

Natomas Central

Draft

CEQA Initial Study and Notice of Intent to Adopt a Mitigated
Negative Declaration

Prepared for:



City of Sacramento

September 12, 2005

Submitted by:

 **FOOTHILL ASSOCIATES**

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OVERVIEW. NATOMAS CENTRAL (P04-173) INITIAL STUDY AND NOTICE TO ADOPT A MITIGATED NEGATIVE DECLARATION: This Initial Study has been prepared for K. Hovnanian Forecast Homes and the City of Sacramento Planning and Building Department, Environmental Planning Services, 1200 Arena Boulevard, Second Floor, Sacramento, CA 95814, pursuant to Title 14, Section 15070 of the California Code of Regulations; the Sacramento Local Environmental Regulations (Resolution 91-892) adopted by the City of Sacramento, and the Sacramento City Code, Title 63.

This Initial Study is organized into the following sections:

SECTION 1.0 BACKGROUND: Provides summary background information about the project name, location, sponsor, when the Initial Study was completed, and lead agency information.

SECTION 2.0 PROJECT DESCRIPTION: Provides a detailed description of the Natomas Central project as proposed, including information regarding project location, background, and purpose. All components of the project are described, including current and proposed land use designations, anticipated timeline and required discretionary approvals for the project.

SECTION 3.0 ENVIRONMENTAL CHECKLIST AND DISCUSSION: Contains the Environmental Checklist form together with responses to checklist questions. The Checklist Form is used to determine if the proposed project would result in any of the following categories of environmental impacts: 1) “Potentially Significant Impacts,” may not be mitigated even with the inclusion of mitigation measures agreed to by the project proponent, 2) “Potentially Significant Impacts Unless Mitigated,” could be mitigated through incorporation of mitigation measures agreed to by the project proponent, and 3) “Less than significant Impacts,” are less than significant even without mitigation measures. Where appropriate, mitigation measures are provided to reduce potentially significant impacts to a less than significant level. The end of this section includes a summary of the mandatory findings of significance.

SECTION 4.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: Identifies which environmental factors that determined whether the project would have either a “Potentially Significant Impact” or “Potentially Significant Impacts Unless Mitigated,” as indicated in the Environmental Checklist.

SECTION 5.0 DETERMINATION: Identifies the determination of whether impacts associated with development of the proposed project are significant, and what, if any, additional environmental documentation may be required.

SECTION 6.0 REPORT PREPARATION AND REFERENCES: Identifies list of staff and consultants responsible for the preparation of this document, and persons and agencies consulted. This section also identifies references used in preparation of the MND.

APPENDICES - The appendices are available for public review during business hours at 2101 Arena Boulevard, 2nd Floor, Sacramento, CA.

APPENDIX A — TENTATIVE SUBDIVISION MAP: The Natomas Central Tentative Subdivision Map shows proposed villages, including residential units, elementary school, fire station, recreation center, roads, parks, and open space locations including a lake/detention facility that is proposed for the center of the property. The map includes a land use summary table for the project.

APPENDIX B — URBEMIS AIR QUALITY MODEL DATA: Air Quality data obtained through the URBEMIS (Urban Emissions) Air Quality Model. This model was used to estimate emissions (lbs./day) generated from construction equipment and vehicles expected to be used during the development of the project. Long term emissions from the operation of projects after construction were also calculated for emissions from gas appliances, wood stoves, fireplaces, landscape maintenance equipment; and residents' vehicle use.

APPENDIX C — CALIFORNIA NATURAL DIVERSITY DATABASE (CNDDDB): Map of California Natural Diversity Database records for special-status species occurrences within five miles of the Natomas Central project site.

APPENDIX D — CITY OF SACRAMENTO TRAFFIC DATA: Local traffic data provided by the City of Sacramento Development Engineering and Finance Division.

APPENDIX E — NATOMAS CENTRAL MITIGATION MEASURES TABLE: Table of Mitigation Measures provided in Section 3.0 of this document that will be necessary to implement as part of the development of the Natomas Central project. Mitigation measures identified in Section 3 of this document would need to be implemented to reduce significant impacts to a less than significant level.

Introduction and Regulatory Guidance

This document is an Initial Study that provides justification for a proposed Mitigated Negative Declaration (MND) for the Natomas Central project. This MND has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq., and the State CEQA Guidelines, 14 California Code of Regulations (CCR) Section 15000 et seq.

An Initial Study is conducted by a Lead Agency to determine if a project may have a significant effect on the environment (CEQA Guidelines Section 15063). An EIR must be prepared if an Initial Study indicates that substantial evidence shows that the proposed project under review may have a significant impact on the environment. A Negative Declaration can be prepared instead, if the Lead Agency prepares a written statement describing the reasons why there is no substantial evidence that a proposed project may have a significant effect on the environment, and therefore does not require the preparation of an EIR. According to CEQA Guidelines Section 15070, a Negative Declaration shall be prepared for a project subject to CEQA when either:

- a) The Initial Study shows that there is no substantial evidence, in light of the whole record before the agency, that the proposed project may have a significant effect on the environment, or
- b) The Initial Study identifies potentially significant effects, but:
 - (1) Revisions in the project plans or proposals made by or agreed to by the applicant before the proposed negative declaration is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and
 - (2) There is no substantial evidence, in light of the whole record before the agency, that the proposed project as revised may have a significant effect on the environment.

If revisions are adopted in the project plans or proposals in accordance with CEQA Guidelines Section 15070(b)(1), a Mitigated Negative Declaration (MND) is prepared.

Lead Agency

The Lead Agency is the public agency that has the principal responsibility for carrying out or approving a proposed project. CEQA Guidelines Section 15051 states that if a project will be carried out by a public agency, that agency shall be the Lead Agency, even if the project would be located within the jurisdiction of another public agency. Since the project is located within the boundaries of the City of Sacramento, and since the City of Sacramento would have to grant land use approvals in order for the project to proceed, the City of Sacramento is the Lead Agency for the project for the purposes of CEQA.

Terminology Used in this Document

The Environmental Checklist (Section 3.0) in this document utilizes the following terminology to describe the various levels of significance associated with project related impacts as described in CEQA Section

Potentially Significant Impact: An impact that may have a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project" (CEQA Guidelines Section 15382); the existence of a potentially significant impact (i.e., the existence of substantial evidence, in light of the whole record before the City, that the project may have a significant effect that cannot be mitigated to a point where clearly no significant effect would result) requires the preparation of an EIR with respect to such an impact;

Potentially Significant Unless Mitigated: A potentially significant impact that could be mitigated to a less than significant level with the addition of mitigation measures; and

Less Than Significant Impact: An impact that is less than significant and does not require the implementation of mitigation measures.

1.0 BACKGROUND

1.1 Project Name and File Number

Natomas Central (P04-173)

1.1.1 Project Location

The project is located in North Natomas within the City of Sacramento, east, north, and adjacent to Fisherman's Lake and southwest of the intersection of Del Paso and El Centro roads.

1.2 Project Contact Persons

For additional information regarding this project, review studies or reports referenced in this report, please contact or send correspondence to:

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1.3 Project Sponsor

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1.4 Date Initial Study Completed

August 17, 2005

1.5 Lead Agency

The City of Sacramento is the lead agency for the preparation of this Mitigated Negative Declaration for the Natomas Central project. The City of Sacramento (City) has determined that the development of Natomas Central will not have a significant effect on the environment. This environmental review examined whether there are potentially significant effects associated with the project, or those effects that are potentially significant absent mitigation measures agreed to by the project proponent. Although public review has not yet occurred, and such review could lead to new evidence as to the potential significance of project impacts, it is currently believed that the project will not result in potentially significant impacts. For this reason, City staff has determined that the proposed Mitigated Negative Declaration is the appropriate environmental document for this project.

This Mitigated Negative Declaration was previously circulated from August 19, 2005 through September 7, 2005, which was a 20 day review period.

The City is soliciting views of interested persons and agencies on the content of the environmental information presented in this document. The City is reissuing the document for a 30-day public review period. This Mitigated Negative Declaration will be circulated for public and agency review from September 12, 2005 to October 11, 2005. Your responses must be sent at the earliest possible date, but no later than the comment and review period ending on October 11, 2005.

Please send written responses to:

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2.0 PROJECT DESCRIPTION

2.1 Project Location

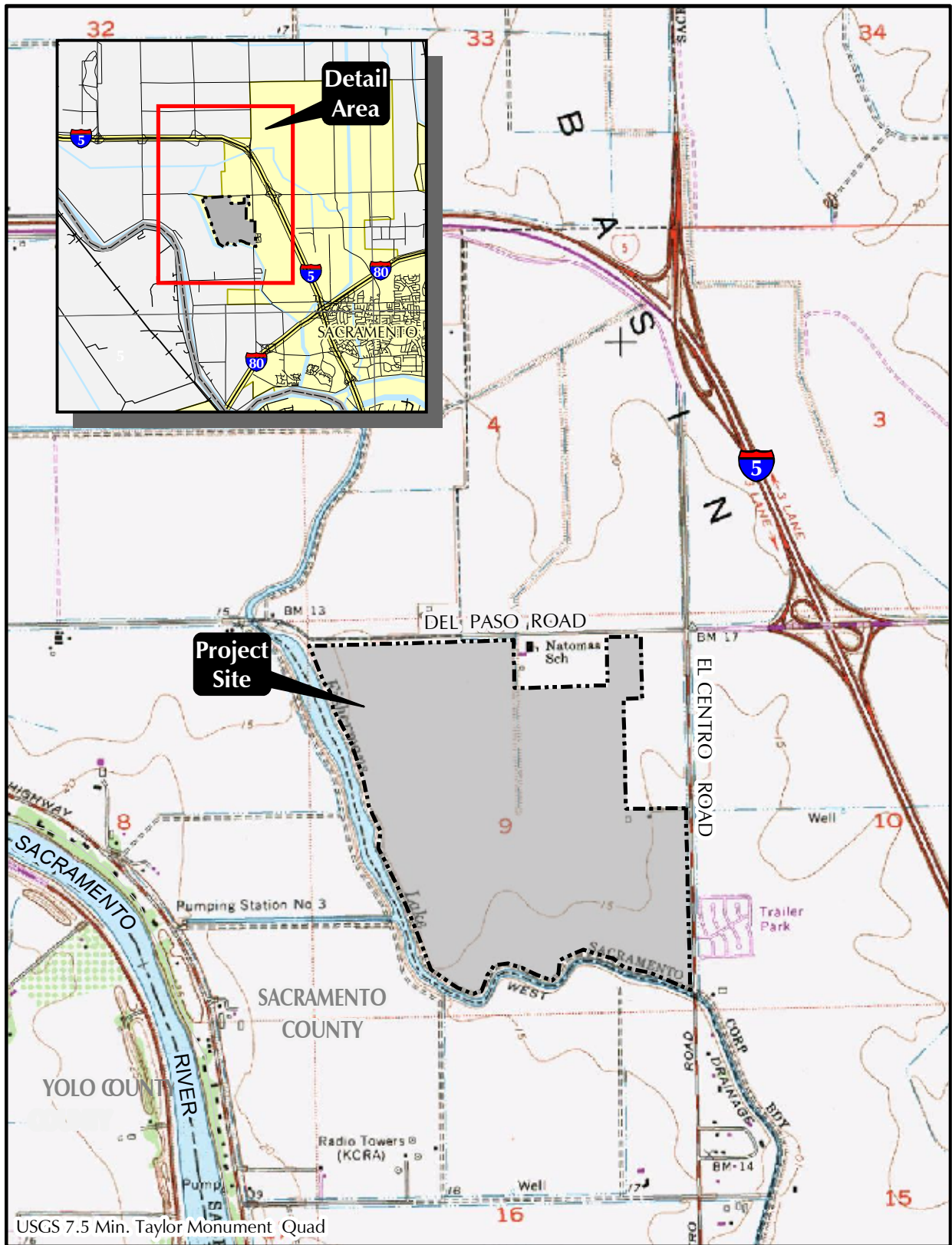
The 397.9-acre Natomas Central project is located in the North Natomas area within the City of Sacramento (Figure 1). The project site is generally bound by Fisherman's Lake and the Natomas West Drain to the south and west, Del Paso Road to the north, and El Centro Road to the east. Interstate 5/Highway 99/70 is located less than ½ of a mile east of the project and Interstate 80 is within two miles of the southern boundary. The site is located on the U.S. Geological Survey Taylor Monument 7.5 minute quadrangle in Township 9 north, Range 4 east, Section 9. Assessor's Parcel Numbers (APN) for the project site include: 225-0080-002, -003, -004, -008, -015, -016, -017, -018, and -038.

2.2 Project Background

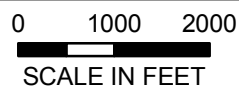
Development of the North Natomas area falls within the guidelines of the City of Sacramento General Plan (1998). The Natomas Central project occurs within the North Natomas Community Plan area (NNCP) which is designed to include fourteen interconnected neighborhoods, employment and commercial centers, and a centrally located town center. The purpose of the Community Plan is to provide guidelines for development of the 9,038-acre North Natomas area. The Community is also part of the Natomas Basin, which includes the South Natomas Community Plan Area, Sacramento International Airport, Special Plan Area (including reserves), and agricultural areas. Specific developmental guidelines for the design of the North Natomas area have been developed and are outlined in North Natomas Development Guidelines (City of Sacramento 1994). Design details in the North Natomas Development Guidelines address signage, lighting, streetscapes, and general layout of the Community Plan area. K. Hovnanian Forecast Homes has proposed the Natomas Central Planned Unit Development (PUD), which is under the jurisdiction of the City of Sacramento.

The Natomas Central project is also covered by the Natomas Basin Habitat Conservation Plan (NBHCP), which is designed to promote biological conservation in conjunction with economic and urban development within the Natomas Basin area. The Plan's goal is to minimize incidental take of Endangered Species within the Natomas Basin, and to provide mitigation for impacts to these species and their habitat. The City of Sacramento requires all proponents of development within the Basin to demonstrate suitable mitigation for project impacts in accordance with the NBHCP, and applicable federal and state environmental rules and regulations. The Natomas Basin Conservancy (TNBC) has been established as an independent entity for ensuring that the NBHCP and reserve system are implemented on behalf of the City of Sacramento, Sutter County and other potential permittees within the Natomas Basin.

Under requirements of the NBHCP, the City of Sacramento was required to adopt a buffer along Fisherman's Lake for the protection of Swainson's hawk habitat. On June 29, 2005 the City satisfied its legal obligation to establish a buffer along Fisherman's Lake, when the Sacramento City Council voted 6-2 in favor of establishing a 300-foot-wide buffer along the



SITE AND VICINITY



Drawn By: MAB, AH
 Date: 11/24/04

FIGURE 1

area of Fisherman's Lake used by the hawks for nesting, and 200 feet along the rest, totaling 52 acres. The portion of the proposed project located adjacent to Fisherman's Lake is subject to the 300-foot buffer requirement due to historic Swainson's hawk nests observed in this area.

2.3 Project Purpose

The North Natomas area is designated as a major growth area for housing and employment according to the City of Sacramento General Plan (General Plan). According to the General Plan, the North Natomas Community will provide 35 percent of the planned new housing and 30 percent of the planned new jobs within the City of Sacramento at full buildout. Due to the anticipated growth and population increase of the Sacramento Metropolitan area, the need for additional housing, employment, and recreational and civic opportunities are expected. The Natomas Central project will provide low-density (LD) medium-density (MD), and high-density (HD) residential, public space, parkway/open space, fire station, elementary school, and recreation center within the City of Sacramento.

2.4 Project Components

For the purpose of this document, the land use designations will follow the tentative map proposal (Appendix A). Although an amendment to current land use designations outlined in the NNCP will be required, the project has been designed to comply with NNCP designations. The project includes the development of a residential subdivision, recreation center, elementary school, fire station, parks and open space, and associated infrastructure including streets, drainage facilities, sewer and water lines. The residential portion of the Natomas Central project as currently proposed contains 30 residential villages with a total of 1,788 single-family residential lots, 556 active adult lots, and 745 multi-family units (HD Residential). Road improvements associated with development of the project include the construction of local streets, alleys and driveways, as well as off-site improvements to adjacent sections of El Centro and Del Paso roads. A centrally located 25.9 acre lake will be used for storm water detention and will also function as open space. An additional 38.6 acres of parkway and open space is also included in the land use plan and will function as a buffer along Fisherman's Lake to the west and south.

The layout and design features of the project will allow for the use of public and zero emission transit. The Sacramento Regional Transit Board recently adopted a Locally Preferred Alternative for providing a light rail connection through the Natomas area that would connect downtown Sacramento with the Sacramento International Airport. The proposed connection will traverse through the Natomas area along Truxel Road, East Commerce Parkway and Meister Way, and the proposed East Commerce Parkway station will be the closest light rail station to Natomas Central, located less than 1 mile from the project site. Natomas Central is also designed to allow for easy access between the proposed developmental communities within North Natomas via El Centro and Del Paso roads, and access to outlying areas via nearby Interstate 5, Highway 99/70, and Interstate 80. The specific entitlements needed for the project as proposed are set forth in section 2.7 below.

2.4.1 Residential Housing

A total of 2,533 residential units are planned for Natomas Central (**Figure 2** and **Appendix A**). Low density residential housing will be comprised of fourteen villages, containing a total of 705 single-family housing units, several of which will be half-plex units. Half plex lots are concentrated within the southern section of the project site, and are depicted as those lots having a dashed line with a central circle. Medium density housing will be comprised of sixteen villages containing 1,083 single-family lots, and will include courtyard and cottage lots. A total of 745 high density multi-family units are also part of the project. In addition to the half-plex lots, the low density residential housing will have a variety of lot styles including 50' x 105' lots, 52' x 105' lots, 55' x 105' lots, and 60' x 105' lots.

In addition to the cottage and courtyard lots the medium density villages will be arranged in a variety of styles including 30' x 76' lots, 43' x 72' lots, and 48' x 60' lots. A total of ten low and medium density villages containing 556 units will be developed as an age-restricted active adult community, located in the northern section of the project. The high density parcel located within the active adult community parcel adjacent to Fisherman's Lake will contain three-story building offering condominiums, and additional three-story condo-style structures and apartment buildings are proposed for the High Density Residential (HDR) lot located adjacent to the fire station along the southeastern project boundary. All lots are designed to provide adequate access to residential and major streets.

