from the proposed project, threatens the continued nesting of raptor species in this area and along the parkway.

The long-term vision for Sutter's Landing Park includes preserving and restoring habitat and natural resource values. Restoration and enhancement could be done in such a way to increase the values provided for wildlife at the project site and surrounding area. Maintaining the existing values is an important and necessary step to implement this vision. The DEIR does not discuss this vision or any options to help implement it.

The DEIR estimates the project would impact approximately 50 acres of foraging habitat on and off site for sensitive raptor species. This is a significant impact to Sutter's Landing Park and the American River Parkway. Potential significant impacts are also identified for other sensitive species. Proposed off-site mitigation would not be adequate or fully mitigate for impacts to these species. These impacts would also occur to Sutter's Landing Park and within the parkway. Mitigation for such impacts must occur so that these areas are not impacted and include restoration and enhancement at each location. There are options to improve habitat conditions by relocation of existing structures on Sutter's Landing Park, as well as securing and restoring habitat on lands immediately adjacent to the park. This also fits with the long-term vision for Sutter's Landing Park and the parkway. Any off-site mitigation should be secondary and used to buffer the impacts in the park and parkway from increased recreation and disturbance from those residing at the project site. Long-term monitoring and oversight will be necessary to ensure the success of mitigation at the park.

The DEIR indicates that the heavily disturbed nature of the project site makes it unlikely that the project would contribute to a cumulative impact to common wildlife species. This does not take into consideration that McKinley Village residents would likely increase recreation and disturbance activities at Sutter's Landing Park and the parkway. The EIR needs to address increased human activities in adjacent high-value wildlife areas, including direct and indirect impacts and reduction of available habitat which would affect nesting success, among other things. This includes pets kept by McKinley Village residents or released as feral animals—cat, dogs, etc. that kill wildlife—which will add to the threats facing wildlife along the Parkway. Human disturbances are increasing already due to the popularity of accessing the parkway via Sutter's Landing Park. The proposed project would be expected to increase such activities.

The DEIR indicates that a roadway extending east from the intersection of 28th and A Street is "contemplated in the 2030 General Plan as part of the Sutter's Landing Parkway Interchange, and in the Sutter's Landing Park Master Plan.

Public meetings on this subject have included statements from elected officials that this interchange is no longer likely and will be dropped from the General Plan. Likewise, the master plan for Sutter's Landing Park is out of date and needs revision before further development proceeds. Previous identification of a road across the landfill is not consistent with the current vision for enhancing natural resource values there. An update to the master plan is needed before it is assumed that a road across the landfill is appropriate for the park.

City-owned land at the southwestern edge of the proposed project has been identified as the site for possible storm detention. This land was identified previously as associated with Sutter's Landing Park, which it is directly connected with. These lands also have the potential to be enhanced as part of the restoration of the park in the future. Any loss of these lands is a lost opportunity and impacts the future of the park. In earlier public meetings it was stated by City staff that these City lands would serve to handle drainage for the proposed project. Questions were raised by the public about how decisions were made regarding these city lands. Now the DEIR states that this would be a separate project and that the proposed development would handle all drainage on site. The potential use of City lands for storm detention still appears to be linked to the proposed project and these lands would be impacted from constructing such infrastructure there. These impacts must be considered in the DEIR. To do otherwise is segmenting the project and not considering all potential environmental impacts associated with it.

The DEIR doesn't discuss impacts to Sutter's Landing Park public services and recreation although comments and questions were submitted on this subject during the NOP. On page 4.7-11 the statement regarding Sutter's Landing Park ("Sutter's Landing Regional Park, consisting of 163 acres, is located directly northwest of the site across the Capital City Freeway") is inaccurate or poorly written. It is unclear. In addition, the DEIR fails to address the comments presented in FOSL's letter in response to the NOP (July 8, 2013) requesting analysis of the cumulative impacts of the proposed project on Sutter's Landing Park.

The DEIR discussion on potential impacts to parks emphasizes new activities resulting from development. What about direct and indirect impacts to existing park values? Passive recreation activities, including wildlife viewing, photography, enjoyment of nature and related activities, would be impacted by the project as proposed. There is no discussion of the loss of existing habitat/open space that provides value to Sutter's Landing Park. A Street construction and drainage features on the City-owned portion of the project parcel would result in losses to the park and parkway and must be mitigated on-site and in advance.

The proposed project currently includes dedication of 2.4 acres of parkland which

is less than currently required by the City. The use of fee payment to the City, unless increased and used specifically for Sutter's Landing Park, is not adequate. This is not fully mitigating for impacts to existing park values let alone for the new demands that would be put on them due to the project.

The DEIR does not discuss the need to update the existing master plan for Sutter's Landing Park and factor the new impacts from the proposed project into it.

The DEIR states that the public would not have access to the portion of Sutter's Landing Park immediately north of the freeway (the mound) until after 2027. The public can and often does view these areas of the park now including passive wildlife viewing, open space and other recreation values. Many of us view these areas daily and enjoy seeing wildlife and the open space around the park.

The project as proposed is expected to generate 1880 cars exiting A Street through Sutter's Landing Park daily. This would pose safety issues for park users; the park is not now ADA compliant. The steep grade leaving the park on 28<sup>th</sup> Street compounds this problem. The DEIR does not adequately address these safety issues.

Sutter's Landing Park supports an incredible diversity of wildlife species. Documentation of this diversity can be found on the Friends of the River Banks website. This information includes records made at and adjacent to the proposed project site. A recent example of the interest in viewing wildlife at this location can be seen on this record of the FORB annual New Years Day 2014 event which included observations of a peregrine falcon and coyote as well as other species. Both peregrines and coyotes are known to make use of the area around the park including the proposed project area. The Sutter's Landing Park area is included in the annual American River Natural History Association wildlife count and often records species little seen in other parts of the parkway. The diversity of habitats present on the Park, adjacent parkway, and other open space such as the McKinley Village project site all contribute to the rich wildlife observed. Any impacts to the existing habitat and open space must be fully mitigated within this same area to preserve wildlife diversity and sensitive species.

Sutter's Landing Park is a work in progress. There are many challenges to achieving the world-class "Gateway to the American River Parkway" that has been envisioned. The area is precious. Putting an a new road and considerable new traffic right in the middle of the Park is counter to the goals of a public park. It will preclude any habitat restoration of that area of the landfill and cause secondary impacts to the Park over all. The DEIR does not include adequate or on-site mitigation for these impacts to the Park.

FOSL also recognizes the importance of sustainable residential infill projects. We believe that appropriately located and designed residential infill projects can be compatible additions to the area if they are non-disruptive of the Park's wildlife,



habitat, and aesthetic values, and the revenues generated go to Park enhancements and operations. However, the current McKinley Village development proposal does not meet these requirements and, while residential developments can be sited in many places, we cannot easily create new river habitat or large acreage of parklands.