A total of 286.3 gross acres of the property will be devoted to housing, with net acres totaling 212.8 acres. The density for low density villages varies from 5.9 to 8.2 dwelling units per acre (du/acre) while the medium density village varies from 9.8 to 18.3 du/acre. The four high density parcels have a target density of 22.0 or 29.0 du/acre. When including the high density parcels in calculating the average density for the project site, an overall residential density of 11.9 du/acre is achieved. **Table 1** shows the land use summary for the project according to the proposed Natomas Central tentative subdivision map.

A Home Owners Association will be created for the development and this association will be responsible for enforcing the Covenants, Codes, and Restrictions that are established for the subdivision, and will perform activities associated with the management of the water treatment facilities of the site, codes associated with use of the recreation center, and fund raising activities.



PROPOSED DEVELOPMENT

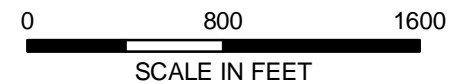


Table 1 — Natomas Central Land Use Summary

Lot No./ Village No.*	PUD Zoning Designation	Acres (Gross)	Acres(Net)	Units	Density
Villages 1, 2, 3, and 4 (Active Adult Community)	MD (R-1A and R-2B)	31.8	24.5	264	10.78
Villages 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, and Lot A	MD (R-1A and R-2B)	92.0	59.9	819	13.67
Villages 5, 6, 7, 8, 9, and 10 (Active Adult Community)	LD (R-1)	53.8	42.5	292	6.87
Villages 23, 24, 25, 26, 27, 28, 29, and 30	LD (R-1)	77.2	56.7	413	7.28
Subtotal		254.8	183.6	1788	9.74
High Density Residential	HD (R-3 and R-4)	31.5	29.2	745	25.51
Residential Total		286.3	212.8	2533	11.90
Fire Station	Civic (R-3)	2.5	2.0	-	-
Elementary School	ES (R-1)	8.0	8.0	-	-
Recreation Center	P (R-1)	7.0	7.0	-	-
Park	P (A-OS)	31.0	31.0	-	-
Lake	Lake (OS)	25.9	25.9	-	-
Open Space	OS (A-OS)	27.7	27.7	-	-
Del Paso & El Centro Roads	-	9.5	9.5	-	-
Local Residential Streets	-	-	72.6	-	-
Landscape Corridor and Landscape Lot	-	-	0.79	-	-
Pedestrian Access	-	-	0.61	-	-
Non-Residential Total		111.6	185.1		
Grand Total		397.9	397.9	2533	10.84

Notes:

- LD = Low Density Residential 3-10 du/acre
- MD = Medium Density Residential 7-21 du/acre
- HD = High Density Residential 11-29 du/acre
- P = Parks
- OS = Open Space
- ES = Elementary School

2.4.2 Parks and Open Space

Three parks located within the interior of the development, and parkway/open space corridors located along Fisherman's Lake are proposed as part of the project. The three parks located within the interior of the site include a 10.0-acre neighborhood park located in the northeast portion of the project adjacent to the existing junior high school; a 5.0-acre park situated adjacent to the elementary school site and the eastern end of Natomas Central Lake; and a 6.0-acre park located in the central portion of the project, adjacent to and south of Natomas Central Lake. A 10.0-acre parkway and 27.7 acre open space corridor are located along the western and southern boundaries of the project site. A total of 31.0 acres are proposed to be dedicated for construction of the residential and neighborhood parks, and the parkway along Fisherman's Lake. In addition to providing park and open space areas for project, this area will also function as part of the required buffer established for the protection of Swainson's hawk habitat along Fisherman's Lake. Consistent with the North Natomas Financing Plan (NNFP), and the City Council's recent adoption of the buffer as required by the NBHCP, the park and open space areas along the southern and western boundaries with Fisherman's Lake will be a 200 to 300-foot wide and, pursuant to the NNCP, will be established from the western edge of the Community Plan boundary, which is identified as the City limit line.

The only major difference between the parkway and open space parcels along Fisherman's Lake is that park benches will be a component of the parkway area. Both parcels will remain in their natural state, except for the construction of a pedestrian/bikeway. The only additional landscaping that will occur in the parkway/open space areas will serve as an additional buffer between Fisherman's Lake and its associated riparian corridor and the proposed development. While it has not yet been determined what specific types of recreational opportunities will be available within the proposed parks, a variety of amenities and options are proposed for the project. The neighborhood parks are designed to serve residents within a ½-mile radius of the site and may offer tot lots, an adventure area, unlighted sport fields or sport courts, or group picnic areas. Limited on-street parking is associated with neighborhood parks. The open space and parkway areas of the project will offer limited recreational opportunities and will be designed to promote the natural features of the area. Primary activity in the open space/parkway area located within the project boundaries will be limited to passive recreational uses such as walking, bicycling, and wildlife viewing, and access to these will be restricted during the Swainson's hawk breeding season (April through August) to reduce impacts this species and other special-status species known to inhabit this area along Fisherman's Lake. The pedestrian/bicycle path will be a paved asphalt trail approximately 12 feet wide with a 2 foot decomposed granite shoulder on either side.

2.4.3 Water Features

Water on the project site resides within the few unlined, shallow drainage canals that traverse the property in north/south and east/west directions and along the north and east project boundaries. These features are all excavated in upland and were constructed for the purpose of conveying irrigation water for agricultural purposes. As such, these features are not subject to regulation under the Clean Water Act. These canals remain dry throughout much

of the late spring, summer, and fall months and retain water mainly from rainfall received during the winter months.

Fisherman's Lake, which is part of the Natomas West Drain, is located adjacent to the western boundary of the site. Although this feature is part of the irrigation drainage infrastructure of Reclamation District 1000 (RD 1000), it is subject to Clean Water Act jurisdiction, since it represents a natural wetland drainage feature. The lake and drainage canal are owned and operated by RD 1000 and a levee separates the site from the lake/canal area.

The 25.9-acre Natomas Central Lake is proposed for construction as a central feature of the project and would contribute to the open space on site. In addition to functioning as an open space area, Natomas Central Lake will also serve as the on-site detention basin for the project. The Natomas Central Lake will be designed to contain water year round in order to function both as a detention basin and a community feature. In order for the lake to function properly and to prevent excessive discharge requirements from groundwater seepage, a thick clay liner will be constructed for the basin due to the presence of a high water table on the project site. The depth of Natomas Central Lake is deep enough that aeration of the lake will not be required to prevent stagnation of waters contained therein. To minimize the use of chemicals needed to control mosquitoes, the Home Owners Association will be responsible for enforcing the Covenants, Codes and Restriction for the development, and mosquito vector control measures environmentally friendly methods that may be utilized include the use of mosquito fish within the detention basin for controlling of mosquitoes.

During the summer dry season the Natomas Central Lake elevation will be maintained at a depth of nine feet and will be maintained at a winter elevation of 11.5 feet. The lake level elevations will be controlled through the metering of discharges to ensure water is retained in the basin, since the on-site lake also provides an open space element for the project. Initial retention of the water within the basin will occur after construction of the basin is completed and seasonal rains and runoff are available to fill the basin. Storm water runoff collected during storm events by the on-site storm drain system will discharge into Natomas Central Lake and be allowed to gravity drain through an outlet structure into Fisherman's Lake to the west (Wood Rodgers 2004a). The design of Natomas Central Lake and outlet structure will ensure that discharges into Fisherman's Lake will not exceed 0.1 cfs/acre as required by RD 1000, and in addition to providing storm water detention, Natomas Central Lake will provide protection from flooding as its capacity has been designed to accommodate for a 100-year flood event. RD1000 will not have any operation responsibilities or ownership of Natomas Central Lake. Natomas Central Lake will be owned either in fee or easement by the City of Sacramento, and the City will have maintenance responsibilities in terms of the storm drain functions of the lake. The remainder of the maintenance requirements (e.g. debris cleanup, algal control, water quality tasks) associated with Natomas Central Lake will be the responsibility of the master project Home Owners Association.

2.4.4 Recreation Center

A 7.0-acre lot is dedicated for a proposed Recreation Center located in the northwest quarter of the project. Indoor facilities will include a community center, gymnasium, multi-purpose

rooms, and conference rooms along with other amenities. Outdoor areas will include areas for tennis courts, Bocci ball, barbeque pits, and a swimming pool.

2.4.5 Fire Station

The proposed Fire Station will be located in the southeast corner of the project site on a 3.6-acre lot. This fire station will serve the project and surrounding areas.

2.4.6 Elementary School

The construction of an elementary school is a component of the proposed project, and will be located on 8.0 acres of land near the center of the project, adjacent to the 5.0-acre park bordering the Natomas Central Lake. The proposed elementary school will be a part of the Natomas Unified School District.

2.4.7 Local Roads and Major Road Improvements

A total of 72.5 acres of the project site is designated for local road construction and roadway easements on site. The roads have been designed to promote safe vehicular travel and provide access to all parts of the subdivision. The project's internal roadways are also designed to provide local residents access to nearby commercial, recreational, and residential areas, as well as allow for adequate access to major roadways adjacent to the site. The project will also require the widening of Del Paso and El Centro roads and installation and upgrading of traffic signals consistent with the NNCP and NNFP to accommodate for the increased traffic associated with this project and development within North Natomas as a whole. Funding for the majority of these facilities is provided by the North Natomas Public Facilities Fee (PFF) as part of the City of Sacramento's 2003-2008 Capital Improvement Program. The purpose of the PFF is to coordinate funds among area developers for improving the capacity of major roadways within the North Natomas area (City of Sacramento 2004). A total of 9.5 acres of the project site has been allotted for improvements to Del Paso and El Centro roads.

2.4.8 Infrastructure and Utilities

Development of the project site will require the construction of infrastructure and utilities necessary to serve the project including sanitary sewer, water, storm drainage, electric and gas lines, and telecommunication facilities (phone and internet). The City of Sacramento will provide water, park maintenance, storm drain, fire and police services. Sacramento Municipal Utilities Department will provide electrical services, Pacific Gas and Electric Company will provide gas services, and the Sacramento Regional Sanitation District will provide sewer services for the project.

2.5 Land Use Designations and Amendments

The residential land use classifications within the General Plan and NNCP provide a density range for units per acre and are structured to provide consistency with other plans and zoning requirements. The General Plan and NNCP contain requirements for residential developments including restrictions on building height, building setbacks, and lot sizes for each designation. Residential land use designations are used to guide developers when designing and constructing residential communities. The land use designations provided by the General Plan differ from the land use designations of the NNCP. A comparison of the density allowances for the General Plan and NNCP are provided in **Table 2** and are depicted graphically in **Figure 3**, **Figure 4**, and **Figure 5**.

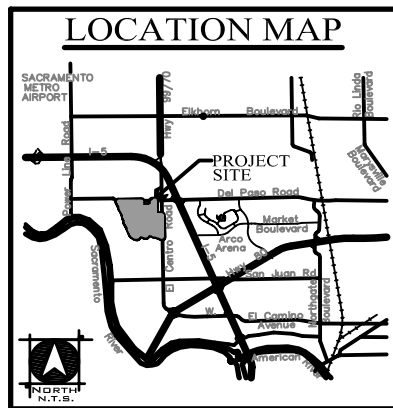
Table 2 — Land Use Designations

City of Sacramento General Plan		North Natomas Community Plan	
<i>Designation</i>	<i>Density Allowed</i>	<i>Designation</i>	<i>Density Allowed</i>
Rural Estates	0-4 units/acre	Rural Estates	Average of 1 unit/acre
LD residential	4-15 units/acre	LD residential	3-10 units/acre
MD residential	16-29 units/acre	MD residential	7-21 units/acre
HD residential	29 + units/acre	HD residential	11-29 units/acre

Based on the currently land use proposed for the project site amendments to the General Plan and NNCP will be required for the project. The additional land use and acreage changes that are proposed for the Natomas Central project area are provided in **Table 3** and **Table 4** (see **Figure 3**, **Figure 4**, and **Figure 5**). Based on the newly defined land use designations identified in the General Plan, Natomas Central will provide 233.5 acres of low-density residential and 71.9 acres of medium-density residential housing. Amendments to the NNCP land use designations will provide 129.9 acres of low density housing, 110.8 acres of medium density housing and 29.5 acres of high density residential. These amendments will ensure consistency between the project’s General Plan and NNCP land use designations. Therefore, for the purposes of this CEQA document, land use designations will follow the NNCP guidelines.

Table 3 — City of Sacramento General Plan Amendments

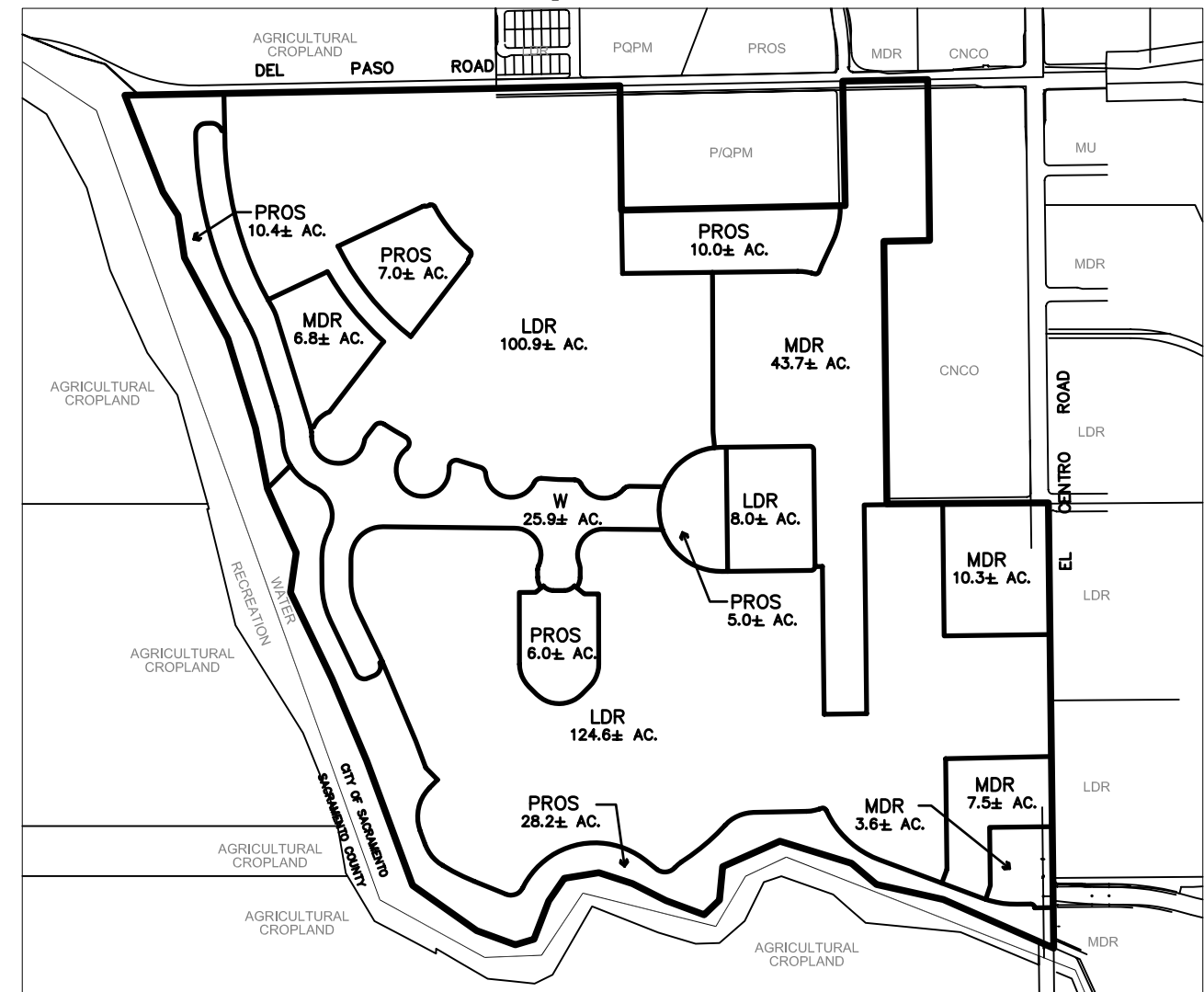
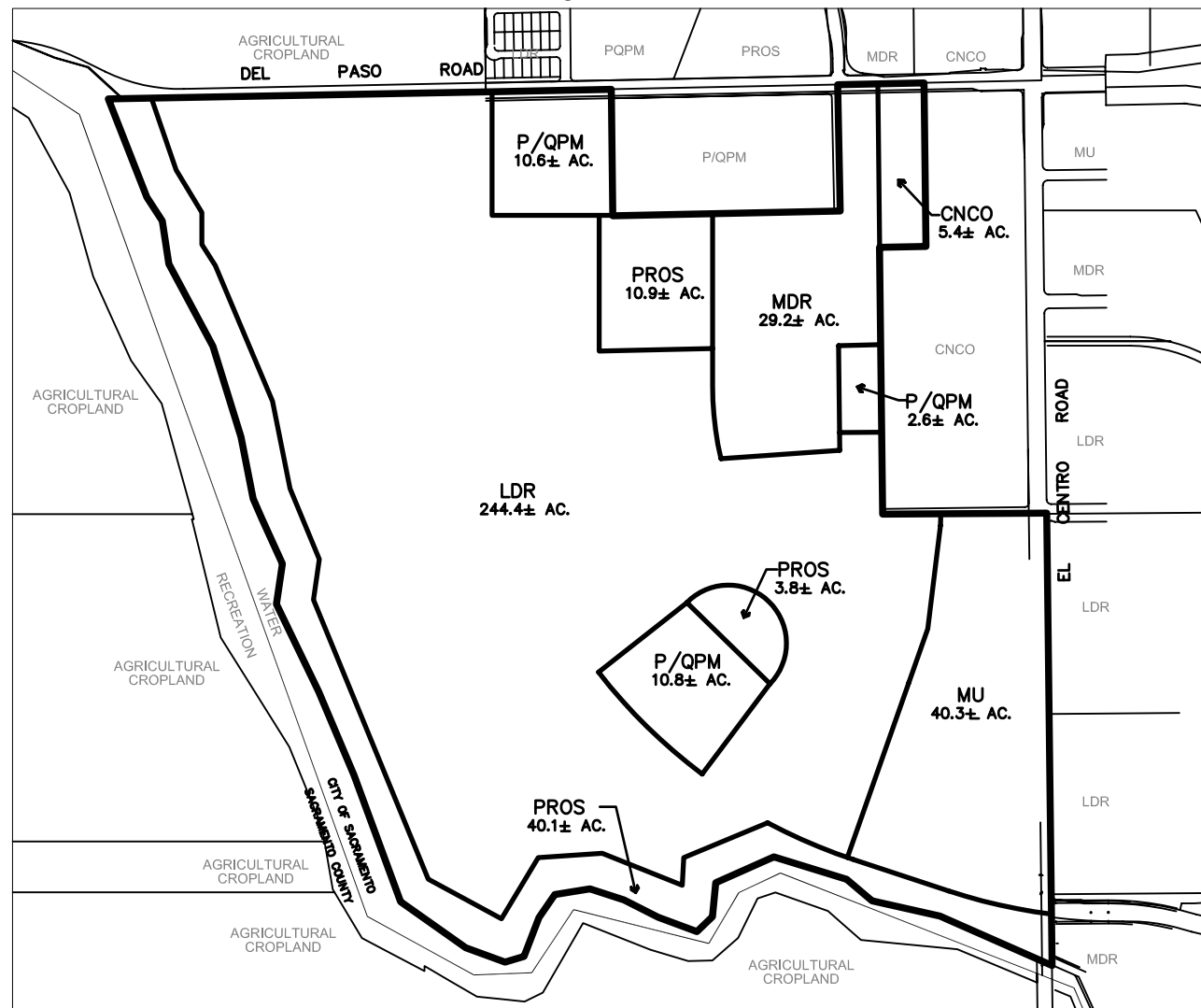
Existing General Plan Designation and Land Use	Acres	Proposed General Plan Land Use Designations	Acres
Low Density Residential	244.4	Low Density Residential	233.5
Medium Density Residential	29.2	Medium Density Residential	71.9
High Density Residential	0	High Density Residential	0
Parks/Recreation/Open Space	54.8	Parks/Recreation/Open Space	66.6
Public/Quasi-Public Miscellaneous	23.8	Public/Quasi-Public Miscellaneous	0
Mixed Use	40.3	Mixed Use	0
Community/ Neighborhood Commercial & Office	5.4	Community/ Neighborhood Commercial & Office	0
Water	0	Water	25.9
Total	397.9		397.9



GENERAL PLAN SUMMARY TABLE				
DESIGNATION	LAND USE	EXISTING	PROPOSED	DIFFERENCE
LDR	LOW DENSITY RESIDENTIAL (4-15 DU/AC)	244.4	233.5	-10.9
MDR	MEDIUM DENSITY RESIDENTIAL (16-29 DU/AC)	29.2	71.9	+42.7
PROS	PARKS-RECREATION-OPEN SPACE	54.8	66.6	+11.8
P/QPM	PUBLIC/QUASI-PUBLIC-MISC.	23.8	0	-23.8
W	WATER	0	25.9	+25.9
MU	MIXED USE	40.3	0	-40.3
CNCO	COMMUNITY/NEIGHBORHOOD COMM. & OFFICES	5.4	0	-5.4
		397.9	397.9	

Existing General Plan

Proposed General Plan



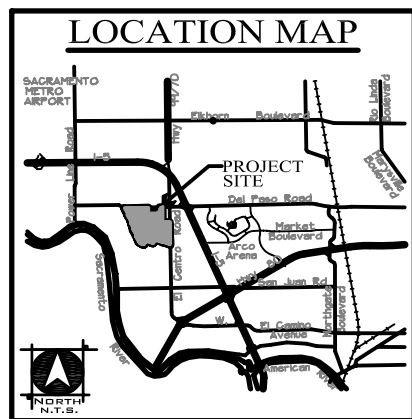
GENERAL PLAN AMENDMENT EXHIBIT



Digital base data provided by Wood Rogers



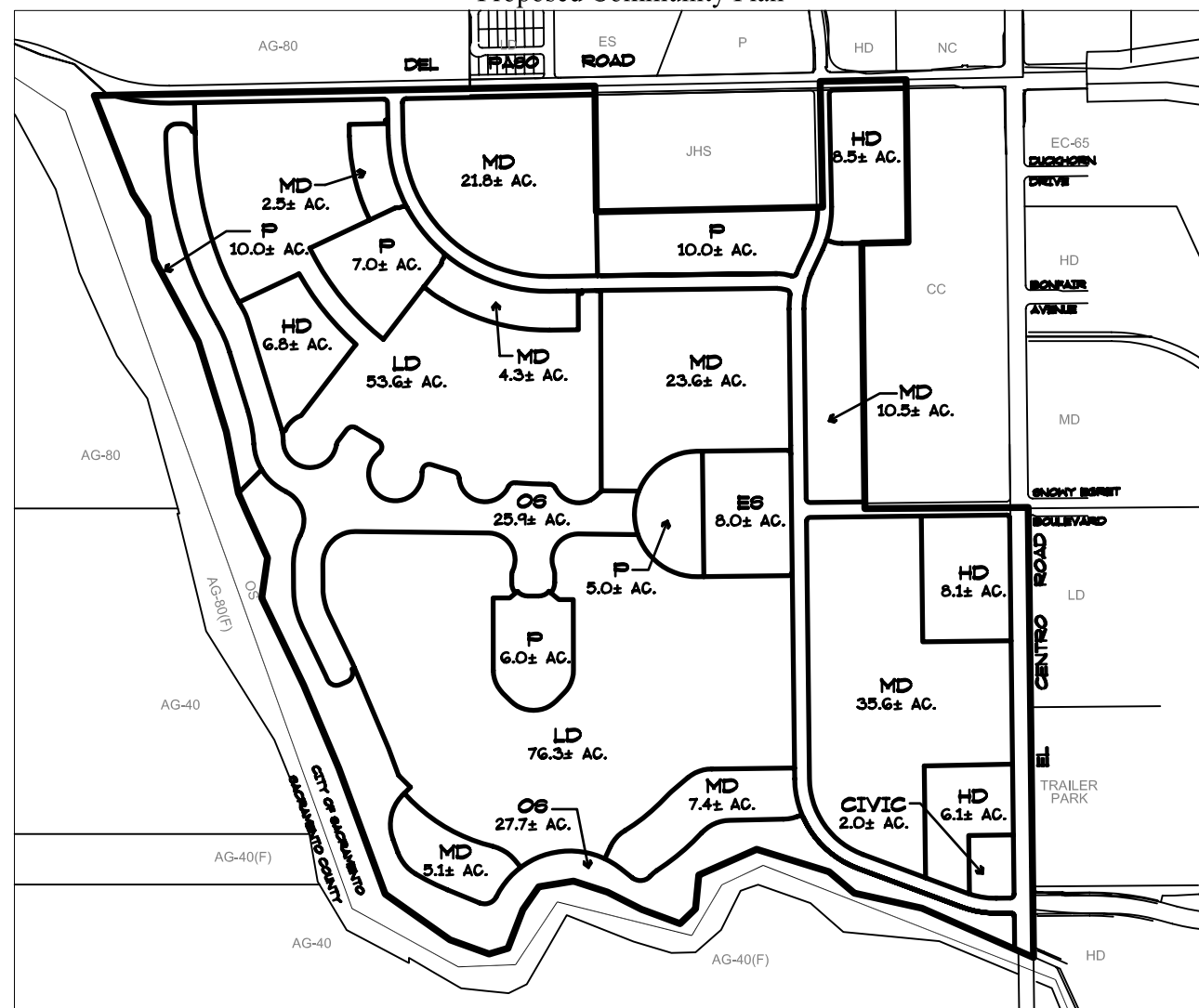
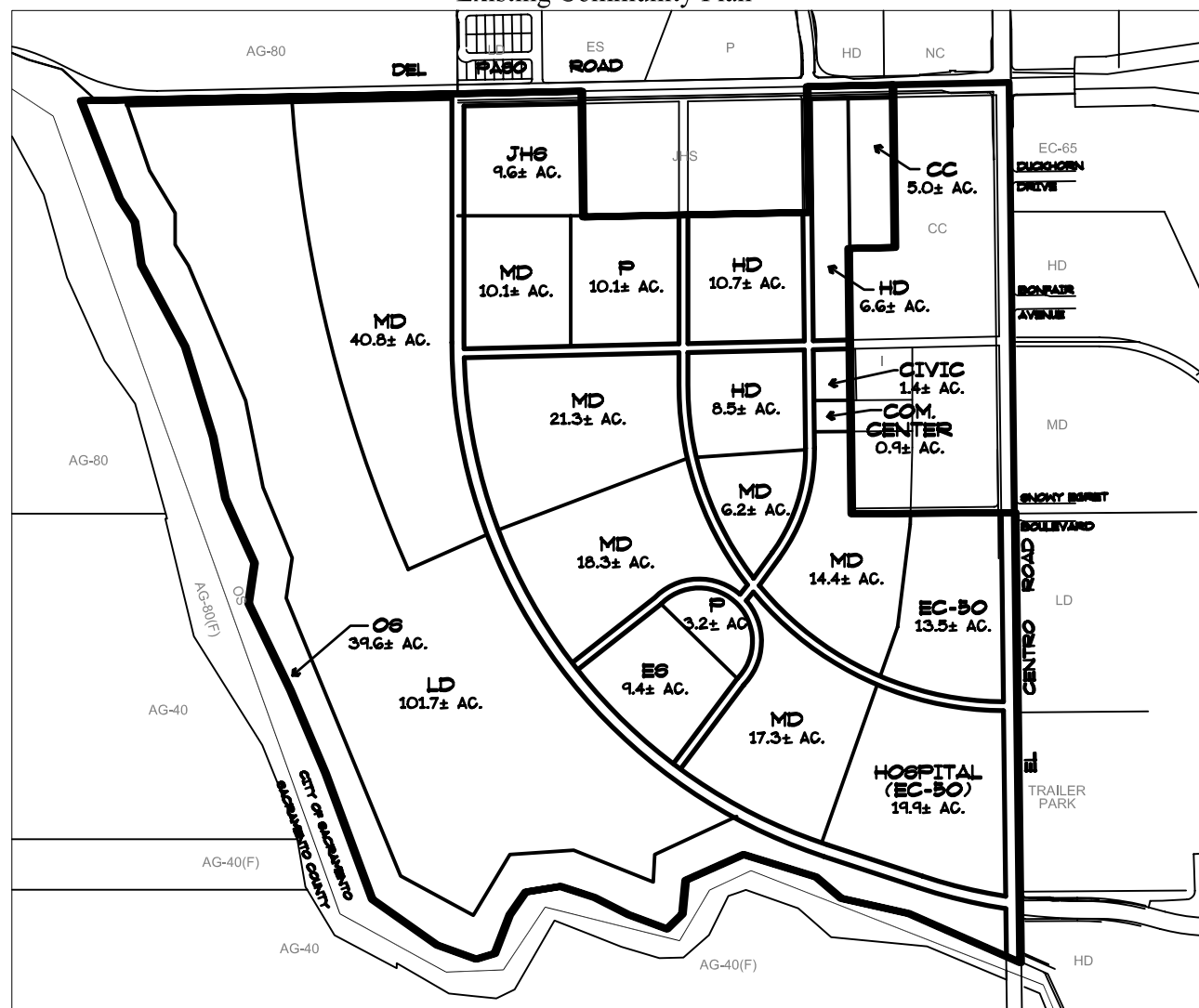
FIGURE 3



COMMUNITY PLAN SUMMARY TABLE				
DESIGNATION	LAND USE	EXISTING	PROPOSED	DIFFERENCE
LD	LOW DENSITY RESIDENTIAL (3-10 DU/AC)	101.7	129.9	+28.2
MD	MEDIUM DENSITY RESIDENTIAL (7-21 DU/AC)	128.4	110.8	-17.6
HD	HIGH DENSITY RESIDENTIAL (11-29 DU/AC)	25.8	29.5	+3.7
P	PARK/RECREATION	13.3	38.0	+24.7
ES	ELEMENTARY SCHOOL	9.4	8.0	-1.4
JHS	JUNIOR HIGH SCHOOL	9.6	0	-9.6
OS	OPEN SPACE	39.6	53.6	+14.0
CC	COMMUNITY COMMERCIAL	5.0	0	-5.0
CIVIC	FIRE STATION	1.4	2.0	+0.6
COM. CENTER	COMMUNITY CENTER	0.9	0	-0.9
EC-50	EMPLOYMENT CENTER (50 EMPLOYEES/NET AC.)	13.5	0	-13.5
HOSPITAL	HOSPITAL	19.9	0	-19.9
MAJOR + SECONDARY ROADS		29.4	26.1	-3.3
		397.9	397.9	