We respectfully request the City to include the following conditions of approving this proposed project:

- Avoid all unnecessary impacts to Sutter's Landing Park, which includes the proposed A Street access across the landfill inside the Park. Require the proposed project include traffic/circulation solutions that do not impact 28th Street, the only roadway into the Park.
- Any direct or indirect impacts to Sutter's Landing Park must be fully mitigated to restore and enhance natural values. This can include relocation of the existing infrastructure (skateboard park and corp yard) or by adding additional adjacent lands with adequate funding to restore and enhance, and monitor the natural resource values.
- The loss of foraging habitat for sensitive species on the project site also impacts those wildlife species and natural resource values at Sutter's Landing Park. Mitigation for these impacts must benefit the Park, not off-site locations.
- The loss of open space/habitat on the project site would impact the mobility of wildlife species at the Park and American River Parkway. Mitigation for impacting this corridor must directly benefit the park and parkway, not off-site locations.
- An additional alternative must be evaluated in the EIR that would not develop the site and would rezone these lands as open space, recreation, and parklands. This analysis would include potential City financial support as well as governmental and other grant sources for this purpose.
- Recirculate the DEIR to address issues that were raised during the NOP process in the letter submitted July 8th 2013 and elsewhere in the public record.
  
- Thank you for the opportunity to comment on the DEIR for the proposed McKinley Village Project.

Sincerely,  
*Lori Ward*

Lori Ward, for Friends of Sutter's Landing Park

January 10, 2014

To: Dana Allen, Associate Planner

City of Sacramento, Community Development Dept.

300 Richards Blvd., 3rd Floor

Sacramento, CA 95811

Ms. Allen,

Boulevard Park Neighborhood strongly opposes the McKinley Village project for the following reasons:

1. Two access points in and out of the project does not qualify as "adequate" per the DEIR.
2. Emergency services will have to use the 40<sup>th</sup> street access when the train is stopped at 28<sup>th</sup> street. This increases the time for the emergency responders to attend a crisis. Is adding an extra ten minutes to emergency services response time acceptable to the City of Sacramento? Has the switching yard at 28<sup>th</sup> street, with the trains stopping for different lengths of time been taken into account and counted in the time for emergency response teams?

Respectfully,

Suzie Johnston

Boulevard Park Neighborhood Association

## Dana Allen

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**From:** Paul Noble <noblep5@comcast.net>  
**Sent:** Friday, January 10, 2014 2:26 PM  
**To:** Dana Allen  
**Cc:** Deane Dana; Brian Holloway; Megan Norris (RCI)  
**Subject:** McKinley Village Draft Environmental Impact Report

Hello Dana,

The Board of Directors of the East Sacramento Improvement Association would like to submit the following comments concerning the DEIR for the McKinley Village project:

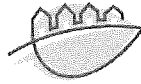
(1) The DEIR is not sufficiently clear about the effect on traffic of the project plus the possible closure of the E Street onramp. A clear analysis of how local traffic in the neighborhood would be affected should be included in the DEIR (i. e., on Alhambra Boulevard, the J Street on ramp, and other neighborhood streets). The possible impact on local air quality should also be evaluated.

(2) We request City staff to evaluate the feasibility of the following additional traffic mitigation measures:

- a. Install stop signs on all four corners of 35<sup>th</sup> Street and McKinley Boulevard.
- b. Install protected left turn lights on Alhambra at H Street for both northbound and southbound traffic.
- c. Re-stripe 30<sup>th</sup> Street between E Street and C Street to allow for two-way traffic.
- d. Re-time traffic lights at 29<sup>th</sup> & E and 30<sup>th</sup> & E to maintain safe queue lengths on the E Street off-ramp from Business 80.

Thank you for giving us the opportunity to comment.

Paul Noble, President  
East Sacramento Improvement Association



Neighbors United  
for Smart Growth

DEIR Comments

January 10, 2014

Dana Allen, Associate Planner  
City of Sacramento, Community Development Department  
Environmental Planning Services  
300 Richards Boulevard, Third Floor  
Sacramento, CA 95811  
dallen@cityofsacramento.org

Dear Ms. Allen,

Neighbors United for Smart Growth (NUSG) was established in spring 2013 to serve as a unifying voice for residents of East Sacramento and Midtown concerned about the negative consequences on our quality of life, traffic levels and schools brought on by the McKinley Village project. Our ultimate goal is to ensure that new development does not destroy or detract from the character, safety and livability of East Sacramento and Midtown.

We appreciate the project proponent's attempt to create in-fill development in close proximity to employment centers in Sacramento but we have remaining concerns related to the lack of connectivity to mass transit opportunities and the ability of the project design to reduce car travel produced by the number of homes proposed, or, at the least, better connect ingress/egress of the project site with major arterials already existing within the surrounding road system. This additional vehicle traffic will have a negative effect on the existing east Sacramento and mid-town Sacramento neighborhoods.

Although the DEIR has done an adequate environmental analysis of the project for several resource topics, we believe the DEIR is inadequate in several aspects and will need to be corrected and analysis added. It is likely that, with these fixes, the DEIR will be required to be recirculated for additional public and agency review prior to being certified and used by the City for project approval. Attached please find NUSG's comments on the draft environmental impact report (DEIR).

NUSG Steering Committee Members

Rob Finley  
Matt Johnson  
Angie Pappas  
Steve Swindel  
Ken Bogdan  
Tina Cerruti  
Chuck Czajkowski



## Neighbors United for Smart Growth

DEIR Comments  
Chapter 1 Introduction and Scope

January 10, 2014

Project Background: The DEIR implies that the only history regarding the background for the project site starts in 2008. However, land uses on the site have a long history and should be discussed. In addition, there have been several proposals prior to 2008 to develop the site some of which included CEQA analysis – these too should be described to give the reader and decision maker an understanding about the prior land uses and also the prior difficulties in developing at this particular location.

Use of Previously Prepared Environmental Documentation: The DEIR lists several documents that are relied on. However it appears that the subsequent sections of the DEIR do not sufficiently summarize the incorporated parts of these referenced documents nor does it adequately describe the relationship between the referenced document and the EIR (as required by CEQA Guidelines Section 15150). In addition there is no reference to previous CEQA documents or other environmental analysis that the City within its administrative record for previous proposals for development at the project site.