Existing Community Plan

Proposed Community Plan



COMMUNITY PLAN AMENDMENT EXHIBIT



Digital base data provided by Wood Rogers



SCALE IN FEET 0 500 1000

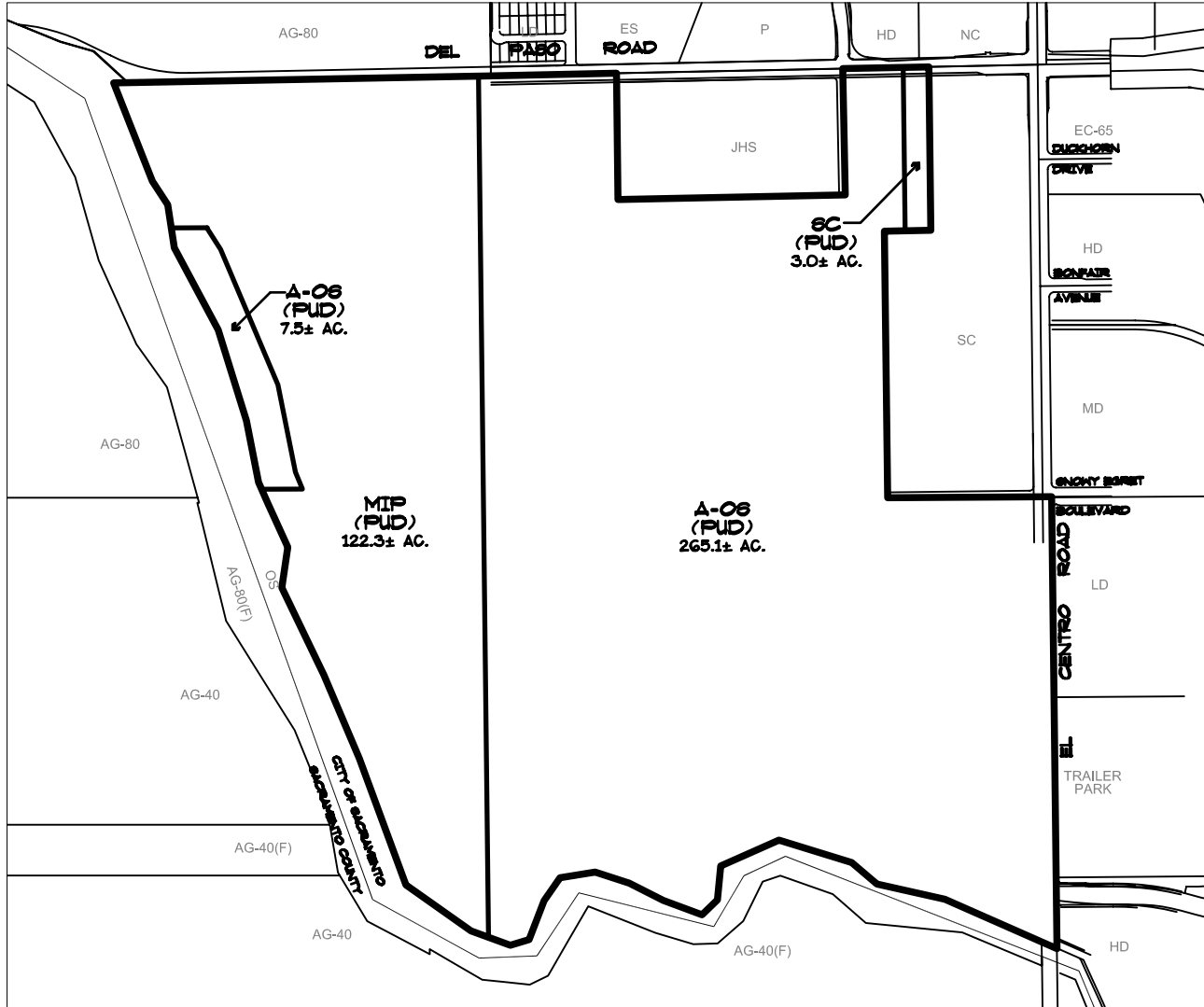
FIGURE 4



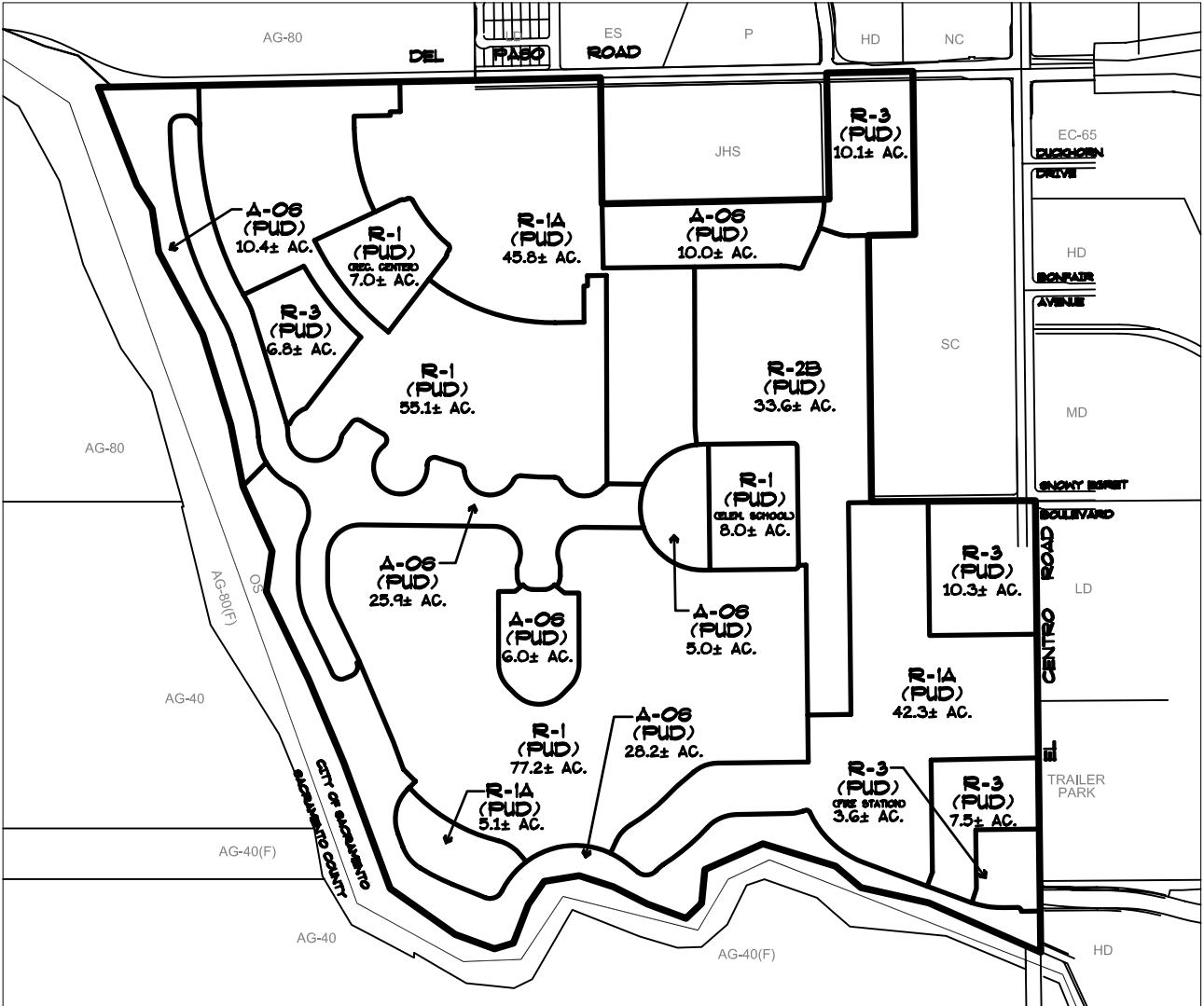
ZONING SUMMARY TABLE

DESIGNATION	LAND USE	EXISTING	PROPOSED	DIFFERENCE
MIP (PUD)	MANUFACTURING-INDUSTRIAL PARK	122.3	0	-122.3
SC (PUD)	SHOPPING CENTER	3.0	0	-3.0
R-1 (PUD)	STANDARD SINGLE-FAMILY	0	147.3	+147.3
R-1A (PUD)	SINGLE-FAMILY ALTERNATIVE (15 DU/AC MAX.)	0	93.2	+93.2
R-2B (PUD)	MULTI-FAMILY (21 DU/AC MAX.)	0	33.6	+33.6
R-3 (PUD)	MULTI-FAMILY (29 DU/AC MAX.)	0	38.3	+38.3
A-05 (PUD)	AGRICULTURE-OPEN SPACE	272.6	85.5	-187.1
		397.9	397.9	

Existing Zoning



Proposed Zoning



REZONE EXHIBIT



Digital base data provided by Wood Rogers



SCALE IN FEET 0 500 1000

FIGURE 5

Table 4 — North Natomas Community Plan Amendments

Existing Community Plan Designation	Acres	Proposed Community Plan Amendments	Acres
Low Density Residential	101.7	Low Density Residential	129.9
Medium Density Residential	128.4	Medium Density Residential	110.8
High Density Residential	25.8	High Density Residential	29.5
Parks/Recreation	13.3	Parks/Recreation	38.0
Elementary School	9.4	Elementary School	8.0
Junior High School	9.6	Junior High School	0
Open Space	39.6	Open Space	53.6
Community Commercial	5.0	Community Commercial	0
Fire Station	1.4	Fire Station	2.0
Employment Center	13.5	Employment Center	0
Community Center	0.9	Community Center	0
Hospital	19.9	Hospital	0
Major & Secondary Roads	29.4	Major & Secondary Roads	26.1
Total	397.9		397.9

2.6 Consistency with North Natomas Community Plan

Figure 4 shows a comparison of land uses proposed by the NNCP and the proposed project. Based on density calculations consistent with those provided by the NNCP, up to 2958 residential units could be developed on the project site. Under the proposed amendment, the project proposes development of 2533 units, which is 425 units less than what would be allowed by the NNCP. Furthermore, the calculations used to generate residents per household during the EIR and NNCP development process has likely decreased over the roughly 20 years since inception of the plan area. This results in a further reduction in the population assumptions used when estimating impacts to the environment. The proposed project, in addition, will provide 556 active adult residences, which on average would have two or less persons per household, which is below the residential occupancy averages according to 2002 Census data for the City of Sacramento. Based on the project components and assumptions used to generate the project's impact on the environmental issues discussed in this document, the proposed project should fall at or below the significance thresholds generated for the project site as determined through the NNCP EIR process.

2.7 Project Timeline

The Natomas Central project is expected to be developed over a four-year timeframe. Grading of the entire site, including the Natomas Central Lake basin, is proposed to begin in September 2005, and will be followed by a steady progression of development of the site in phases. Site preparation associated with the project development is expected to be complete by fall 2007, and home construction activities are expected to be completed by sometime

during 2009. This schedule is approximate and subject to change as a result of permitting requirements, approvals required for the project, and market conditions.

2.8 Required Discretionary Approvals

An Early Project Notification and tentative maps were submitted by K. Hovnanian Forecast Homes, the project proponent, to the City of Sacramento in September 2004 requesting various entitlements, establishment of the Natomas Central PUD (Planned Unit Development), and special permits. After consideration of comments received by the City and adoption of the required 200 to 300-foot buffer along Fisherman's Lake, the tentative map was revised, and the application is expected to be resubmitted to the City as follows, based on the current land use plan for the project. Refer to **Figure 3**, **Figure 4**, and **Figure 5** for amendment and rezoning information provided in this section.

- Environmental Determination: Mitigated Negative Declaration;
- Mitigation Monitoring Plan;
- Development Agreement between the City of Sacramento and K. Hovnanian Forecast Homes;
- Inclusionary Housing Plan;
- General Plan amendment requesting included the redesignation of the 397.9 acres of the property from 244.4 acres of Low Density Residential, 29.2 acres of Medium Density Residential , 54.8 acres of Parks/Recreation/Open Space, 23.8 acres of Public/Quasi-public Miscellaneous, 40.3 acres of Mixed Use, and 5.4 acres of Community/Neighborhood Commercial and Office **to** 233.5 acres of Low Density Residential, 71.9 acres of Medium Density Residential, 66.6 acres of Parks/Recreation/Open Space, and 25.9 acres of Water;
- Community Plan amendment requesting the redesignation of 101.7 acres of Low Density Residential, 128.4 acres of Medium Density Residential, 25.8 acres of High Density Residential, 13.3 acres of Parks/Recreation, 9.4 acres of Elementary School, 9.6 acres of Jr. High School, 39.6 acres Open Space, 5.0 acres of Community Commercial, 1.4 acres of Fire Station, 0.9 acres of Community Center, 13.5 acres Employment Center, 19.9 acres Hospital, and 29.4 acres Major and Secondary Roads **to** 129.9 acres Low Density Residential, 110.8 acres Medium Density Residential, 29.5 High Density Residential, 38.0 acres Parks/Recreation, 8.0 acres Elementary School, 53.6 acres Open Space, 2.0 acres Fire Station, and 26.1 acres Major and Secondary Roads;
- Rezoning requests including 122.3 acres of Manufacturing-Industrial (MIP), 3.0 acres of Shopping Center (SC), and 272.6 acres of Agriculture/Open Space (A-OS) **to** 147.3 acres Standard Single Family (R-1), 93.2 acres of Single Family Alternative (R-1A), 33.6 acres of Multi-Family Residential (R-2B), 38.3 acres of Multi-Family Residential (R-3), and 85.5 acres of Agricultural/Open Space (A-OS);
- A request to establish PUD Guidelines and Schematic Plan for the 397.9-acre parcel to be known as Natomas Central Planned Unit Development (PUD);

- Submittal of the Tentative Master Parcel Map to the City of Sacramento requesting subdivision of the site into 41 residential, park, open space, and school parcels;
- Tentative Map requesting the subdivision of 397.9 acres into 1,788 single family lots, 29.2 net acres of multi-family/high density residential, four parks sites totaling 31.0 net acres, a 8.0 net acre elementary school site, a 7.0 net acre private recreation center, a 25.9 acre detention basin/lake, a 2.0 net acre fire station site, and 27.7 net acres of open space;
- Special Permit requests to construct 2533 residential units on 212.8 net acres in the Standard Single-Family (R-1), the Single-Family Alternative (R-1A), and Multi-Family (R-2B, R-3 and R-4) zone within the Natomas Central PUD; and
- Special Permit to construct a private recreation center on 7.0 net acres in the Natomas Central PUD is to be submitted to the City of Sacramento Planning Department.
- Consistent with the requirements of the NBHCP, the project proponent has complied with all mitigation requirements by transferring 216 acres of land to TNBC and previously paying all non-land acquisition components of the NBHCP mitigation fee to the City.

3.0 ENVIRONMENTAL CHECKLIST AND DISCUSSION

3.1 Land Use

Issues:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than significant Impact
Would the proposal:			
A) Result in a substantial alteration of the present or planned use of an area?			X
B) Affect agricultural resources or operation (e.g., impacts to soils or farmlands, or impact from incompatible land uses?)			X

3.1.1 Environmental Setting

The Natomas Central project site is located in the Natomas Basin portion of the Sacramento Valley, within the City of Sacramento. The project is situated approximately ½-mile east of the Sacramento River, north of the confluence of the Sacramento and American Rivers, and south of the Sutter/Sacramento County line. The projects western and southern boundaries are adjacent to Fisherman’s Lake, which forms part of the Natomas West Drainage Canal. Fisherman’s Lake also defines the City of Sacramento and County of Sacramento city/county line. East of the county line and north of Del Paso Road is the Westborough subdivision. Existing residential developments and a mobile home park are located along the eastern side of El Centro Road. Along the eastern edge of Sacramento County to the west and south is County Agriculture land.

Historically the area was predominantly riparian-scrub, with large areas of open plains farmland. Prior to the construction of flood protection levees, there were several inland lakes located in the vicinity of the project site. These large inland lakes formed when the natural levees that formed along the riverbanks of the lower Sacramento River overtopped during flood events creating flooded basins and inland lakes. These lakes gradually receded and released water back into the river via sloughs as the rivers levels receded. Fisherman’s Lake is a remnant of a natural slough that drained the American Lake Basin prior to reclamation (Padre Associates, Inc. 2004). Levee and canal improvements since the early 1900s enabled conversion of significant land areas within the project vicinity to agricultural production, and in the recent past, the project site was utilized for production of hay and rice crops.

The soil composition of the area contains high amounts of clay which make it favorable for irrigated rice farming, and this type of land use dominated the area during the 1940s (U.S. Fish and Wildlife Service and California Department of Fish and Game 2003). Today the dominant agricultural crops grown in the project vicinity include rice, corn, grain, and tomatoes. Land use in the vicinity includes areas of residential and commercial development and agricultural activities including farming of various crops and cattle grazing. Significant landmarks in the vicinity of the project include

Sacramento International Airport, Arco Arena, Northgate Industrial Park, and Witter Ranch Historic Farm.

A majority of the remaining agricultural lands within the City of Sacramento are situated in the North Natomas area. Section 6 (Conservation and Open Space Element) of the General Plan, describes goals and policies for conservation of, and opens space used for, the managed production of resources. Goal A of this element is to retain land inside the City for agricultural use until the need arises for development, and to support actions of Sacramento County to similarly conserve its land until needed for urban growth. Policy 1 of this element allows for phasing the conversion of agricultural lands to urban uses while implementing the policies of the NNCP. The NNCP designates agricultural land within the community as “121 acres of agriculturally designated land located adjacent to Interstate 5 at the northwest corner of the plan area”. This agriculturally designated area is located in the County portion of the Community Plan area, located west/southwest of the project site.

Recent implementation of the North and South Natomas Community plans has encouraged development of the area to provide residential, commercial, and civic opportunities. The Natomas area is designated as a significant growth area under the General Plan and North Natomas improvements are expected to accommodate for 35 percent of the needed residential housing and 30 percent of the required jobs within the City (City of Sacramento 1996). Several residential communities have been completed and several are in various stages of development within the plan areas, with approximately 80 percent of plan area built out. Additionally, transit and road improvements within the community are being incorporated as well to compensate for the increased volume of traffic and use of the area, including expansion of light rail lines and new bus routes.

In order to develop the Natomas Central PUD project as currently proposed it is necessary to amend the General Plan and NNCP land use designations of the project as outlined in Section 2.7 of this document. The current General Plan and NNCP land use designations shall be amended so that they are consistent with the planned land use for the Natomas Central project. The basis of approval for these amendments shall reside on a finding of the City of Sacramento City Council that the project is in compliance with the North Natomas Development Guidelines, and is consistent with the General Plan and NNCP goals and objectives.

The approved development of the project site will incorporate guidelines and requirements of the General Plan and NNCP. Compliance with these documents will ensure that impacts to the environment will be minimized, and the project is in compliance with established zoning and development guidelines. The project proponent has worked with TNBC and has satisfied the NBHCP mitigation requirements by transferring 216-acres of land located in Sutter County to TNBC and by paying all non-land acquisition components of the NBHCP mitigation fee to the City.

3.1.2 Standards of Significance

For the purposes of this analysis, an impact is considered significant if the project would substantially alter an approved land use plan that would result in a physical change to the environment, or result in affects to agricultural resource operations. Impacts to the physical environment resulting from the proposed project are discussed in subsequent sections of this document.

3.1.3 Answers to Checklist Questions

- A) Existing and proposed land uses within the project area were assessed based on a review of existing planning documentation including the General Plan, NNCP, a site visit by Foothill Associates staff, information provided by the City of Sacramento Planning Department, and the project applicant. The proposed project includes the development of 705 low density residential lots, 1083 medium-density residential lots, and 745 high density multi-family lots on 286.3 acres, including low, medium, and high density lots designated for the active adult community. In addition, four parks totaling 31.0 acres, a 25.9-acre lake/detention basin, 27.7 acres of open space, a 8.0-acre elementary school site, a 7.0-acre recreation center, a 2.5-acre fire station lot, and 72.6 acres devoted to local roads, driveways, and alleys are part of the land use plan for Natomas Central. Additional infrastructure improvements to support the development include water and sewer lines, electrical and gas lines, drainage facilities, and 9.5 acres devoted to improvements of Del Paso and El Centro roads. These infrastructure improvements will be necessary to implement the construction and operation of the Natomas Central project, and will not require alteration or amendments to existing land use plans, and will be consistent with the planned development covered by the NNCP. No off-site improvements are part of the proposed project.

Natomas Central will require amendments to existing General Plan and NNCP zoning designations, and final development plans for the Natomas Central PUD will require approval from the City of Sacramento. The proposed PUD amendments and zoning changes that will be required are outlined in detail in Section 2.7 of this document and will address changes in land use from Agriculture-Open Space (A-OS), Manufacturing-Industrial Park (MIP), and Shopping Center (SC), to Standard Single Family (R-1), Single Family Alternative (R-1A), Multi-Family (R-2B, R-3, and R-4), and Agriculture-Open Space (A-OS) under the current General Plan zoning and reconfigure the various land uses of the site. Although the proposed land use changes from the NNCP and General Plan result in a decrease of overall acreage devoted to mixed use, and an increase in residential development, the overall zoning and land use changes within North Natomas have been described in the NNCP, and these land use changes are not significantly different from what is currently proposed. These amendments will also address some of the overlapping zoning and land use designations that currently exist between the General Plan and NNCP. In addition, the increase in residential development for the project site will help address the anticipated population growth for the area.

Based on an evaluation of the Natomas Central PUD, the project is considered consistent with the goals, guidelines and policies of the General Plan, and the NNCP, since the planned use of the area will not be significantly altered by implementation of the proposed project, and since the required amendments are not proposed with the purpose of avoiding or mitigating for environmental affects. A less than significant impact to present or planned uses is expected as result of the project.

- B) Recent farming activities on the site include the harvest of hay crops during 2004, with periods of historic rice farming. Currently the site has been disked and is fallow. The conversion of agriculture lands of the Natomas Central project to urban uses falls within the developmental policies of the General Plan, and the NNCP. According the North Natomas Community Land Use Plan, the site is located within an area designated for mixed use incorporating low, medium and high density residential with parks, recreation, schools, open space, commercial, civic, community center, and employment center land uses. The affect on agricultural resources or operations from the project was considered and addressed during the development of the NNCP. The Plan designates 121 acres of land designated for agriculture located adjacent to Interstate 5 in the northwest corner of the plan area, and is located in the Sacramento County's portion of the plan area. As a result of the anticipated conversion of agricultural land to urban uses, the projects land use plan is consistent with the planned land use for the area, and as such a less than significant impact to agriculture is expected. The conversion of agricultural farmland to urban uses has been approved by the General and Community plans in order to accommodate for expected growth in the area. The conversion of agricultural farmland was also covered by the Environmental Impact Report that was prepared for the NNCP. The project is consistent with the planned use of the area.

Mitigation Measures

None required.

3.1.4 Findings

The Natomas Central project is consistent with the policies and guidelines of both the General Plan and the NNCP. The proposed development will not result in a substantial alteration of the current and planned land use of the North Natomas area, or affect planned agricultural resources or operations as a result of the project, including impacts to soils, farmlands, or incompatible land uses since the conversion of agricultural lands was anticipated and planned for in the development of the NNCP. The project will result in a less than significant impact to land use.

3.2 Population and Housing

Issues:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than significant Impact
Would the proposal:			
A) Induce substantial growth in an area either directly or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?			X
B) Displace existing housing, especially affordable housing?			X

3.2.1 Environmental Setting

The population of the City of Sacramento was 407,018 according to the 2000 Census. In 2005, an estimated 446,960 people were projected by the Sacramento Area Council of Governments (2004c) to reside within the City of Sacramento, with North Natomas designated as the major growth area. These growth projections will require an estimated 10,500 additional housing units to accommodate for the growth in population within the City limits. According to the General Plan and the NNCP, it is anticipated the North Natomas area will provide approximately 35 percent of the new housing and 30 percent of the new jobs within the City.

According to City of Sacramento, Department of Finance a high growth rate is anticipated for the California Central Valley metropolitan areas when compared to the coastal metro areas, and the projected growth within the interior of the Central Valley growth is almost twice the rate expected statewide (City of Sacramento Development Services Department, Planning Division, Long Range Planning 2004). These rates of growth reflect current land availability and market conditions that are seen as favorable to job and housing growth. The recent growth rates observed within the City of Sacramento from 2000 – 2003 largely reflect the build out of North Natomas. 2003 population estimates for the North Natomas Community Plan area were 24,935, with population estimates for 2010 and 2025 of 57,000 and 66,864 respectively. The residential housing estimate for Natomas Central in 2010 is estimated to be 23,359 dwelling units. From 2000 to 2003 the NNCP area added an additional 9,190 housing units and saw an increase in population of 23,300 people. In fact, the City report states that 58% of the near term (2004-2010) increase in dwelling units will occur in North Natomas, greatly exceeding the expected growth rates in other community plan areas within the City limits.

Employment opportunities in the North Natomas area have increased along with the recent development of the Community Plan area. In 2003 the North Natomas area provided an estimated 3,188 jobs, with of majority of these outside of the retail job market (2,789). The City’s 2004 Population and Housing Report (City of Sacramento Development Services Department, Planning Division, Long Range Planning 2004)

states that approximately 78% of the near term (2004-2010) employment opportunities will be from the North Natomas, South Natomas, and South Sacramento areas.

Policies and guidelines outlined in the General and Community Plans are designed to offset the negative impacts from urban development by implementing design features which minimize the developments' contribution to pollution, traffic congestion, and demands for public services and natural resources. The NNCP incorporates an integrated mixture of residential, employment, commercial, and civic uses, and the community is arranged as a radial network around a centrally located town center, that will provide linkages between activity centers, streets, transit routes, and pedestrian/bicycle paths. Additional light rail and bus services are proposed for the North Natomas area, and are contingent upon funding, which has yet to be finalized. The provision of integrated quality transit services is a key feature of the Community Plan.

3.2.2 Standards of Significance

For the purposes of this analysis, an impact is considered significant if the project would induce substantial growth that is inconsistent with the approved land use plan for the area or displace existing affordable housing.

3.2.3 Answers to Checklist Questions

- A) Section 15126.2 (d) of the CEQA Guidelines describes a growth inducing impact as an impact that fosters economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Growth inducement may be considered a significant impact if the growth is not consistent with or accommodated by the land use plans and growth management plans and policies for the area affected. Local land use plans provide development patterns and growth policies that guide orderly urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer services, and solid waste services. A project that would induce "disorderly" growth (i.e., conflict with the local land use plans) could directly or indirectly cause additional adverse environmental impacts and other public services. Typically, the growth-inducing potential of a project would be considered significant if it fosters growth or a concentration of population above what is assumed in local and regional land use plans, or in projections made by regional planning authorities. Significant growth impacts could also occur if the project provides infrastructure or service capacity to accommodate growth levels beyond those permitted by local or regional plans and policies.

The current land use designations for the site contain a mixture of low, medium and high density residential, with parks, recreation, schools, open space, commercial, civic, community center, and employment center land uses. The current density of the proposed residential portion of the project is approximately 11.90 du/na, and includes a mix of low, medium, and high density lots orientated into 30 residential villages distributed throughout the project site.

The development of a large residential community similar to Natomas Central will by default contribute additional people to the area as a direct result of the increase in additional housing. A substantial portion of these residents will require employment within a reasonable commuting distance. Although this may be considered substantial growth, the demand for housing and employment needs within the City of Sacramento was anticipated and planned for during the process of creating the NNCP, and environmental impacts associated with the implementation of the NNCP were evaluated during the EIR process. The approval of the General Plan and NNCP amendments discussed in this document will allow the development of the project to meet the target densities identified in the 1996 NNCP, and because infrastructure improvements, employment generators, industrial, institutional, and commercial land uses are part of the community plans, the project will not significantly alter the expected population of the area. In addition, the NNCP has provided for ample employment opportunities for NNCP residents at full buildout.

Portions of El Centro and Del Paso roads located adjacent to the project site will require improvements (signaling and widening) to meet the transportation and safety needs of residents of Natomas Central. While this may be considered an indirect growth inducing impact, these road improvements are necessary for implementation of the project, and were anticipated during development and environmental review of the NNCP. The steady development within the NNCP area over the last decade has resulted in the construction of new roads and the improvement of existing roadways, and these improvements will need to continue in order for the connectivity within the NNCP area as a whole to function properly.

The proposed project is located within an area planned for development, and a significant portion of the NNCP area has been developed over the past several years. Development of the proposed project will not significantly impact population beyond what has already been planned for and approved within the City limits. Therefore, impacts to population and housing are anticipated to be less than significant.

- B) The project site is currently undeveloped. The project will not displace existing housing, affordable or otherwise, because no existing housing units are situated within the project boundaries. Impacts to existing housing are considered less than significant.

Mitigation Measures

None required.

3.2.4 Findings

The development of the Natomas Central project will result in additional housing units and road improvements, which will result in substantial growth within the City of

Sacramento. This growth has been anticipated for through development of the NNCP, and the implementation of projects within the NNCP will help address the expected housing and employment needs anticipated within the City limits over the next decade. This population growth is not considered significant since it is part of an approved community plan for the North Natomas area. No residents or homes currently exist within the project boundaries and as such displacement of existing housing or people will not result from the project. Impacts to population and housing are expected to be less than significant.

3.3 Seismicity, Soils, and Geology

Issues:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than significant Impact
Would the proposal result in or expose people to potential impacts involving:			X
A) Seismic hazards?			
B) Erosion, changes in topography or unstable soil conditions?		X	
C) Subsidence of land (ground water pumping or dewatering)?		X	
D) Unique geologic or physical features?			X

3.3.1 Environmental Setting

The project site is located in a geologic area of California known as the Great Valley, and this area is characterized by thick sequences of alluvial and floodplain deposits of sedimentary material from the Cascade Mountains to the west and the Sierra Nevada range to the east (Wallace-Kuhl & Associates 2004b). Much of the soils on site are comprised of silt and clay deposited from the Sacramento River during flood events, and a majority of the topography within this area of the Central Valley has been altered by human activities through agriculture, flood control projects, transportation projects, and residential, commercial, and industrial development.

The U.S. Soil Conservation Service (1993) mapped the following four soil units on the project site (**Figure 6**) described below.

3.3.1.1 Soils

Clear Lake clay, hardpan substratum, drained, 0 to 1 percent slopes – Clear Lake clay, hardpan substratum, drained, 0-1 percent slopes is very deep and deep artificially drained soil found in basins. This soil type is associated with levees, drainage ditches, and pumps that have lowered the water table and altered the drainage of the soil, and is formed in somewhat poorly drained, fine textured alluvium derived from mixed rock sources. The hazard of flooding for this soil type is reduced due to the creation of levees and large upstream dams. Deep cracks may form when the soil is dry, and the slopes are flat due to land leveling. Inclusions are those soil units making up a small component of the overall soil type. Inclusions in this soil unit make up about 15 percent of the total acreage, and include small areas of Cosumnes and San Joaquin soils, with the San Joaquin soils located on low terraces.

Permeability is slow in Clear Lake clay soil, and water capacity is moderate. The shrink-swell potential is high, and runoff is very slow. The hazard of erosion for Clear Lake clay ranges from no hazard at all to a slight erosion hazard, and this soil is subject to rare flooding. The water table in this soil type is found mainly at a depth of approximately 5-

6.5 feet though occasionally is found deeper or not reached at all within a 20 foot sample depth.

The primary limitations affecting urban uses with Clear Lake clay are the high shrink-swell potential, low strength, depth to seasonal high water table (which is observed during the winter months during periods of seasonal rainfall in the project area), slow permeability, very slow runoff, flooding, and sloughing. Sloughing is a hazard associated with shallow excavations, such as trenches and holes. Properly graded building sites will help to divert water away from foundations and will help prevent ponding of water in adjacent areas. Excess runoff can be removed by designing a system of drainage ditches or drainage pipes. Buildings constructed on this clayey soil require properly designed foundations and footings to divert runoff away from buildings and to prevent structural damage that can result from shrinking and swelling of the soil. Properly designed streets and roads will help to compensate for the instability of the soil. This soil type comprises approximately 50 percent of the project soils, with a large section located along Fisherman's Lake in the southern and western portions of the site.

Cosumnes silt loam, drained, 0 to 2 percent slopes - This soil type is very deep, artificially drained soil found on narrow, low floodplains. Levees and ground water overdraft have altered the drainage of this soil type. Slopes are flat. The hazard for flooding is diminished as these soils are subject to rare floods due to the protection provided by surrounding levees. The surface area is typically a pale brown silt loam of a thickness of approximately 8 inches. The next 13 inches is pale brown silty clay loam and clay followed by 22 inches of a buried surface layer of gray clay. To a depth of 60 inches is a layer of gray and pale brown clay loam.

Permeability is slow in the Cosumnes soil, and this soil type has a high available water capacity. Depth to the water table is greater than 72 inches. The shrink swell potential for this soil type is high, with slow runoff and a slight hazard of erosion. Cosumnes silt loam makes up less than 10 percent of the project soils and is confined to a small area along the eastern project boundary with El Centro Road.

Jacktone clay, drained, 0 to 2 percent slopes - Jacktone clay is a moderately deep, artificially drained soil found in high areas of basins. Levees, drainage ditches, and pumps have lowered the water table and altered the drainage of the soil. Slopes are flat or slightly convex. The hazard for flooding is lowered due to the surrounding levees and this soil is subject to rare flooding. The soil formed in somewhat poorly drained, fine textured alluvium derived from mixed rock sources. The surface layer is typically very dark gray clay. At a depth of approximately 11 inches there is a layer of very dark gray and gray clay until a depth of about 24 inches where an 18 inch thick layer a light brownish gray and gray hardpan weakly cemented with silica can be found. The hardpan is covered by a hardened layer about 2 millimeters thick, with the underlying material to a depth of 60 inches composed of light yellowish brown sandy loam.

Permeability is slow in Jacktone clay soil, and the available water capacity is moderate. Depth to hardpan is 20-40 inches, with depth to water table eight feet or greater (often greater than 20 feet). The shrink swell potential is high, runoff is very slow, and the

hazard of water erosion is slight to none. Jacktone clay makes up about 20 percent of the project soils, with two sections located in the northern half of the project site.

San Joaquin-Galt complex, leveled, 0 to 1 percent slopes - This soil complex is found on low terraces with flat slopes. It is comprised of approximately 45 percent San Joaquin soil and 40 percent Galt soil, with the San Joaquin soil found in areas slightly cut when leveled and Galt soil found in areas slightly filled. The water table in this soil type is found at a depth of eight feet or greater, often lying at a depth of greater than 20 feet.

San Joaquin soil is moderately deep and moderately well drained. The surface layer is typically approximately 15 inches of strong brown silt loam which is underlain by a 5-inch thick claypan of yellowish red clay loam. The next layer is a hard pan layer approximately 26 inches thick, with a substratum to a depth of 60 inches composed of light yellowish brown loam.

Permeability is very slow with water perching above the claypan for short periods after a heavy rainfall in winter and early spring when soil is over irrigated. Available water capacity is low. The hardpan depth ranges from 20 to 36 inches. The shrink-swell potential is high, runoff is very slow, and the hazard of water erosion is slight to none.

The Galt component of the soil is moderately deep and moderately well drained. It is typically covered with fill material of pale brown silt loam about 6 inches thick. The surface layer extends approximately 13 inches below this and is grayish brown clay. The next layer is grayish brown and brown clay about 19 inches thick. This is underlain by a yellowish red and light yellowish brown, calcareous hardpan weakly cemented with silica.

Permeability is low for this soil type with low available water capacity. The depth to the hardpan is 24-40 inches. The shrink swell potential is high, runoff is very slow, and the hazard for water erosion is slight. San Joaquin-Galt complex comprises approximately 20 percent of the project soils, and is centrally located extending towards the eastern project boundary.

Seismicity. The Natomas Central project site is not located on an Alquist-Priolo Earthquake Fault Zone, and there are no known active faults in Sacramento County. Few earthquakes have occurred in the vicinity of Sacramento County and those that have occurred were of low magnitude. Even though the Central Valley is considered less seismically active than other areas of California, it is still susceptible to some degree of seismic groundshaking due to earthquake faults located in the surrounding area. Nearby faults include the Foothills/Bear Mountains System, Coast Range-Sierran block boundary, the San Andreas Fault, and others.

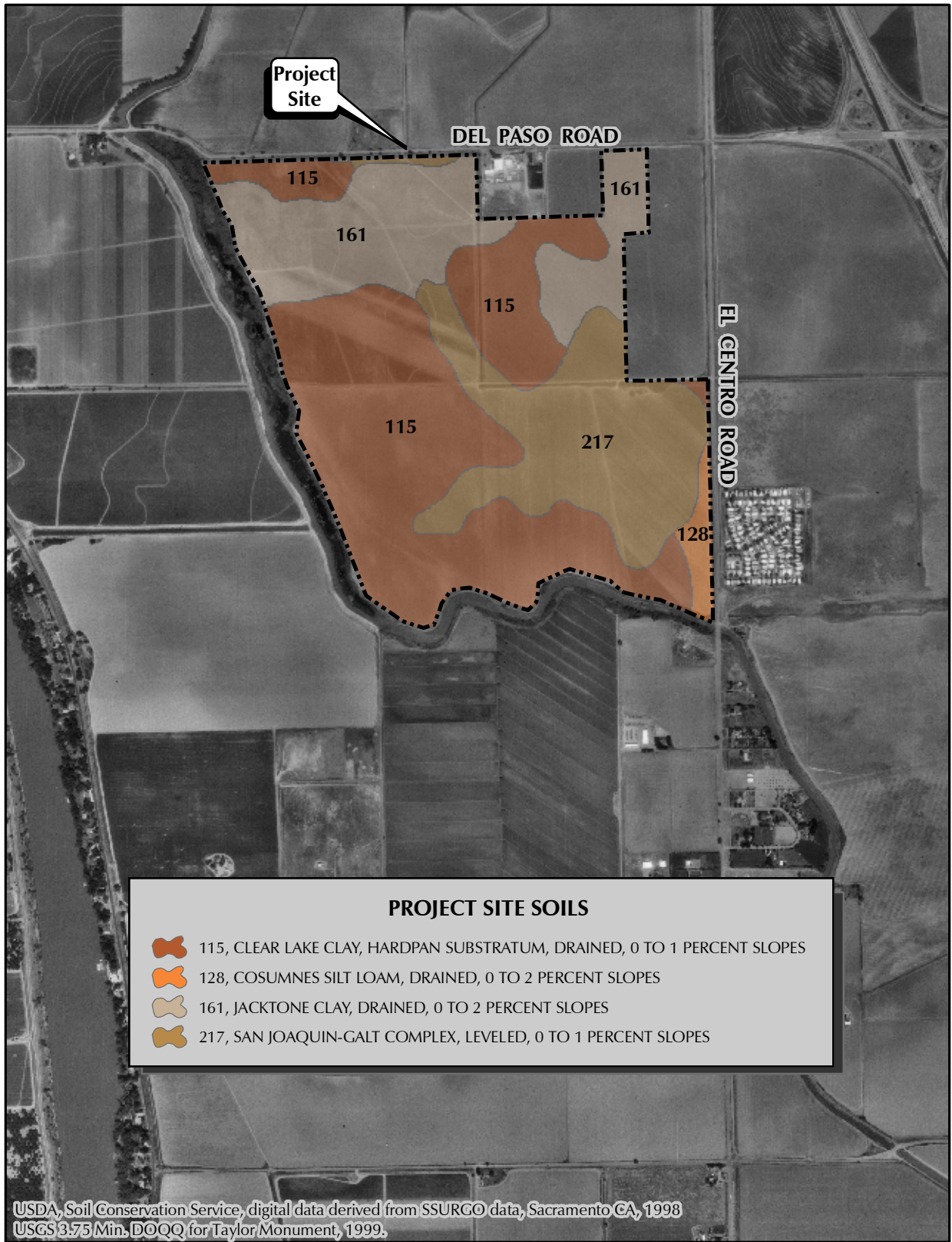
Type A faults describe those faults that have a moment magnitude potential of less than 7.0 and a slip rate equal to or greater than 5 mm/year (Western States Seismic Policy Council, 2005). These types of faults are considered to be active and capable of producing large magnitude events. Most segments of the San Andreas Fault can be classified as a Type A fault. Type C faults are those faults that have a moment magnitude



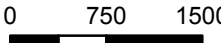
potential of less than 6.5 and a slip rate of less than or equal to 2 mm/year. Type C faults are considered to be sufficiently inactive and not capable of producing large magnitude events such that potential near-source ground shaking effects can be ignored. Most faults outside of California are Type C. Type B sources are all faults that are not either Type A or Type C and include most of the active faults in California. A review of California Department of Conservation fault maps for California performed as part of the geotechnical engineering report conducted by Wallace-Kuhl & Associates, Inc. (2004b) for the project site did not reveal any Type A or B faults within 15 km of the site.

Topography. The project site is relatively flat and typical of the Central Valley topography with on-site elevations ranging from 14 feet above mean sea level (MSL) near Fisherman's Lake to approximately 20 feet above MSL near the existing junior high school located just north of the northeastern project boundary. Due to the presence of limited low grade slopes on site and the site's flat topography and location in a low risk earthquake zone, the potential for earthquake induced landslides is low.