Scope of the Draft EIR

Support for resource issues not analyzed: The DEIR implicitly eliminates the need to do any analysis on technical areas related to agricultural resources, geology and soils, and mineral resources. Apparently, this conclusion is “based on review of the project and comments received”. There does not appear to be any further discussion as to why the proposed project does not have the potential to cause a significant impact on these resources. There is no reference to an initial study to document the rationale for eliminating these technical areas from further study. For example, with an understanding of the prior land uses (which should have been identified in the project background), this area had been used for agricultural production and it certainly can be argued that there could be an impact to agricultural resources as a result of the project.

Compliance with SB 375: although there is no mention of this in the introduction and presentation of the scope of the DEIR, in the land use chapter, the DEIR states that because the proposed project is “consistent with the general land use designation, density, building intensity, and applicable policies specified for the project area in the SCS” it is “not required to discuss growth inducing impacts, or any project specific or cumulative impacts from cars and light-duty truck trips on global warming, or on the regional transportation network” pursuant to the provisions of Public Resources Code Section 21159.28. However, as described in our comments below, the DEIR does not identify how or if the project has incorporated “the mitigation measures required by an applicable prior environmental document” as required by this section of CEQA. Therefore, the scope of the analysis and related significance determinations (and, if applicable, discussion of alternatives and mitigation) that were not included in the DEIR (the DEIR states that they were included only for “the purposes of full disclosure”) should be included.



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Additional Resource Impact needed to be included in the DEIR: An additional issue that does not appear to be analyzed in the DEIR relates to CEQA's mandatory findings of significance: *whether the project has the potential to substantially degrade the quality of the environment*. The neighboring east Sacramento and midtown Sacramento neighborhoods are unique in their appearance and character and there is no mention in the DEIR about the potential impacts the proposed project would have on the quality of the environment within these unique neighborhoods. Both from an aesthetic aspect as well as the neighborhood "livability" related to the character of the two neighborhoods, with special emphasis on the "walkability" and "bike-ability", there is the potential that the proposed project could cause impacts from construction and the additional vehicle traffic.

CEQA defines the environment as both natural and man-made conditions. Notwithstanding the impact to the cultural resource/historic nature, aesthetics, and public safety aspects of the two neighborhoods (mentioned separately below), there is an impact perspective that is currently absent from the DEIR: the scope of the DEIR should include assessment of impacts of the quality of the environment related to the man-made environment. This concept is much more than an economic or social effect, it relates to how a resident in the existing neighborhoods would be adversely affected by the project because of the negative affect to the current quality of the environment (this may include enjoyment of a certain ability to walk, run, or bike the city streets; to allow children to play in the front yard or travel without safety fears to school or parks; and to enjoy a level of contentment within the surrounding residential streets).

The environmental setting related to the neighborhood quality of the environment will be negatively affected by the proposed project and is not analyzed within the scope of the DEIR. Although the anticipated level of traffic produced by the proposed project would likely be greater than what is currently projected on the neighborhood streets, even at current projections the traffic anticipated would create the potential for a significant impact to the quality of the environment for the East Sacramento and mid-town Sacramento neighborhoods. Ironically, the traffic analysis of the DEIR focuses only on how the driver's experience (both within cars produced by the project as well as existing drivers) would be negatively affected by the cars produced by the project. The DEIR never looks outside the exterior of the cars, at the surrounding environment, to address how the cars produced by the project would adversely affect the neighborhood resident's environment as the cars pass through these narrow local streets. The DEIR's analysis merely limits the traffic impact to the designated "level of service" for city streets and misses an important impact parameter related to the environment outside the vehicle. At a minimum, the substantial effect to the quality of the environment in the neighborhood should be used as an additional threshold of significance to assess the traffic impacts because "level of service" does not adequately represent a threshold of significance for these types of neighborhoods within East Sacramento and mid-town Sacramento.



## Neighbors United for Smart Growth

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Alternatives: the DEIR currently does not sufficiently evaluate a reasonable range of alternatives that would meet most of the project objectives and would avoid or substantially reduce the potentially significant impacts of the proposed project. There are significant impacts of the proposed project to the East Sacramento and mid-town Sacramento neighborhoods and alternative project proposals with alternative access at Alhambra and/or Lannatt have not been sufficiently evaluated. There is evidence on the record that these options are potentially feasible and if implemented would avoid or minimize the potential for significant effects. In addition, it should be noted that Alternative 4 appears to be self-serving as a “straw man alternative” that makes the proposed project look better and does nothing to truly achieve CEQA’s directive to look at alternatives that address the potentially significant impacts of the proposed project.

### Chapter 2 Project Description

Figure 2-2 Project Location appears to carve out the A Street over pass as being outside the project location but is within the project description. This figure (and many others throughout the DEIR) gives the misleading impression that the A Street overpass and access road improvements to 28<sup>th</sup> Street are outside the scope of the proposed project.

Project background: This section does not mention previous land uses, including agriculture.

Project Objectives: The project proponent lists “provide adequate access points for vehicular traffic” as an objective for the proposed project; as discussed in the traffic comments, the DEIR does currently contain sufficient information to support that the proposed project meets this objective.

Site Access Overview: The DEIR states that the 40<sup>th</sup> Street access is the preferred design compared to the Alhambra and Lanatt access points. However sufficient investigation into these access points has not been adequately supported by the current record. Other than the description included pps 2-46 through 2-49 there appears to be no engineering or other technical analysis to support the conclusion that this option is infeasible (there are no references to personal communications with UP or other experts, no technical reports cited, nor any information in the appendices). If the evaluation of these different access points was submitted by the project proponent, the City must perform an independent analysis to determine feasibility of these alternatives. In a cursory investigation performed by NUSG into options for developing a roadway underpass at Alhambra (see Tina Cerruti comment letter; additional information was submitted by NUSG to City planning staff on December 23, 2013), there are alternative methods of construction that could greatly minimize costs. Also, the discussion regarding the Lanatt Street access point does not present any information as to why the current location for the underpass could not be used but, instead of coming straight out to Elvas/C Street, cut north east at a diagonal to connect to Lanatt Street (feeding into a roadway improvement at the intersection with Elvas consistent with previous project designs). In relation to alternatives to avoid or minimize potentially



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significant impacts of the proposed project, these two access points may in fact be more appropriate and should be analyzed in greater detail by the lead agency.

Chapter 3 Land Use Planning and Population

The DEIR states on page 3-1 that “Changes in population (and housing) in and of themselves are generally characterized as social and economic effects and are not considered physical effects on the environment.” The DEIR provides no citation to CEQA or the CEQA Guidelines to support this assertion. Changes in population and housing have impacts on the physical environment (through possible construction of more housing, demolition of housing, more people taxing existing or requiring new public services, etc.) and it is not clear as to the reasoning of the DEIR as to why it states that this is not the case (other than it lumping these impacts with economic or social effects).