Regional Geology. The Central Valley is 400 miles long, 20-70 miles wide and covers an area of over 20,000 square miles. The valley formed as a subsiding basin between the Coast Ranges to the west and the Sierra Nevada to the east. The Central Valley gradually filled with sedimentary deposits, largely composed of material eroded from the Sierra Nevada and Coast Range, and this material was deposited in low alluvial fans, underlain by marine sediments (U.S. Geological Survey 2004a). A large aquifer system is located beneath the Central Valley and is grouped into the Sacramento Valley, Sacramento-San Joaquin Delta, and the San Joaquin Valley regions. Generally the area of the Central Valley where the site is located receives between 1-10 inches of runoff per year. The increase in ground water withdrawals for irrigation and public use over the last several decades has caused significant land subsidence to occur in large areas within the Central Valley. While a majority of this subsidence is located in western and southern areas of the San Joaquin Valley near the Tulare Basin, one large area of subsidence (> 1 foot) is located northeast of the project area (U.S. Geological Survey 2004b) in Yolo County, just outside the northwest boundary of Sacramento County.

Geotechnical Investigation. As part of NNCP regulatory requirements for all projects, a geotechnical engineering report has been prepared by Wallace-Kuhl & Associates, Inc. (2004b, and **Appendix F**) for the project site, which outlined the potential impacts from soil erosion, drainage, grading, seismicity, and shrink-swell potential of the soil. The report also included measures to address site preparation and excavation, fill material requirements, fill compaction requirements for road and foundation design, backfill, and unusual soils conditions. The report provided a table of seismic code parameters, bearing capacity information, and foundation, interior slab, sound wall, and retaining wall design recommendations. A separate geotechnical engineering investigation was conducted by Wallace-Kuhl & Associates, Inc. specifically for the Natomas Central Lake site (2004a and **Appendix G**).



SOILS			
 FOOTHILL ASSOCIATES <small>ENVIRONMENTAL CONSULTING • PLANNING LANDSCAPE ARCHITECTURE</small>		 SCALE IN FEET	Drawn By: AH Date: 11/24/04
			FIGURE 6

Several test bores were performed on site, including the area slated for creation of Natomas Central Lake, that determined subsurface soils were composed of dark brown to black, silty clays to depths of 3 to 10 feet, and below the surface clays silts, silty sand and sands were encountered to a maximum depth of 15 feet. Hardpans were also encountered at depths ranging from 1 to 5 feet below existing grades, but this cementation condition generally declined with increased depth.

The test borings conducted for the project site as a whole on March 22, 2004, and test borings for the Natomas Central Lake site were conducted on March 23, 2004. Both investigations encountered ground water during test borings at depth ranging from 8 to 14 feet for the general project site, and between 14 and 15 feet for the lake site. The water was observed to rise within the soil shaft to approximately 8 to 11 feet below existing grade for the general site test bores, and up to 11 to 12 feet below existing grade for the Natomas Central Lake site, which is indicative of some level of artesian pressure within the area. Results of test bores and ground water levels were consistent with other studies conducted on adjacent properties within the Natomas area.

3.3.2 Standards of Significance

For the purposes of this analysis, an impact is considered significant if it allows a project to be built that will either introduce geologic or seismic hazards by allowing the construction of the project on such a site without protection against those hazards.

3.3.3 Answers to Checklist Questions

- A) The State of California provides minimum standards for building design through the California Uniform Building Code (CUBC) (California Code of Regulations [CCR], Title 24), which is based on the Uniform Building Code (UBC) that is widely used throughout the U.S. The UBC was modified for California conditions to create the CUBC by including additional details and more stringent regulations. Prior to the construction of structures, the CUBC requires that geotechnical investigations be conducted to determine site-specific soil conditions that could possibly constrain building designs, such as soils susceptible to liquefaction or landslides. The Natomas Central project is also required to comply with state seismic safety, unstable slope, and unstable soil design requirements. Earthquake resistant design and materials are required to meet or exceed the current seismic engineering standards of the CUBC Seismic Zone 3 improvements. Impacts associated with ground failure and ground shaking would be reduced to a less than significant level through compliance with the UBC, CUBC, state regulations, and local ordinances. The Natomas Central project site is located in an area of low seismic activity, and as such the project is not expected to expose persons or structures to an increased seismic hazard. No mitigation is required.

- B) Construction of the development within the relative flat topography of the project area is not anticipated to result in significant erosion or significant changes in topography. However, due to the expansive nature of the on-site soils identified in the geotechnical investigation and report prepared by Wallace-Kuhl & Associates, Inc. (2004b), development of the project could result in unstable soil conditions.

Recommendations from Wallace-Kuhl & Associates, Inc. includes the retention of representatives from a qualified engineering firm be present during site preparation and grading operations to observe and test the fill to ensure compliance with their recommendations.

The implementation of **Mitigation Measure SSG-1** below will reduce impacts from development in areas of expansive soil to a less than significant level.

Mitigation Measure SSG-1

The developer will retain representatives from a certified engineering firm on site during preparation and grading operations to observe and test the fill to ensure compliance with recommendations from the geotechnical investigation report.

The recommendations of the geotechnical report were provided under the assumption that construction and development activities would take place during a typical construction period beginning in late spring up until the fall months. If construction activities are necessary to be conducted outside of this period, additional wet-season recommendations would be necessary, and compliance with **Mitigation Measure SSG-2** will ensure any potential geologic impacts from wet-season development activities are mitigated to a less than significant level. These mitigation measures will reduce impacts associated with expansive soils and soil conditions during wet season construction activities to a less than significant level and no additional mitigation is required.

Mitigation Measure SSG-2

If development activities involving soils are conducted during the wet season (October 15th through March 15th), the developer and contractors will implement specific wet-season construction measures provided by a certified engineering firm

If **Mitigation Measure SSG-2** is implemented, potential environmental impacts resulting from these wet-season constructions measures will be reduced to a less than significant level through compliance with **Mitigation Measure W-2** described in Section 3.4 of this document.

Results from field and laboratory tests show near surface soils to have variable densities that range from loose to medium stiff, but that they would be capable of supporting the proposed one- to two-story single family residential structures and three-story structures provided that near-surface soils are properly moisture conditioned and recompacted as recommended in the report. The geotechnical study provided several recommendations to address these potentially significant unstable soil conditions and in particular emphasized that thorough recompaction of the upper soils that have been disturbed by agricultural disking will be crucial to providing uniform support for the planned structures. In addition, to address the high water table that will be encountered on the project site, the report recommended that proposed residential structures be supported on either post-tensioned slabs or deepened and heavily reinforced conventional foundations and slabs-on-grade. Construction details were also provided for minimizing moisture migration beneath the structures, and recommendations for each foundation type were provided in detail.

In addition to implementation of **Mitigation Measure SSG-1**, **Mitigation Measures SSG-3** and **SSG-4** will reduce these impacts from expansive and unstable soil conditions to a less than significant level.

Mitigation Measure SSG-3

Although the soils are capable of supporting the proposed structures a majority of the on-site soils have been disturbed through past agricultural uses. Soils that have been subject to historic agricultural uses will be properly conditioned by thorough recompaction of upper soils in compliance with the UBC and CUBC adopted by the City of Sacramento. With the exception of the open space area and parkway, which will remain for the most part in its natural state, most of the project site will require soil compaction due to the presence of expansive soils on the project site. This includes the detention basin site. Recommendations for constructing the type(s) of foundations used on the project site (post-tensioned concrete foundation/slab systems, or continuous and spread foundations) will be implemented as outlined in the Wallace-Kuhl Geotechnical Engineer Report (2004b), as well as the site preparation recommendations that address the potentially expansive clays located on the project site. This includes the reinforcement of continuous foundations with a minimum of four No. 4 reinforcing bars, placed two each on the top and bottom, to minimize the effects of the potentially expansive soils. To impede moisture migration beneath the structures, perimeter foundations will be continuous around the entire structure.

Mitigation Measure SSG-4

Due to the expansive nature of the on-site soils, engineered fill will be used along with post-tensioned foundations or deepened and heavily reinforced conventional foundations.

- C) Subsidence of land near the project site has occurred from increased ground water withdrawals due to agricultural irrigation practices and public water supplies use over the last several decades has caused significant land subsidence to occur in large areas within the Central Valley. One large area of subsidence (> 1 foot) is located northeast of the project area (U.S. Geological Survey 2004b) in Yolo County, just outside the northwest boundary of Sacramento County. The geotechnical investigations did not identify subsidence due to on or off site activities as an issue of concerns

Water services for the development will be provided by the City of Sacramento and will not require ground water pumping. Although the project will not contribute to additional ground subsidence, the project may be subject to additional ground subsidence from actions outside the project area. The implementation of **Mitigation Measures SSG-1, SSG-3 and SSG-4** described in this section will reduce potentially subsidence impacts to a less than significant level. As such a less than significant impact to land subsidence will occur as a result of this project.

The Natomas Central Lake has been designed to function as a detention basin as well as an open space element of the project site, since it will retain water year round. Once the basin and associated facilities have been completed, the initially filling of the basin with water will occur through natural rainfall events and subsequent storm water discharge into the basin. Lake levels will be controlled through metered discharges into the Fisherman's Lake. Discharges into Fisherman's Lake will not be allowed to exceed 0.1 cfs/acre as required by RD 1000.

A clay based lake liner will be required to reduce groundwater seepage into the basin, however some seepage is expected to occur. The clay liner is expected to be constructed out of on-site native clays and will be approximately two feet thick. With the clay liner in place, seepage rates of five gallons per minute into the basin will be negligible and will not affect water levels within the basin.

Although no ground water pumping is expected to occur as a result of the project dewatering concerns are associate with the construction of Natomas Central Lake. High ground water levels in the area have historically been recorded near 14 feet above MSL though they are estimated to have dropped to approximately 10 feet above MSL (about five feet below existing grades) due to increased development and subsequent decrease in irrigation flooding practices. This is consistent with the results of the test bores conducted by Wallace-Kuhl & Associates (2004a and 2004b) geotechnical investigations.

To mitigate for impacts due to anticipated dewatering activities associated with construction of Natomas Central Lake, **Mitigation Measures SSG-5** through **SSG-7** are provided. These mitigation measures are based on

information provided in the geotechnical investigation report prepared by Wallace-Kuhl & Associates, Inc (2004a and 2004b).

Mitigation Measure SSG-5

The dewatering system for the Natomas Central project will be designed, constructed, and developed by a dewatering contractor who has experience with performing such activities in the immediate vicinity of the project site. Excavation and dewatering activities should be scheduled during the early summer months to allow the subsurface soils maximum drying time once the system is operational, but late enough during the season so that groundwater elevations are low to minimize dewatering activities as described in **Mitigation Measure W-2**.

Mitigation Measure SSG-6

Continuous flow meters, or other similar devices, will be installed by the dewatering contractor to meter dewatering, as required in Section 2.4.2 of the *North Natomas Drainage Design and Procedures Manual*. Records of this information, and all other dewatering information, will be kept on file by the dewatering contractor and made available to the City of Sacramento and all other project consultants upon request to ensure compliance with this mitigation measure is being met.

Mitigation Measure SSG-7

If water collected during dewatering activities will be discharged into any nearby water body it will be filtered to ensure that pollutant and sediment levels are at or below water quality standards established by the Regional Water Quality Control Board (RWQCB). If collected water is to be taken off site, it will be properly treated and disposed of.

D) The project is not located in an area containing unique geologic or physical features. This is considered a less than significant impact.

3.3.4 Findings

Due to the project sites location in an area of low seismic activity, the proposed project is not expected to expose people to seismic hazards above and beyond what can be expected for residents of the Central Valley. No mitigation is required to address impacts from seismic activity.

Although land subsidence has occurred in the project vicinity, land subsidence was not identified in the geotechnical investigations as an issue of concern. **Mitigation Measures SSG-1, SSG-3, and SSG-4** will mitigate potential land subsidence impacts to a

less than significant level. The site does not contain unique geological features and no mitigation is required for these issues.

The project is located in area containing a high water table, which may result in unstable soil conditions. Mitigation measures have been provided for impacts due to the expansive nature of the on-site soils and anticipated dewatering activities associated with creation of the detention basin. The implementation of **Mitigation Measure SSG-1** through **SSG-7** will reduce these impacts to a less than significant level and no further mitigation is necessary.

3.4 Water

Issues:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than significant Impact
Would the proposal result in or expose people to potential impacts involving:			
A) Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff (e.g. during or after construction; or from material storage areas, vehicle fueling/maintenance areas, waste handling, hazardous materials handling & storage, delivery areas, etc)?		X	
B) Exposure of people or property to water related hazards such as flooding?			X
C) Discharge into surface waters or other alteration of surface water quality that substantially impact water temperature, dissolved oxygen or turbidity, beneficial uses of receiving waters or areas that provide water quality benefits, or cause harm to the biological integrity of the waters?		X	
D) Changes in flow velocity or volume of storm water runoff that causes environmental harm or significant increases in erosion of the project site or surrounding areas?		X	
E) Changes in currents, or the course or direction of water movements?			X
F) Change in the quantity of ground waters, either through direct additions or withdrawal, or through interception of an aquifer by cuts or excavations or through substantial loss of ground water recharge capability?		X	
G) Altered direction or rate of flow of ground water?			X
H) Impacts to ground water quality?		X	

3.4.1 Environmental Setting

Surface/Ground Water. The aquifer system underlying the City is part of the larger Central Valley ground water basin. The Sacramento, American, and Cosumnes Rivers are the main surface water tributaries that drain much of Sacramento and recharge the aquifer system. In the northern portion of the City, where the proposed project is located, the Sacramento River is the dominant waterbody, located approximately ½ mile west of the project site, and Fisherman’s Lake (part of the Natomas West Drainage Canal) is located adjacent to the western and southern project boundaries. Several additional canals and waterways are located in the surrounding area that are operated and maintained by RD 1000 and Natomas Mutual Water Company (Natomas Mutual). These include Fisherman’s Lake and Natomas West Drainage Canal along the southern and

western project boundary, and the North and East Drainage canals to the north and east. Surface inflows are from the east of the City limits, and deep percolation of precipitation and surface water applied to irrigated crop land recharge the aquifer system. Ground water is depleted by pumped extractions of ground water for municipal, industrial, and agricultural purposes, and ground water levels in the Sacramento area have been declining since 1940. The pattern of pumping has continued over the years, and the current rate of decline is about 1.5 feet per year (City of Sacramento Planning Division). Most runoff is collected and discharged into canals and the nearby Sacramento River. A ground water monitoring well, believed to have been installed by the City of Sacramento, is located on the project site and is used to monitor ground water elevations (Wallace-Kuhl & Associates, Inc. 2003).

A geotechnical study conducted for the site by Wallace-Kuhl & Associate, Inc. included test borings of the soils on site (2004b), which encountered ground water at 14 to 15 feet below existing grade. Water was observed to rise within the boring shaft up to approximately 11 to 12 feet below existing grades before stabilizing, which is indicative of some level of artesian pressure within the area. The investigation also included a review of historic ground water elevation data for two nearby monitoring wells monitored by California Department of Water Resources, located approximately 1900 feet west of the project site, and from a monitoring well located on the project site. These data indicated that well levels ranged from 3.5 feet to 17 feet below existing grade from 1979 to 2002.

Overall results for ground water indicate that levels are seasonally and annually variable, and are largely dependent on subsurface soil conditions, local irrigation practices, and proximity of the West Drainage Canal and Fisherman's Lake. However, recent development within the area and the reduction in irrigation flooding practices typically associated with rice farming has also contributed to lower ground water levels observed in recent years. The report concluded that ground water levels within the project boundaries should be considered to be as high as five feet below the existing ground surface, and this should be taken into consideration when designing the dewatering system for the site, as well as Natomas Central Lake.

A recommendation for continued monitoring of water levels in the on-site monitoring well was also provided so that ground water level data can be used to better provide dewatering recommendations for the site. Dewatering will likely be required during construction of Natomas Central Lake and other subsurface structures, especially in areas that are close in proximity to Fisherman's Lake along the western and southern portions of the site. Scheduling the excavation activities during mid-summer to early fall when subsurface water levels are generally at their lowest should help reduce the amount of water and level of effort necessary to dewater these areas.

Water Quality. The City's municipal water is received from the American and Sacramento Rivers. Water quality of the American River is considered very good. Sacramento River water is considered to be of good quality also, although higher sediment loads and extensive irrigated agriculture upstream of Sacramento tends to degrade water quality. During the spring and fall, irrigation tailwaters are discharged into

drainage canals that flow to the river, with winter runoff flows discharging to these same areas. In both instances, flows are highly turbid with large discharges of herbicides and pesticides introduced into the drainage canals, particularly from rice fields during May and June. The aesthetic quality of the river is changed from relatively clear to turbid from irrigation discharges.

Water quality of the drainage tributaries is also affected by other pollutants, such as runoff from urban storm drains and illegal dumping at creeks and drainageways (City of Sacramento Planning Division). Therefore, to maintain high water quality, it is imperative to reduce sedimentation and erosion into the tributaries. The Central Valley Regional Water Quality Control Board (CVRWQCB) has primary responsibility for protecting the quality of surface and ground water within the City. The CVRWQCB's efforts are generally focused on preventing either the introduction of new pollutants or an increase in the discharge of existing pollutants into bodies of water that fall under its jurisdiction.

The City of Sacramento has obtained a National Pollutant Discharge Elimination System (NPDES) permit from the State Water Resources Control Board (SWRCB) under the requirements of the Environmental Protection Agency and Section 402 of the Clean Water Act. The goal of the permit is to reduce pollutants found in urban storm runoff, and requires the permittee to employ "Best Management Practices" (BMPs) before, during, and after construction. The primary objective of the BMPs is to reduce non-point source pollution into waterways. These practices include structural and source control measures for residential and commercial areas and BMPs for construction sites. BMP mechanisms minimize erosion and sedimentation, and prevent pollutants such as oil and grease from entering storm drains. All BMP components are approved by the Department of Utilities before beginning construction (the BMP document is available from the Department of Utilities, Engineering Services Division, 1395 35th Avenue, Sacramento, CA), and include:

- Maintenance of structures and roads;
- Flood control management;
- Comprehensive development plans;
- Grading, erosion and sediment control ordinances;
- Inspection and enforcement procedures;
- Educational programs for toxic material management;
- Reduction of pesticide use; and
- Site specific structural and non-structural control measures.