The DEIR states that “The project is anticipated to generate a total population of 656 new residents at build-out, based on the City’s rate of 2.0 persons per household”. The DEIR gives no citation to where the City defines this rate and how it supports this conclusion. On its face, it appears to be inaccurate: this type of residential development with this amount of single family housing, in this type of neighborhood, would seem to generate more families beyond 2 per household. This is especially true when other sections of the document assume a certain number of children attending various neighborhood schools.

Metropolitan Transportation Plan/Sustainable Communities Strategy: the DEIR identifies that the project “is consistent with the assumptions for this site contained in the MTP/SCS” and therefore is eligible for the streamlining provisions within CEQA Section 21159.28. However, this section of CEQA requires that in order for the project to be eligible for the streamlining provisions it must incorporate “the mitigation measures required by an applicable prior environmental document.” The DEIR does not appear to identify these particular mitigation measures that have been incorporated into the proposed project. Therefore, as currently presented, the project would be ineligible for these streamlining provisions. SACOG’s letter merely concurs with the City’s conclusion that the proposed project is consistent with the MTP/SCS. This does not equate to a statement that the project is eligible for the streamlining provisions under Section 21159.28.

The DEIR states that because it meets the requirements of Section 21159.28, it is “not required to discuss growth inducing impacts, or any project specific or cumulative impacts from cars and light-duty truck trips on global warming, or on the regional transportation network”. The DEIR adds that, per Section 21159.28, “an EIR prepared for a residential or mixed-use project that qualifies for the streamlining provisions is not required to reference, describe, or discuss a reduced residential density alternative to address the effects of car and light-duty truck trips generated by the project as part of its alternatives analysis”. However, because the record does not appear to support the conclusion that it is





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eligible for these streamlining provisions, the DEIR should be revised to either identify how the project has in fact complied with all the requirements of 21159.28 through identification of the incorporated “mitigation measures required by an applicable prior environmental document” or include analysis, related significance determinations, and appropriate discussion of alternatives and mitigation for those resource impacts that were not originally included in the DEIR (the DEIR states that they were included only for “the purposes of full disclosure”).

Consistency with plans and policies: the DEIR does not appear to address the compatibility issues that go beyond merely locating a residential development at the project site. The City’s associated land use planning documents identify general health and welfare goals that appear to be inconsistent with having a new development direct a substantial portion of additional traffic within existing narrow city streets such as those within the East Sacramento and mid-town Sacramento neighborhoods.

Chapter 4

Scope: as discussed previously, several resource topics and impact parameters are missing from the DEIR. In addition, we have the following comments on several resource topics:

Air Quality – the DEIR repeats the unsupported conclusions related to the proposed project’s eligibility for Section 21159.28’s streamlining provisions and should be revised consistent with previous comments.

The DEIR analysis under Toxic Air Contaminants makes the statement that “impacts of the environment on a project or plan (as opposed to impacts of a project or plan on the environment) are beyond the scope of required CEQA review” and states the analysis is provided “for informational purposes”. The DEIR provides no citation to CEQA or to the CEQA Guidelines to support this conclusion (because none exist). The DEIR does provide citation to a court case that is suspect by many CEQA practitioners and is certainly not controlling for the City of Sacramento (opinion from a different appellate district). The DEIR should be revised to include an actual analysis of the significance of this impact and appropriate discussion of alternatives and mitigation. The DEIR should at a minimum discuss this issue in public safety: because the “baseline” for this issue is existing people (future residents of the proposed project) who have not been exposed to toxic air contaminants (and other hazardous conditions), and the impact of the project is the exposure of these people to a hazardous environment. Although several other sections of the DEIR repeat the “Ballona Wetlands case approach” of ignoring these important health and safety impacts that the project may cause, other sections follow the CEQA Guidelines Initial Study approach of including an impact analysis of a project that proposes to bring people to hazardous or unsafe conditions (also, apparently the California legislature agrees that impacts of exposing the people to a hazardous environment can be within the scope



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of CEQA because it directed the Resources Agency in 2012 (see SB 1241) to amend Appendix G of the CEQA Guidelines to include questions related to fire hazard impacts for projects located SRAs and very high fire hazard severity zones).

**Air Quality Cumulative Impacts** – it appears that the DEIR concludes that the same air impact that is less than significant for project impacts could never be a considerable contribution to a cumulative air impact, no matter how bad the existing environment is or many other reasonably foreseeable projects will also contribute to the problem. This approach does not appear to be consistent with CEQA, the CEQA Guidelines, or CEQA caselaw. A cumulative impact can result from individually minor but collectively significant projects taking place over time. This area is in non-attainment (i.e., existing significant impact) and the DEIR references SMAQD “guidance” as the support for concluding that as long as the impact is under the threshold for project specific air impacts it is not cumulatively considerable for cumulative impact analysis purposes, even if there are numerous projects occurring that all contribute to exasperate an existing significant impact. Just because SMAQD apparently has guidance on this does not mean the City should abandon its independent authority to assess whether this is appropriate for CEQA analysis. On its face, it appears the project in fact would create a considerable contribution to cumulatively significant air quality impacts and, because this is a non-attainment area, this impact would appear to be significant and unavoidable. The DEIR should be revised to include this analysis and appropriate discussion of alternatives and mitigation.

**Cultural Resources** – The DEIR description of the environmental setting for the proposed project does not include the surrounding East Sacramento and mid-town Sacramento neighborhoods which contain both significant historic structures and districts. The DEIR should be revised to include presentation of these resources within the environmental setting and the DEIR should include an analysis of how the project could adversely affect these resources through the addition of a substantial number of cars through the neighborhood.

**Hazards and Public Safety** – as discussed previously, the DEIR should be revised to include an analysis of the significance of project impacts (and as appropriate discussion of alternatives and mitigation) to public health and safety from locating residents within a hazardous area that will expose them to not only toxic air contaminants but other potentially hazardous conditions identified in this chapter.

The DEIR should include an analysis of the project’s potential impact (through increased vehicle traffic) to the public safety of residents in the existing East Sacramento and mid-town Sacramento neighborhoods (especially related to “safe routes to school” - for children walking or biking to school at Theodore Judah elementary school and to Sutter Middle School).



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Public Services and Recreation – NUSG looks forward to working with the project proponent and City to ensure impacts to Theodore Judah Elementary School and Sutter Middle School are completely addressed.

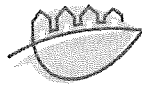
The DEIR does not appear to analyze the impacts of the proposed traffic mitigation measure (light at 33<sup>rd</sup> and McKinley) on current use of McKinley Park. McKinley Park is one of the best used parks for runners and joggers in the greater Sacramento area. The traffic light would in effect cut off an important running path, as the connection of the main park with the “panhandle” creates a complete one-mile loop; with installation of a traffic light at this intersection, runners would be interrupted, through waiting a traffic signal, and would be negatively affected by the mitigation measure.

Transportation and Circulation – Because the DEIR does not currently support the project’s eligibility for Section 21159.28 streamlining, the impact analysis must include analysis of projects impacts on passenger vehicle greenhouse gas emissions and to the regional transportation network. The impacts to the “regional transportation network” - existing and proposed transportation system improvements – includes assessment of the significance of impacts to the state transportation system (i.e., Capital City Freeway) and appropriate alternatives and mitigation.

Traffic Study Area: There does not appear to be an explanation of why the H Street intersections east of Alhambra (beyond H/Alhambra and H/28th) were not studied as a part of the traffic impact analysis. Also, there does not appear to be an explanation of why the connecting intersections from McKinley Boulevard heading south to meet H Street were not studied as part of the traffic analysis. It appears that these additional road segments will receive an increase in traffic due to the current configuration of the primary entrance of the project at 40th Street and the location of Sutter Middle School as well as primary commercial/retail businesses.

The traffic modeling does not appear to account for the current enrollment at Theodore Judah as the school saw an influx of over 40 students in September of 2013 to accommodate the Washington School closure.

The traffic study assumptions related to traffic flow output from the proposed project (e.g., over half the trips projected to occur through the A Street entrance) is not supported by substantial evidence. Not only does it appear that the DEIR failed to identify the preparers of this analysis, it is not reasonable to assume such a high number with the current street closures for train crossings as well as UP’s projected increase in train trips. In addition, access to schools, grocery and other retail, post office, and most public services is more logical through the 40<sup>th</sup> Street entrance.



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The traffic study and impact analysis does not appear to take into account the unique nature of the East Sacramento and mid-town Sacramento neighborhoods, including the fact that the narrow width of many roads in conjunction with street parking (and minimal use of garage parking) and leaf piles in fall months create one-lane roads for many of the neighborhood streets, especially for C Street west of 33<sup>rd</sup> Street.

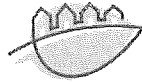
As stated previously, the impacts of installation of a traffic light at McKinley Boulevard/33<sup>rd</sup> Street intersection have not been disclosed. This includes impacts to the current recreation users at McKinley Park (especially runners/joggers) as well as impacts to 33<sup>rd</sup> Street residences.

Urban Design and Visual Resources – The DEIR summarizes several important General Plan Policies that control design for new projects. These same important design goals should also be used to determine whether the proposed project could cause impacts to urban design and visual resources within the existing environment. The DEIR does not have any information as to whether the proposed project's increase of vehicular traffic within the East Sacramento and mid-town Sacramento neighborhoods would adversely affect the scenic quality of the existing environment within these neighborhoods.

The City directs that projects promote community design that produces a “distinctive, high-quality built environment whose forms and character reflect Sacramento’s unique historic, environmental, and architectural context, and create memorable places that enrich community life” and that projects “maintain and protect significant visual resources and aesthetics that define Sacramento.” Implicit in this is that new development should not negatively affect the *existing* distinctive, high-quality environment – however, the DEIR fails to analyze how additional car traffic from the proposed project within the existing neighborhoods could adversely affect the form and character of these neighborhoods. The DEIR should analyze whether the proposed project would impact the “unique historic, environmental, and architectural context” of the existing neighborhoods. The DEIR needs to analyze whether the project would adversely affect the existing neighborhoods making them less “desirable and memorable” (including impacts to “walkable blocks, distinctive parks and open spaces, and tree-lined streets”).

### Chapter 5 Alternatives

As stated previously, the DEIR does not sufficiently evaluate a reasonable range of alternatives that would meet most of the project objectives and would avoid or substantially reduce the potentially significant impacts of the proposed project. There are significant impacts of the proposed project to the East Sacramento and mid-town Sacramento neighborhoods and alternative project proposals with alternative access at Alhambra and/or Lannatt have not been sufficiently evaluated. There is evidence



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on the record that these options are potentially feasible (e.g., using a different method of construction instead of a “shoofly”) and if implemented would avoid or minimize the potential for significant effects. In addition, it should be noted that Alternative 4 appears to be self-serving as a “straw man alternative” that makes the proposed project look better and does nothing to achieve CEQA’s directive to look at alternatives that address the potentially significant impacts of the proposed project.

### Chapter 6 CEQA Considerations

Because the DEIR does not currently support the project’s eligibility for Section 21159.28 streamlining, the impact analysis must include analysis of the project impacts related to growth inducement. This includes an assessment of the significance of impacts related to growth induced by the proposed project and, if applicable, appropriate alternatives and mitigation. The proposed project could remove obstacles to “growth” related to development of the bikeway/trail access along the American River as well as build-out of Sutter’s Landing Park and possible development northwest of Sutter’s Landing Park. At a minimum, the DEIR should assess the foreseeability of this and other growth and whether impacts associated with this development are significant triggering the need for consideration of alternatives and mitigation.

### Chapter 8 EIR Preparation

The DEIR does not identify the preparers of the recreation and transportation and circulation chapters. Although this DEIR chapter does not identify the preparers of any of the technical appendices, the preparers of these documents is apparent for most of the appendices, based on the appendix cover page. However, the Air Quality Model Outputs Appendix has no identification of the preparers. The Traffic Model Output Data Appendix has several pages with the name “Fehr & Peers” in the footer but it is not apparent that this company prepared this entire appendix.



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December 19, 2013

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Re: Draft Environmental Impact Report (DEIR) for the McKinley Village project

Dear Ms. Allen:

The DEIR for the McKinley Village project does not adequately address the health impacts for the residents of the proposed project. As stated on page 4.1-5 in Section 4.1 (Air Quality and Climate Change), Sacramento County's levels of ozone and particulate matter are above attainment levels. Regional air pollution already places our entire community at risk for adverse health effects.

It is well established that proximity to highways is associated with adverse health impacts. According to an August 23, 2012 report by the California Air Resources Board (CARB)<sup>1</sup>, these include: exacerbation of asthma, impaired lung function, increased heart disease, new-onset chronic obstructive pulmonary disease, a faster progression of atherosclerosis, increased risk of premature death from circulatory disease, and increased incidence of new heart disease. Other effects include increased risk of low birth weight and increased risk of preterm delivery for mothers.