Flooding. The Sacramento City Council has developed a Comprehensive Floodplain Management Plan for the City. This plan outlines the primary and secondary flood protection measures to be taken that would reduce personal injury and property damage in the event of a flood. Primary measures include existing and proposed flood control projects, and secondary measures include emergency preparedness and evacuation plans.

All development within North Natomas must comply with the Comprehensive Floodplain Management Plan.

The Federal Emergency Management Agency (FEMA) publishes Flood Insurance Rate Maps (FIRM) that delineate flood hazard zones for communities. A Conditional Letter of Map Revision (CLOMR) has been issued by the US Army Corps of Engineers (Corps) for the SAFCA North Area Local Project. The Local Project included raising and reinforcing the Natomas East Main Drainage Canal levees as well as other levee work. With completion of the Local Project, a LOMR was issued and the Natomas Basin now has 100 year flood protection. A CLOMR has been issued for the North Natomas Comprehensive Drainage Improvements Project that will add volume and pumping capacity to the East and West Drains in order to pull the adjacent areas out of the 100 year floodplain. Work on SAFCA's North Area Local Project, begun in 1993, progresses to the point where FEMA certifies that Natomas and portions of North Sacramento have 100-year protection and flood insurance is no longer required. With the completion of these flood control projects, North Natomas will have a minimum of 100 year flood protection.

Due to the recent levee and map revisions the site is located in Zone X according to the July 6, 1998 FIRM for the project area (Federal Emergency Management Association 1998). Flood Zone X is defined as areas of 500-year flood, with areas of 100-year flood with average depths of less than one foot or with drainage areas less than one square mile, and areas protected by levees from 100-year floods. Although portions of the West Natomas Drain are designated as Zone A, reflecting the potential of 100-year flooding within the Natomas West Drainage Canal system, the recently completed North Natomas Levee Project has improved the levee system located along the property line with Fisherman's Lake maintained by RD 1000. These improvements provide additional protection from localized flooding by containing flood waters within the channel area. Flood Zone A is defined as areas that have not determined base flood elevations.

Drainage. Development in the Natomas area must comply with the Residential and Non-Residential Development Guidelines of the City's Comprehensive Flood Management Plan. The NNCP requires a Comprehensive Drainage Plan (CDP) be developed for the North Natomas area. This plan will be adopted by the City prior to issuance of grading and building permits, and will be consistent with the City's master drainage plan for the area. Phasing of the drainage plan will be conducted to provide drainage protection to inhabitants of the incrementally phased developed area of the Natomas Central project. All drainage agreements needed to accomplish the CDP must be executed prior to issuance of building permits of any incremental phased development. Adequate drainage facilities will be incorporated into the development design that will provide protection to homes from storm water runoff and these are described in the Preliminary Master Drainage Plan (Appendix H). Housing pads will be sloped to divert runoff away from foundations and collected by storm drains along local streets.

A Preliminary Drainage Master Plan has been prepared for the Natomas Central project by Wood Rodgers (2004a) that provided design recommendations for the drainage and detention system for the project. The site has been designed to collect storm water runoff

through an on-site drainage system that will discharge into Natomas Central Lake. Water collected in Natomas Central Lake will gravity-drain into Fisherman's Lake (Natomas West Drain). The conveyance capacity and design of the drainage system for the Natomas Central project will be designed to the satisfaction of the City Department of Utilities, and will have the ability to convey runoff from a 100-year storm event without damage to property. In addition, streets will be designed to accommodate for overland flow in the event 100-year flows are in excess of the 10-year pipe capacity for the drainage system, while maintaining at least 1.3 feet of freeboard elevation to the house pads.

The 25.9-acre Natomas Central Lake will have an elevation of 16 feet and has been designed to maintain winter water levels of 11.5 feet. Storm flows will be released via a box weir containing a 27-inch pipe into Fisherman's Lake. Storm flows will not exceed 0.1 cfs/acre as required by RD 1000, and an automatic flap will be installed at the discharge point to prevent backflow of water into Natomas Central Lake. Summer pool elevations of 12.0 feet will be maintained through the use of flashboards installed at the outlet. Side slopes of the lake will be 3:1 with a 4-foot wide bench at an elevation of 9.5 feet and a 3 foot high headwall rising to 12.5 feet in elevation (Wood Rodgers 2004a).

Results of the preliminary analysis determined that the proposed design of Natomas Central Lake will provide the required conveyance and detention capacity required during all major storm events as well as meet water quality enhancement goals. In addition the storm drain system design will ensure that the RD 1000 discharge requirement of 0.1 cfs/acre or less is achieved. By constructing building pads at an elevation of 17 feet around the lake, at least 1.3 feet of freeboard space will be provided around housing pads in the event a 100-year storm event generates a peak stage of 15.7 feet within the lake/detention basin.

3.4.2 Standards of Significance

Water Quality. For purposes of this environmental document, an impact is considered significant if the proposed project would substantially degrade water quality and violate any water quality objectives set by the SWRCB, due to increased sediments and other contaminants generated by consumption and/or operation activities; or

Flooding. Substantially increase exposure of people and/or property to the risk of injury and damage in the event of a 100-year flood.

3.4.3 Answers to Checklist Questions

- A) Due to the increase in impervious areas associated with the housing areas, driveways, sidewalks, roads and other infrastructure, area surface runoff will increase as a result of the project. As part of the improvement plans required by the City's Utilities and Development Services Departments, adequate drainage facilities are required for the project to collect, retain, and discharge storm water runoff. These drainage facilities will be incorporated into the drainage system

within the street infrastructure. Runoff collected by the street drain system will discharge into an on-site storm drain system that will discharge into Natomas Central Lake. Natomas Central Lake will be designed to contain water year-round and will function to improve water quality and provide flood control due to increased run-off due to the increased amount of impervious surfaces. A Preliminary Drainage Master Plan has been created for the project and the final Drainage Master Plan should be finalized by December 2005. Increases in storm water runoff and changes to local absorption rates and drainage patterns as a result of the project are considered potentially significant unless mitigated. Since the storm water generated on the project site will be collected by the on-site drainage system and collected in Natomas Central Lake, no impacts to off-site area due to runoff will occur.

The project will comply with City specifications (Section 11.12 of the Drainage Design and Procedure Manual) for drainage design and the Comprehensive Drainage Plan for the North Natomas Community, which has been designed to reduce flood related impacts that could potentially occur from development of the North Natomas area. Compliance with the Drainage Design and Procedures Manual, the flood protection provided by levee improvements and certified by FEMA map revisions, and the on-site drainage and detention features, the project will reduce impacts resulting from absorption rates, drainage patterns, and the rate and amount of surface runoff to a less than significant level. Construction and post construction best management practices that are required as part of **Mitigation Measure W-1** below will reduce water quality related impacts from potential runoff generated from the construction site, material storage areas, vehicle fueling/maintenance areas, waste handling, hazardous materials handling, storage, and delivery areas, and operational impacts to a less than significant level.

- B) To develop homes within the Natomas area the NNCP required that levee improvements be completed to ensure flood protection. Improvements to Natomas area levees in the Natomas Basin have provided protection for a 100-year flood event as part of the Natomas Area Local Project. A majority of the project site is located in a 500-year floodplain, and would not be associated with additional flood hazards as a result of development associated with the project, due to recent revisions to the FEMA flood risk map for the project area. Areas of the project adjacent to Fisherman's Lake are located in Flood Zone A, which describes those areas where no base flood elevations have been determined. Although the location of the project site in proximity to Fisherman's Lake and the Sacramento River poses a flood risk to people and property within the project area, the recent levee improvements and FEMA map revisions have increased flood protection for the Natomas Central project. These map revisions certified by FEMA designate that Natomas and portions of North Sacramento have 100-year protection and flood insurance is no longer required. The recent map revisions approved by FEMA, as well a

The development of the Natomas Central project will comply with the City's

Comprehensive Flood Management Plan as outlined in the NNCP, and because the recent map revisions approved by FEMA as a result of levee improvements, a less than significant impact from flood related hazards is expected for the project.

- C) Water on the project site resides within the few unlined, shallow drainage canals that traverse the property in north/south and east/west directions and along the north and east project boundaries. These canals remain dry throughout much of the late spring, summer, and fall months and retain water mainly from rainfall received during the winter months. Minimal erosion and sediment movement off site is expected due to the relatively flat topography of the site, which minimizes the potential for sediment movement and the potential for erosion associated with construction activities.

The 1972 amendments to the Federal Water Pollution Control Act established the National Pollutant Discharge Elimination System (NPDES) permit program to control discharges of pollutants from point sources and non-point discharges to waters of the United States. The 1987 amendments to the Clean Water Act (CWA) created a new section of the CWA devoted to storm water permitting (Section 402[p]). On November 16, 1990, the U.S. Environmental Protection Agency (USEPA) published final regulations that establish storm water permit application requirements. The regulations provide that discharges of storm water to waters of the United States from construction projects that encompass five (5) or more acres of soil disturbance are effectively prohibited unless the discharge is in compliance with an NPDES Permit. The State of California RWQCB administers and enforces the provisions of the NPDES program.

In accordance with the National Pollutant Discharge Elimination System (NPDES) regulations, the RWQCB requires that any construction activities affecting/disturbing five or more must obtain coverage under the General Construction Activity Storm Water Permit (General Permit). In March 2003, Phase II NPDES Storm Water regulations revisions took effect, which revised the General Permit to require construction projects greater than one acre in size to comply with the terms of the General Permit. Construction activities that are subject to this General Permit includes clearing, grading, disturbances to the ground such as stockpiling, or excavation that results in soil disturbances of at least one acre of total land area.

The proposed project has the potential to result in water quality and storm water impacts due to erosion and sediment movement as a result of grading and construction activities associated with development of the project. Impacts to water quality as a result of the operation of the project will be reduced by the incorporation of drainage inlet bags, filters, pollutant and grease separators, or other Best Available Technology features into the design of the storm drain system. These project design features, as well as the implementation of **Mitigation Measure W-1** will reduce these impacts to a less than significant level:

Mitigation Measure W-1

The City of Sacramento has obtained a NPDES permit. Compliance with this permit will ensure water quality will be maintained and erosion and sediment movement minimized during construction activities for the Natomas Central project. As required by the Department of Utilities, a Storm Water Pollution Prevention Plan (SWPPP) shall be developed for all phases of the project. The SWPPP shall provide Best Management Practices (BMPs) that will be employed to prevent runoff, erosion, and release of contaminants into the City's storm drain system and area watershed, and to preserve water quality. Appropriate BMPs must be installed and inspected during all phases of the project until all disturbed soil has been stabilized, and a Notice of Termination (NOT) has been filed and accepted by the RWQCB. The designated SWPPP monitor will inspect the site and all installed BMPs after storm events, and periodically as is required by the NPDES permit and SWPPP monitoring reports will be filed in the copy of the SWPPP kept on site, as well as with the project manager or erosion control specialist in charge of maintaining storm water control for the project site. Inspections shall serve to determine compliance with the NPDES permit, BMP effectiveness, and to provide feedback on maintenance and/or additional measures necessary to ensure water quality is protected and sediments are not released from the project site. BMPs implemented, as part of the SWPPP should include the following procedures:

- (1) restricting grading to the dry season
- (2) utilizing erosion control blankets, hydroseeding, or similar practices to protect finished graded slopes from erosion
- (3) protecting downstream storm drainage inlets from sedimentation through the use of sediment barriers and protection of storm drain inlets through the use of drop inlet sediment sacks and sand bags
- (4) use of silt fencing and straw wattles to retain sediment on the project site
- (5) use of temporary water conveyance and water diversion structures to eliminate runoff to the fill slopes
- (6) any other suitable measures outlined in an approved Erosion Control Manual, which will provides technical guidance for temporary and permanent erosion prevention and sediment control to be used by site designers, developers, contractors and local government agencies during the construction process, before, during and after clearing, grubbing, grading and excavation.

The above erosion control measures implemented during the development of the proposed project site and, compliance with the NPDES regulations, including filing of a NOI with the RWQCB and preparation of a SWPPP

containing appropriate BMP's will reduce significant impacts from erosion to a level less than significant.

- D) Due to the increase in impervious areas that will result from construction of the project, the project is expected to result in an increase in storm water runoff that could potentially cause environmental impacts harm or result in significant increases in erosion of the project site or surrounding areas. **Mitigation Measure W-1** listed above in this section will reduce the potential environmental impacts from storm water runoff to a less than significant level, and no additional mitigation is required.
- E) The discharges of storm water into Fisherman's Lake will be controlled, and the outlet designed to minimize impacts to the flow regime within Fisherman's Lake. No changes in currents, or the course or direction of water movements is expected to result from the construction of this project. A less than significant impact to water currents and direction is expected.
- F) Water supplies for the project will be provided by the City of Sacramento Utilities Department, and operation of the project will not require ground water pumping. Operational impacts to ground water recharge associated with this project are expected to be less than significant. However dewatering activities associated with construction of Natomas Central Lake will be required, which will potentially require that ground water elevations be lowered and is considered potentially significant. **Mitigation Measure W-2** will reduce project related impacts to ground water to a less than significant level. By scheduling anticipated dewatering activities for the summer months, changes in the quantity of ground waters due to dewatering are expected to be temporary in nature.

Mitigation Measure W-2

Conduct any required dewatering activities necessary for construction of Natomas Central Lake during the summer months to reduce the amount of ground water pumping necessary to lower ground water elevations. However due to the conditioning required of the exposed soils to allow adequate drying time before application of the proposed clay liner within the basin, the timing of these construction activities will not extend into late summer.

The increase in impervious surfaces associated with the project will result in reduced amount of groundwater recharge as a result of the project, which may be considered substantial in regards to loss of ground water recharge capability. To mitigate this to a less than significant level **Mitigation Measure W-3** will be implemented.

Mitigation Measure W-3

The project proponent will incorporate low-impact-development measures such as pervious pavement and sidewalks, and grassy swales where appropriate and feasible.

The project is not expected to require an interception, either through direct additions or withdrawal, or through interception of an aquifer by cuts or excavations, and impacts to aquifers is less than significant.

- G) Water supplies for the project will be provided by the City of Sacramento Utilities Department and will not require ground water pumping. As such a less than significant impact to ground water direction and rate of flow is expected from this project.
- H) Impacts to ground water quality from development of the Natomas Central project are expected to be temporary in nature and will be mitigated to a less than significant level through implementation of **Mitigation Measure W-2**.

3.4.4 Findings

The development of the proposed project has the potential to result in changes in absorption rates, drainage patterns, and the amount of surface water. In addition, the project will discharge collected storm water runoff into the portion of Fisherman's Lake located adjacent to the western boundary of the project, and has the potential to affect the beneficial uses of this waterbody if water quality is not protected. Through compliance with regulatory requirements and implementation of **Mitigation Measure W-1** these potential impacts will be reduced to a less than significant level.

The project as proposed is not expected to expose people or property to water related hazards such as flooding due to recent map revisions approved by FEMA as a result of levee improvements completed in the North Natomas area. A less than significant impact from flood related hazards is expected for the project. Changes in currents or the course or direction of water movements is less than significant since discharges into Fisherman's Lake will be metered as required by RD 1000. The storm drain system and Natomas Central Lake will contain best management practices to protect water quality. Ground water quality and quantity impacts are expected to be temporary in nature and these are considered less than significant. Dewatering activities may temporarily alter the direction or rate of flow of ground water, but these impacts are mitigated to a less than significant level through implementation of **Mitigation Measure W-2**. To reduce the impact to ground water recharge as a result of the increase in impervious surfaces that will result from the project, the project proponent will implement **Mitigation Measure W-3**. Through the incorporation of the proposed mitigation measures, the proposed project will have a less than significant impact on water and water quality.

3.5 Air Quality

Issues:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than significant Impact
Would the proposal:			
A) Violate any air quality standard or contribute to an existing or projected air quality violation?		X	
B) Exposure of sensitive receptors to pollutants?		X	
C) Alter air movement, moisture, or temperature, or cause any change in climate?			X
D) Create objectionable odors?			X

3.5.1 Environmental Setting

The project site lies within a developing urbanized area with adjacent agricultural uses of Sacramento County within the Sacramento Valley Air Basin (SVAB), and is subject to federal, state, and local air quality regulations. The SVAB is about 200 miles long in a north-south direction, and has a maximum width of about 150 miles. The SVAB is bounded on the north by the Cascade Range, on the south by the San Joaquin Valley Air Basin, on the east by the Sierra Nevada, and on the west by the Coast Range. Eleven counties are included in the SVAB, and include all or portions of Shasta, Tehama, Glenn, Colusa, Yolo, East Solano, Butte, Sutter, Yuba, Placer, and Sacramento counties. Within the SVAB, the Natomas Central project site is under the jurisdiction of the Sacramento Metropolitan Air Quality Management District (SMAQMD). The SMAQMD is responsible for implementing emissions standards and other requirements of federal and state laws. Air quality concerns within the Sacramento Valley include the most common pollutants including ozone, carbon monoxide, nitrogen oxides, sulfur oxides, and particulate matter from dust and diesel exhaust.

The U. S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants (**Table 5**). These ambient air quality standards are levels of contaminants, which represent safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called “criteria” pollutants because the health and other effects of each pollutant are described in criteria documents.

Table 5 — Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standard	State Standard
Ozone (O ₃)	1-Hour	0.12 ppm	0.09 ppm
	8-Hour	0.08 ppm	0.07 ppm
Carbon Monoxide (CO)	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Particulate Matter (PM ₁₀)	Annual	50 µg/m ³	20 µg/m ³
	24-Hour	150 µg/m ³	50 µg/m ³
Particulate Matter (PM _{2.5})	Annual	15 µg/m ³	12 µg/m ³
	24-Hour	65 µg/m ³	no separate standard
Sulfur Dioxide (SO ₂)	Annual	--	0.03 ppm
	24-Hour	.04 ppm	0.14 ppm
Nitrogen Dioxide (NO ₂)	Annual	0.053 ppm	--
	1-Hour	--	.25 ppm

Note: Any pollutant criteria that does not have a federal or state standard set is indicated by "--".