Numerous peer-reviewed studies have documented the additional health risks for children living in close proximity to highways. These health impacts include an increase in asthma in children who live within 417 meters (1/4 mile) of a major roadway (as evidenced by higher incidents of wheezing requiring inhaler use and increased hospitalizations).<sup>2</sup> Studies also show that exposure to near-roadway pollutants (independent of regional air pollution levels) add additional risk as evidenced by lowered childhood lung function.<sup>3</sup>

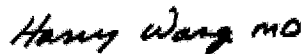
Recent research has also shown that living within 309 meters (0.2 miles) of a freeway during the third trimester, after adjusting for other variables, is associated with an increased risk of having an autistic child.<sup>4</sup>

It is our understanding that the entire project will be located within 417 meters of the freeway and it is anticipated that the closest residence will be 58 feet from the freeway (Appendix C,

page 1). CARB recommends avoiding "siting new sensitive land uses within 500 feet of a freeway."<sup>5</sup> This recommendation is acknowledged in the DEIR in Appendix C, p. 10-11.

The best available scientific research indicates that significant health impacts for children can be lessened if they live at least 1370 feet (417 meters) from a major roadway. This information should be considered as this project is being reviewed.

Sincerely,



Harry Wang, MD  
President, Physicians for Social Responsibility/Sacramento

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<sup>1</sup> California Environmental Protection Air Resources Board. Status of research on potential mitigation concepts to reduce exposure to nearby traffic pollution, August 23, 2012, p. 2-3.

<sup>2</sup> Brown MS, Samat SE, DeMuth KA, Brown LA, Whitlock DR, Brown SW, Tolbert PE, Fitzpatrick AM. Residential proximity to a major roadway is associated with features of asthma control in children. PLoS One. 2012;7(5):e37044. doi: 10.1371/journal.pone.0037044. Epub 2012 May 17.

<sup>3</sup> Urman R, McConnell R, Islam T, Avol EL, Lurmann FW, Vora H, Linn WS, Rappaport EB, Gilliland FD, Gauderman WJ. Associations of children's lung function with ambient air pollution: joint effects of regional and near-roadway pollutants. Thorax. 2013 Nov 19. doi: 10.1136/thoraxjnl-2012-203159.

<sup>4</sup> Volk HE, Hertz-Picciotto I, Delwiche L, Lurmann F, McConnell R. Residential proximity to freeways and autism in the CHARGE study. Environ Health Perspect. 2011 Jun;119(6):873-7. doi: 10.1289/ehp.1002835. Epub 2010 Dec 13.

<sup>5</sup> California Environmental Protection Agency California Air Resources Board. Air Quality and Land Use Handbook: A Community Health Perspective. April 2005, p. 10.

January 9, 2014

*Via e-mail*

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Re: McKinley Village Project (P08-806); Draft Environmental Impact Report

Dear Ms. Allen:

We submit the following comments to be considered regarding the Draft Environmental Impact Report (“DEIR”) for the proposed McKinley Village Project (“McKinley Village” or “MV”).

While we have serious concerns regarding the DEIR, both procedurally and with the lack of objectivity in its tenor, this letter is limited to comment on some of the specific provisions of the DEIR that are neither supported by substantial evidence nor rational scrutiny.

Sections 2.5, pg. 2-9 and 3.1, pg. 3-4.

The contention that the “project is anticipated to generate a total population of approximately 656 residents at build-out” based on a 2.0 persons-per-household (PPH) is not supported by substantial evidence.

The 2.0 PPH estimate is not consistent with other proposed development in Sacramento. The EIR for the Curtis Park development, for example, uses a 2.56 PPH estimate for its analysis, with a PPH estimate for single-family homes being even higher than that. Given that MV is primarily a single-family home development, there is no credible evidence to support for a PPH estimate that is 22% lower than the PPH used for Curtis Park.

Further, the 2.0 PPH estimate fails any amount of rational scrutiny. The DEIR estimates that 258 children are estimated to reside in the proposed development, yet the 2.0 PPH estimate creates a population of 656, meaning that there would be only 398 adults in 328 homes. The DEIR apparently assumes that this will be a community of single parent households. Only 70 of these homes would have two adults, hardly representative of the existing neighborhood or the ability of a single adult to afford such large single-family homes. Further, none of the proposed “granny flats” could be inhabited unless only one person occupied the remainder of the three to five bedroom single family home in order the maintain the 2.0 PPH figure. Neither of these facts is supported by any rational or reasonable thought.

This egregiously low estimate is significant because it calls into question much of the analysis throughout the DEIR. For example, the estimated cancer rate (section 4.1, pg 48) is



based on the total population figure generated from the 2.0 PPH assumptions. The severe underestimation of total population serves to mislead the public regarding more realistic analysis of very serious health and safety concerns for residents of the project.

The unreasonable assumption that is the 2.0 PPH estimate is also significant because it is exemplary of the nonobjective and pro-project analysis and tenor echoed, *ad nauseam*, throughout the DEIR.

Section 3.3, pg. 3-24

The conclusion that MV is consistent with the Sacramento 2030 General Plan (“GP”) because it “would provide a diversity of housing choices” is not supported by relevant evidence or reasoned analysis. This conclusion is based on the stated fact that the “proposed project incorporates four different housing types, 15 house plans, and 45 base elevations (with further material and color variations beyond base elevations ...).” In an amazing twist of logic, said facts are then said to support the conclusion that MV “will meet the needs of a range of ages and abilities.”

The factual description of the housing types, on the other hand, evidences the utter lack of diversity of housing being built to benefit Sacramento in the MV project. MV is an almost exclusively large single-family home community priced to exclude diversity. The idea that offering superficial options, such as different roofing materials or siding, to make four different home types appear more unique furthers housing diversity, is akin to saying a room full of people is diverse because they are all wearing slightly different styles of jeans and/or cologne. Superficial diversity does nothing to increase the real and substantial diversity that is sorely needed in Sacramento proper and contemplated in the GP.

This faulty analysis is significant because it is exemplary of the lack of reasoned evaluation supporting the DEIR’s baseless conclusion, which is riddled throughout chapter 3, that MV is consistent with the GP and SACOG. The truth is that MV is a monolithic and car based community that is inconsistent with the GP and SACOG. For example, there is no real evidence establishing that MV will be “well-connected and maximize[] connections between neighborhoods.” (3-29.) To the contrary, the proposed access points are poorly connected to existing neighborhoods because they fail to take real advantage of existing infrastructure. The unavoidable barrier that is the UP rail line will likely serve to sever MV from the existing neighbors in ways the DEIR fails to consider. The more likely result is that MV will only exist as an isolated car community, whose residents mostly drive to meet their needs.

Similarly, there is a complete lack of substantive evidence supporting a conclusion that MV: (1) meets the needs of seniors, empty-nesters, young couples, single-person households; (2) is a mixed-use development with nearby shopping; (3) reduces auto-dependency; (4) increases use of other modes of transit such as public transportation; or (5) integrates housing types for all socioeconomic levels. All evidence to the contrary, a cursory review of the plans confirms that it is a homogenous community of large houses built with suburban style multi-car garages. There are no amenities or access to public transportation within MV, and therefore its residents will rely on auto transportation for all of their basic needs.

Section 4.1-6, pgs. 4.1-47-48.

The cancer burden rate calculated in the DEIR is not supported by substantial evidence or reasoned analysis. Using the Roadway Protocol, the DEIR first estimates the cancer risk due to DPM emissions from the Capital City Freeway at 200 in 1 million. Then, in logic worthy of Through the Looking Glass, the DEIR analyzes the combined impact from the Capital City Freeway and the additional emissions from the surrounding UP train lines and concludes that the combined cancer risk would be 80 in 1 million for most MV residents. Amazingly, the cancer risk is more than halved when the UP emissions are added to the Capital City Freeway emissions.

After the aforementioned magical wave of hand, the flawed 2.0 PPH number is then used to calculate a woefully underestimated cancer burden for MV. This analysis flies in the face of numerous peer reviewed studies that show significant health consequences to residents living adjacent to freeways.

This is significant because it exemplifies the DEIR's effort to minimize and diminish valid health and safety concerns regarding the MV project. Relying on cap-and-trade analysis and declining to consider cumulative impacts solely because projects are under the threshold individually, the DEIR repeatedly diminishes MV's actual environmental impact throughout chapter 4.

Section 4.4, pg. 4.4-2

The conclusion that "[t]he project site is located in an urban area and is not near forested areas that may pose a wildland fire threat" lacks factual support. MV is set to be built across from an open grass-land park and a wooded river. This is an area that experiences random fires given its proximity to the river, and therefore more investigation and analysis are needed to assess the threat from a wildland fire. Any fire threat would be significant because of the limited access to the development.

Section 4.4, pg. 4.4- 10

The conclusion the site is free of hazardous deposits from Aerially Deposited Lead from Interstate 80/State Route 51 is not supported by credible evidence. It is based on a study that was last conducted in 2007, which found that the samples at .5 feet below ground surface were below that which is considered hazardous. The Geocon report conducted for CalTrans (Appendix L), however, found that the soil at this level was determined to be California Hazardous Waste. Since the freeway is slated for widening due to the increase in use over the last few years, the 2007 findings are outdated and unreliable.

Further, more testing for the various metals found to occur in the area is required before one can accurately conclude that the area is safe from an unhealthy amount of metals. The Geocon study indicates that the number of metals found in the area is very extensive, yet there is no explanation on how to read the samples. The number of studies taken seems low to conclude that levels are acceptable or even safe, given the development's proximity to both the freeway

and the railroad. The DEIR states that no “releases of hazardous materials have been reported on the UP tracks adjacent to the site.” This analysis ignores levels of exhaust produced by the trains? With the increase in trains planned for the future given expansion of the tracks, the accumulation of hazardous materials from train exhaust needs to be considered.

Table 4.4-4, pg. 4.4-23

The conclusion that the site is “unlikely” to be contaminated by tetrachloroethylene (PCE) solely based on MV’s proximity to other sites where PCE was found to occur is not supported by evidence or rational analysis. Why would this not be tested for if PCE is a known contaminate that has been identified in multiple locations near the site? Multiple times throughout this table “unlikely” is used as an excuse to avoid the need to test for known contaminants, including everything from diesel to a number of various solvents. As a course of due diligence it would be prudent to actually test for these contaminants, as opposed to assume their non-existence.

The same is true for the analysis regarding the lack of testing for asbestos. (4.4-11.) Testing for asbestos would be a conclusive way of indicating if there are any occurrences of asbestos.

Measure 4.4-5, pg. 4.4-46

“The proposed project could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Based on the analysis... the impact is less than significant.” The city clearly states in its 2008 EOP that given the established Police Beat Area 3C that Alhambra Blvd. serves as the suggested north-south evacuation route. But Alhambra is not going to be utilized as an ingress/egress point for the development and that the proposed ingress/egress at 40<sup>th</sup> and C streets would suffice. This conclusion makes little sense, and is further exemplary of the lack of critical analysis that embodies the overly deferential DEIR.

Alhambra Blvd. is already identified as an evacuation route. It is proposed, should UPPR approve, that Alhambra Blvd. only be used for pedestrian and bicycle access, but this is planned to occur during the later phases of the project. Utilizing Alhambra Blvd., in addition to the 40<sup>th</sup> and C streets ingress/egress, as vehicular ingress/egress would increase the available safety measures available to the Police and Fire for the residents within the development.

This is significant because the proposed egresses were selected solely for budgetary reasons benefiting the developer’s bottom line. They were not selected to further any goals of the GP or SACOG, or to enhance the safety or existing infrastructure of MV or the existing Sacramento community at large. The DEIR serves to whitewash and compromise safety in deference to a poorly planned development. The repeated deferential rhetoric throughout the report calls into question the validity of its analysis.

The bottom line is that the use of Alhambra Boulevard as a second connection would solve the emergency access issues, among other issues.

Section 4.5, pg. 4.5-17-18

Groundwater was discovered within 6 feet of the surface within the western region of the property. There does not appear to be any analysis of mitigation regarding the ground water once this area of the development is built out. Also, given the detection of inorganic compounds found to be in occurrence at the 28<sup>th</sup> Street landfill location, this would call into question the anecdotal opinion that “it does not appear that leachate from the 28<sup>th</sup> Street Landfill has significantly impacted groundwater at the project site.” Accordingly, the analysis regarding groundwater lacks factual and analytical support.

Section 4.5, pg. 4.5-31

Given the increased load on Sump 99 and the identified need for an upgrade, would it not make sense for the developer to be responsible for upgrading this facility at the start of build out? If infrastructure is planned on being completed in the first phase of the project would it not be prudent to upgrade Sump 99 at this time?

Section 4.5, pg. 4.5-40

Given the current plan, the pedestrian underpass at Alhambra is not planned to be completed until later in the development. That fact calls into question much of the analysis throughout the DEIR on the grounds that MV is consistent with the GP and SACOG largely because of the bike tunnel. The DEIR fails to incorporate into its analysis the effects of the bike tunnel not being built at the outset of Phase 1, and the effects on the MV project if the bike tunnel does not get built.

Section 4.7-3, pg. 27-29

We would like to see an additional study on the school impacts. In speaking with Jeff Cuneo, SCUSD President, he indicated that the numbers being utilized for this study are not a true recommendation for the number of students that a school may hold. These numbers were intended to draw fair comparisons to POTENTIAL student populations in order to analyze school closures.

As parents with young children at Theodore Judah Elementary we can guarantee there is no additional room at the school. Even for the kids who are currently at the school it is a tight fit. Theodore Judah lost the parent participation preschool in order to accommodate an additional classroom this past fall. Taking every room for classrooms would eliminate a wonderful science program, a fantastic speech therapist and a needed Special Education classroom. These are elements that add to the betterment of our school and we do not want these programs to be lost in order to squeeze more students into our school. We imagine a true study of Sutter Middle School would provide similar information. Please do your due diligence and analyze the schools more thoroughly.

Section 4.7-4, pg. 29-30.

“The project site is located in the East Sacramento Community Plan area, which is one of the City’s most park-deficient Community Plan areas.” The DEIR states on page 4.7-33, “The City’s Park and Recreation Master Plan 2005-2010 indicates that the project applicant shall dedicate land for local recreation or park facilities that would be sufficient in size and topography to serve the residents of the subdivision.” We disagree wholeheartedly that this community would meet the recreational needs of its residents. The proposed development provides no additional playground facilities for the community. Children in the proposed development will therefore utilize existing parks, increasing impacts to existing parks. A clear recommendation would be to provide a playground facility within the proposed development. How is it that time and time again this development is allowed to create further deficiencies and yet no mitigation is required? This community continues to take resources from the existing adjacent community yet provides no benefit in return.

Providing a pool that only serves a small portion of the community for a few months of the year hardly seems to meet the requirement for active recreational areas. The pool also has no wading pool so parents with young children will continue to access wading pools in East Sac such as the free one at Bertha Henschel which already has many days with a line out the gate. This community will heavily rely on East Sacramento for active recreational facilities therefore significantly increasing impacts to current facilities. McKinley Village needs to provide year-round active recreational facilities.

We also suggest that River Park pool and playground not be included as a part of a true analysis. I have lived in East Sac for 9 years and have taken my kids to their playground twice and never use their pool. That facility is simply not utilized regularly by East Sac residents since we have our own facilities within East Sac. We suggest that instead you add East Portal Park to your analysis. While no pool is provided this park has a playground and holds weekly soccer games for East Sac families during the fall.

Can public funds - Quimby fees as noted on 4.7-4 pg 30 - be directed to the proposed recreation center, effectively a private facility? The park development fees that are indicated in this section are of further question. How would these funds be used? Would they be used to support the parks that would be most impacted by these residents or would they go into the general park and recreation budget? We would like to see these funds be directed to East Sacramento parks that would be truly utilized by these residents.

Section 4.7-2, pg. 26-27.

We are concerned that the Sacramento Police Department staffing is falling below optimum staffing levels and optimum staffing is not being maintained. The report states that there is no mitigation required, despite below-optimum public safety staffing levels. “Development within the project area would increase the demand for higher levels of fire protection and emergency services, including additional staffing and vehicles,” as noted on pg 27

of this section. Is this within the city budget to hire more police and fire? In a time when cuts have been made to all public safety providers is there truly additional funds available or will this just continue to thin the current services. A local police officer, unrelated to this project but that serves our community, also informed us that houses near railroad tracks are more likely to have their doors kicked in as trains pass by because of the noise distraction. With 40+ trains a day passing by this community it seems that this would increase the need for police staffing in this area therefore removing services from nearby neighborhoods if there are not additional funds for more officers. Please ensure that all requirements are met for safety of all our community members.

#### Section 4.8, Table 4.8.1

Table 4.8-1 appears to have incorrect totals for combined diversions. Adequate water resources for the city with current and ongoing water shortages will not be solved by adding several hundred new single family homes governed by a home owners' association, which can require significant water usage for common area lawns, fields, etc.

#### Section 4.8, Table 4.8-8

The total of estimated water demand is not supported by substantial evidence. The DEIR uses an estimate based on acres of land use to calculate the estimated water demand. This is unusual as compared to other environmental impact reports which estimate water demand on per EDU/ESD basis, like what was done for wastewater in this DEIR.

This is significant because it casts into doubt assumptions being made on the impact MV will have on Sacramento's water demand. It further affects analysis in other sections, including the alternatives section where an alternative project with fewer units is estimated to use more water than MV as proposed.

#### Section 4.9

The conclusion that over 50% of the MV traffic will be borne by the A Street egress is not supported by substantial fact or rational scrutiny. The A Street egress crosses the existing UP Rail line and is subject to a railroad crossing guard. First, this conclusion in the DEIR fails to consider basic human factors, including that people are generally risk adverse and will choose a route that poses no possibility of closure over one that does. It only takes one time for an MV resident to be late to work because of a train to cause said resident to use the 40<sup>th</sup> Street egress even if that route adds a couple minutes to their travel.

Secondly, a quick look at a map coupled with minimal critical analysis will demonstrate that most existing amenities that will be used by MV residents are in East Sacramento. Place your finger on MV, and then ask yourself, "How does a MV resident get to Safeway?" Substitute Safeway with Compton's Market, Trader Joes, Theodore Judah, East Sac Hardware, Sacred Heart Church, Caleb Greenwood or Sutter Middle School. It is self evident that most

basic amenities, such as groceries and school, which will serve the MV community, will be accessed via the 40<sup>th</sup> Street egress.

This is significant because it calls into question the entire analysis regarding traffic impacts in the existing East Sacramento neighborhoods surrounding the 40<sup>th</sup> Street egress. It is further significant because the purported lack of significant traffic impact is being used to justify placing the East Sacramento egress in the worst possible place with respect to utilizing existing infrastructure and minimizing impact on existing communities.

We have concerns regarding the traffic analysis and would request further analysis of the cumulative impacts of the proposed Sutter Park development, the potential E Street on-ramp closure and how each of these factors will affect the level of service. We are also concerned about the population size, and potential population size, not impacting the traffic analysis as the analysis is based on the number of homes and not the population. As parents of young children we make many more daily car trips to meet their needs than we would as single adults yet the analysis provides no differentiation per home.

#### Conclusion

For the forgoing reasons, and for many more reasons too numerous to be covered effectively herein, the DEIR suffers from serious flaws in evidentiary support and reasonable analysis in reaching many of its conclusions. The lack of rational scrutiny of the real impact MV will have on the environment and community in the DEIR suggests that it is not an objective tool used to assess the true pros and cons of the proposed MV project, but is a means to silence community critics via unsubstantiated claims that MV will have little to no impact on the environment. The pro-development rhetoric is apparent throughout the DEIR, and the community deserves, and we hereby demand, better.

The City should make an actual effort to critically analyze the potential impacts of MV, and not sell the existing community a bunch of whitewashed conclusions neither supported by substantial and material fact nor well reasoned scrutiny.

Very truly yours,

/s/

Love East Sac  
Laura Barrett  
Heather Sullivan  
Anthony Donoghue and  
Rob Ferrera