The federal and state governments have enacted laws mandating the identification of areas not meeting the ambient air quality standards and development of regional air quality plans to eventually attain the standards. Both the federal Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) classifies Sacramento County as non-attainment for ozone and PM₁₀ (particulate matter less than 10 microns in diameter), and the CARB classifies the County as non-attainment for PM_{2.5} (**Table 6**). For carbon monoxide (CO), Sacramento County is designated as unclassified/attainment by the EPA, and attainment by the CARB. For both nitrogen dioxide (NO₂) and sulfur dioxide (SO₂), the CARB designated the County as attainment, while at the national level the EPA designates the County as unclassified/attainment (California Air Resources Control Board 2002).

3.5.1.1 North Natomas Community Plan

As described in Section 2.6 (Project Description, Consistency with the North Natomas Community Plan) of this document, the proposed project and proposes fewer units than allowed by the NNCP.

The North Natomas Community Plan (NNCP) of 1994 has both a Transportation Systems Management (TSM) Plan and an Air Quality Mitigation Strategy (AQMS). The Air Quality Mitigation Strategy of the NNCP is focused on reducing emissions of ozone precursors. Ground level ozone is not emitted directly into the air, but is formed instead by chemical reactions between oxides of nitrogen (NO_x) and reactive organic gases (ROG) in the presence of sunlight. The major sources of NO_x and ROG are emissions from motor vehicle exhaust, gasoline vapors, chemical solvents, industrial facilities and electric utilities. Site design, target area, and community wide measures are included in the AQMS. Site design measures include orientation of buildings to promote transit use, while a target area measure might include reduced parking in areas located within ¼ mile

of a light rail station. A shuttle system for the community is one example of a community-wide mitigation strategy.

As required by the NNCP, The City Development Services Department and SMAQMD have set a goal of 35 percent community-wide daily reduction in vehicle and other ROG emissions at build out of the Natomas Community. Residential developments must reduce ROG emissions by a minimum of 20 percent compared to single occupant vehicle baseline. Some of the measures that will be implemented to meet this goal include the promotion of electric, low, and zero-emission vehicle use, providing emission credits for electric vehicle use, and the use of low or zero emission appliances such as furnaces and electric lawnmowers.

The Transportation Systems Management component of the NNCP requires the establishment of a community-based Transportation Management Association. The North Natomas Transportation Management Association (NNTMA) was established in 1998 to assist developers, employers, residents and others with the implementation of trip reduction strategies in support of the NNCP goals and objectives (North Natomas Transportation Management Association 2003). Each developer within the NNCP area is required to submit a Transportation Management Plan (TMP) that demonstrates how the project will help meet the trip and emission reduction goals, and one of the requirements of each TMP is participation in the NNTMA.

The NNTMA will be responsible for area and community wide traffic reduction strategies, which would contribute to the development's required percentage of emission reduction.

3.5.2 Standards of Significance

Ozone and Particulate Matter. According to the SMAQMD, an increase in short-term effects (construction) of nitrogen oxides (NO_x) above 85 pounds per day and in increase in long-term effects (operation) of either ozone precursor, nitrogen oxides (NO_x) and/or reactive organic gases (ROG), above 65 pounds per day would result in a significant impact. An increase of PM₁₀ above the CAAQS standard of 50 micrograms per cubic meter would result in a significant impact and require mitigation.

Carbon Monoxide. Motor vehicle emissions are the dominant source of CO in Sacramento County (SMAQMD 2004). Carbon monoxide concentrations are considered significant if they exceed the 1-hour state ambient air quality standard of 20.0 parts per million (ppm) or the 8-hour state ambient standard of 9.0 ppm (state ambient air quality standards are more stringent than their federal counterparts).

Table 6 — Sacramento County Attainment Status

Pollutant	Federal Standards	California Standard
Ozone (O ₃) 1-Hour	Non-attainment	Non-attainment
Carbon Monoxide (CO)	Unclassified/Attainment	Attainment
Particulate Matter (PM ₁₀)	Non-attainment	Non-attainment
Particulate Matter (PM _{2.5})	Unclassified	Non-attainment
Sulfur Dioxide (SO ₂)	Unclassified/Attainment	Attainment
Nitrogen Dioxide (NO ₂)	Unclassified/Attainment	Attainment

Air quality impacts resulting from implementation of the project are categorized as follows:

- Short-term impacts related to construction activities; and
- Long-term impacts related to operation of the project.

Short-term air quality impacts are the result of the use of construction equipment, transport of materials (i.e. equipment, supplies, and construction material) to and from the site, and construction employee commute trips. Short-term air quality emissions typically consist of reactive organic gases (ROG), oxides of nitrogen (NO_x), and fugitive dust. Nitrogen oxides (NO_x) and reactive organic gases (ROG) are the primary reactive compounds, or precursors, contributing to the formation of ozone and are largely generated from the operation of gas and diesel powered equipment. Fugitive dust and particulate matter is largely generated from earth moving activities and wind erosion.

Long-term air quality impacts are associated with the operational characteristics of the project and typically are the result of the use of equipment that directly generates pollutants (i.e. diesel powered water pump or electrical generator). Additionally, long term air quality impacts are associated with mobile emissions related to employee trips to work and home.

In order to calculate air quality construction and long-term emissions for the project, the URBEMIS computer program was used (URBEMIS 2002, version 8.7). URBEMIS stands for "Urban Emissions Model", and estimates emissions (lbs./day) generated from construction equipment and vehicles used during the development of residential neighborhoods, shopping centers, and office buildings. URBEMIS also estimates long term emissions from the operation of projects after construction. Long-term impacts include emissions from gas appliances, wood stoves, fireplaces, landscape maintenance equipment; and residents' vehicle use. The URBEMIS model is widely used in California by air districts, local governments, project developers, and environmental consultants and is recommended and approved for use by multiple air quality districts throughout the state.

Construction and operational mass daily emissions were calculated for the project based on project phases and days with the maximum potential peak daily activity (worst case day). In order to calculate the worst case day, air quality emissions were calculated for each phase of construction. Long term operational emissions were calculated based upon area source emissions, including natural gas use, and emissions from residential vehicle use.

The construction of the development is divided into six phases. The first four operations will occur in the following sequence and will not overlap:

- Rough grading operation
- Dewatering and underground operations
- Subgrading operation
- Rocking and concrete operations

Specific construction equipment has been identified for these four operations and a separate URBEMIS 2002 (version 8.7) model has been run for each of these operations.

The fifth and sixth operations are building construction and asphaltting. Specific equipment has not yet been identified for these operations. Equipment type and quantities were identified using Table 3.1 of the Sacramento Metropolitan Air Quality Management District's (SMAQMD) Guide to Air Quality Assessment (2004). These two operations overlap and an URBEMIS model has been run for these operations together.

For emissions after full build-out, an URBEMIS model has been run to determine area source and operational (vehicle) emissions.

3.5.2.1 URBEMIS Results

The URBEMIS results are calculated on an expected project construction timeline of 20.5 months, including approximately 8.5 months for rough grading, dewatering & underground operations, subgrading, and rocking and concrete operations. The maximum daily acreage disturbed will be 100 acres during rough grading and 10 acres disturbed during subgrading operations. After the rocking and concrete operations are complete, building construction and paving will occur over a time frame of approximately 12 months. If the construction time frames lengthen, it would be expected that lbs/day emissions will decrease due to less acres or units being developed on an average day. The full URBEMIS data results for unmitigated project emissions are located in Appendix B. At the end of the URBEMIS data is the SMAQMD's mitigation fee calculator which takes the unmitigated NO_x emission results from the URBEMIS model and applies a NO_x emission reduction of 20% for planned construction on-site mitigation measures and 15% for operational on-site mitigation measures. Projected NO_x emissions after on-site mitigation for each project phase are located in this fee calculator in Appendix B.

Table 7 — URBEMIS Construction Emissions (lbs/day) – Before Mitigation

Construction Emissions - Unmitigated			
	ROG (lbs/day)	NO_x (lbs/day)	PM₁₀ (lbs/day)
Rough grading phase	141.93	1016.05	1046.17
Dewatering & underground phase	80.37	582.56	124.77
Subgrading phase	25.43	167.53	107.19
Rocking & concrete phase	28.38	177.38	107.14
Building Construction & asphalt phase	118.45	700.69	31.19
SMAQMD threshold	n/a	85.00	50 micrograms per cubic meter (CAAQS standard)
Exceed Sacramento Metropolitan AQMD Thresholds before mitigation?	No standard for construction phase	Yes, all phases	Yes, rough grading phase only*

* The URBEMIS model calculates PM₁₀ emissions in lbs/day. The Rough Grading emissions of 1046.17 lbs/day before mitigation are expected to be in excess of the CAAQS standard of 50 micrograms per cubic meter.

Table 8 — URBEMIS Operational Emissions (lbs/day) – Before Mitigation

Operational Emissions - Area Source and Vehicles (lbs/day) - Unmitigated			
	ROG (lbs/day)	NO_x (lbs/day)	PM₁₀ (lbs/day)
Area sources	137.02	28.79	0.34
Vehicle emissions	159.44	156.91	142.38
Total	296.46	185.70	142.71
SMAQMD threshold	65.00	65.00	50 micrograms per cubic meter (CAAQS standard)
Exceed Sacramento Metropolitan AQMD Thresholds before mitigation?	Yes	Yes	No

3.5.3 Answers to Checklist Questions

A and B) Construction activities associated with the development of the project site would generate an increase in criteria pollutants particulate matter from grading, trenching, and earthmoving activities (i.e. dust generation). Diesel fumes associated with the operation of construction equipment would contribute to the release of NO₂ and ROGs. The project will comply with SMAQMD rules and regulations including Rule 403 to prevent airborne dust from leaving the project site and Rule 442 to use architectural coatings that comply with volatile organic compound content limits. The project does not

involve the construction within ¼ mile of a school of any facilities which might reasonably be anticipated to emit hazardous or acutely hazardous air emissions. By incorporating standard construction mitigation measures developed by SMAQMD, complying with all requirements under the Grading, Erosion and Sediment Control article of the Sacramento City Code (SCC - Chapter 15.88) and the Control of Dust and Mud article of the SCC (Construction Site Regulations - Chapter 15.40.050), the increase in worse case criteria pollutants generated by the project's construction is expected to be reduced by 20 percent for NO_x. Based upon the URBEMIS model results, short-term NO_x emissions for construction after on-site mitigation will still exceed the thresholds of 85 lbs/day by approximately 57 to 728 lbs/day depending upon the construction phase. This is considered a significant impact to air quality.

However, California and SMAQMD have developed a mitigation program (the Heavy-Duty Low-Emission Vehicle Program) that assists in providing cleaner emissions technology with the region. A fee could be paid to this program to offset the remaining NO_x emissions over the significance threshold generated from the proposed project. Per SMAQMD (2005) high ozone levels can occur at great distances from where NO_x was originally emitted. Mitigation fees, therefore, are used on projects anywhere within the ozone non-attainment area that meet the cost effectiveness criteria used to determine the fee. Most mitigation fees are related to construction impacts, and those fees are used by SMAQMD to reduce emissions from construction equipment. Examples include repowering off-road construction equipment with newer engines that meet more stringent emission standards, retrofitting diesel engines with diesel catalyst technology, providing incentives for the use of lower-emission fuels, and other cost-effective strategies.

Private business and public agencies that use heavy-duty vehicles or mobile off-road equipment can receive funds to defray the costs of new lower emission technologies for diesel engines. Through the Heavy-Duty Low-Emission Vehicle Program, SMAQMD helps fleets pay for new lower emission engines, lower emission retrofits, and new engine replacements.

Mobile sources such as cars, trucks, tractors and other on and off road vehicles produce 70 percent of our air pollution. Low-emission fuels and technologies lead the way to cleaner air. Helping businesses purchase newer engines will accelerate progress to reduce air emissions and helps the state meet federally mandated clean-air deadlines.

The Heavy-Duty Low-Emission Vehicle Program is funded in part by the Carl Moyer Incentive Program sponsored by the California Air Resources Board. Incentives through the Carl Moyer Program will cover an incremental portion of the cost for the purchase of cleaner engines. Lower emission projects range from liquid and compressed natural gas vehicles to diesel engine replacements. The Carl Moyer Program promotes the introduction of low-

emission technologies by providing incentive money to companies, fleet operators and individuals who are willing to reduce emissions from their heavy-duty vehicles and mobile off-road equipment.

SMAQMD recommends setting the value of NO_x at the cost effectiveness standard established by the California Air Resources Board for the Carl Moyer Program. That value is \$13,600 per ton.

The project's mitigation fee is calculated based on the amount of the mitigated construction emissions produced by the project less the District Threshold, multiplied by the number of days of construction multiplied by the standard District fee of \$13,600/ton on NO_x. Through compliance with this mitigation fee (see **Mitigation Measure AQ-5**), the SMAQMD considers the short-term impacts from NO_x to be mitigated to a less than significant level.

Both before and after on-site mitigation, long term operational emissions from area sources and vehicles are expected to be in excess of the SMAQMD's significance thresholds for ROG and NO_x.

These impacts were evaluated in the NNCP Supplemental Environmental Impact Report and found to be significant and unavoidable and were overridden by the City of Sacramento. Long term operational emissions are mitigated by the North Natomas community's incorporation of mitigation measures contained in the 1994 NNCP. These include:

- Incentives for ride-sharing, transit, and bicycle use
- The implementation of land use measures that reduce vehicle trips and lengths by linking land uses with all modes of transportation
- Compliance with the Federal and California Clean Air Acts
- Direct street routing and providing a support system for zero emission vehicles, bicycles, and pedestrians
- Providing commercial sites at transit station and stops to make it easier for transit riders to shop on their commute routes rather than making separate trips

The project's adherence to and implementation of the AQMS and Transportation Systems Management (TSM) Plan of the NNCP will substantially lessen the impacts to air quality that occur due to the development of the project and Community Plan area. The TSM Plan for the community sets a goal of a 35 percent reduction in peak hour trips compared to a baseline of an all single-occupant vehicle condition. The AQMS sets a goal of an overall community reduction of 35 percent ROG emissions, with residential developments reducing these emissions by 20 percent compared to the baseline. In addition, the NNCP and the North Natomas Development Guidelines requires that Planned Unit Developments (PUDs) and projects

submit a project Air Quality Mitigation Strategy (see **Mitigation Measure AQ-10**) to implement the overall NNCP air quality mitigation measures.

The established North Natomas Transportation Management Association has implemented key features of the AQMS and TMS Plan by establishing community shuttles for within-community trips and commuting trips, bicycle rebate programs, and Neighborhood Electric Vehicle (NEV) rebate programs.

The project is required to comply with the NNCP mitigation measures. It will also incorporate the following mitigation measures to reduce the construction and operational impacts to air quality to a less than significant level:

Mitigation Measure AQ-1

Prior to groundbreaking the project proponent will submit a Construction Emission/Dust Control Plan to the City of Sacramento, SMAQMD, and CARB, which will include at a minimum the **Mitigation Measures AQ-2** through **AQ-9** below.

Mitigation Measure AQ-2

The construction contractor will provide the City of Sacramento, SMAQMD, and the CARB with a plan for approval demonstrating that heavy-duty (>50 horsepower) off-road vehicles to be used will achieve a project wide fleet average of 20 percent NO_x reduction and 45 percent PM reduction compared to the most recent CARB fleet average at the time of construction. Off-road vehicles include owned, leased, and subcontractor vehicles. The project contractor will submit to the City of Sacramento, SMAQMD, and CARB, a comprehensive inventory of all off-road construction equipment (> 50 horsepower) that will be used for a total of 40 hours or more during any portion of the project. The inventory will include the horsepower rating, engine production year, and projected hours of use or fuel requirements for each piece of equipment. The inventory will be updated and submitted monthly throughout the duration of the project, except for any 30-day period in which no construction activities occur. At least 48-hours prior to the use of subject heavy-duty off-road equipment, the project representative shall provide SMAQMD with the anticipated construction timeline including start date, name and phone number of the project manager, and on-site foreman.

Mitigation Measure AQ-3

The project contractor shall ensure that emissions from off-road diesel powered equipment used on site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed the 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately, and the City of Sacramento, SMAQMD, and CARB shall be notified within 48-hours of identification of non-compliant equipment. The project contractor shall insure that a visual survey of

all in-operation equipment is made at least weekly, and a monthly summary of the visual survey results shall be submitted by the contractor to the City of Sacramento and to SMAQMD throughout the duration of the project (except for 30-day periods of inactivity). The monthly summary shall include the quantity and type of vehicles surveyed, and the date of each survey.

Mitigation Measure AQ-4

Construction equipment will utilize the Best Available Technology (BAT) so as to minimize vehicle emissions to the extent possible. This may include the use of diesel particulate filters and cooled exhaust gas recirculation or equivalent measures on all off-road and on-road diesel equipment in the construction phase of the project. The project proponent will review amendments to CARB and SMAQMD regulations and City of Sacramento ordinances during construction, and comply immediately with newly adopted regulations, including those for equipment idling, which would reduce the cumulative release of pollutants.

Mitigation Measure AQ-5

Coordinate with the SMAQMD for payment of fees into the Heavy-Duty Low-Emission Vehicle Program designed to reduce construction related emissions within the region. Fees shall be paid based upon the SMAQMD District Fee of \$13,600/ton of NO_x emissions generated. This fee shall be paid prior to issuance of building permits. Based upon the Urbemis emissions data and the SMAQMD's mitigation fee calculator, the expected payment for remaining construction related NO_x emissions over the significance threshold will be \$1,135,655. If the projected construction equipment or phases change, the applicant shall coordinate with the SMAQMD to determine if the mitigation fee needs to be re-calculated.

During construction of the proposed improvements, grading activities have the potential to result in the generation of significant amounts of fugitive dust that could potentially expose sensitive receptors to criteria pollutants unless mitigated. **Mitigation Measures AQ-6 through AQ-9** will reduce these impacts to a less than significant level.

Mitigation Measure AQ-6

During clearing, grading, earth-moving, or excavation operations, fugitive dust emissions shall be controlled by watering exposed surfaces 2 times per day, watering haul roads 3 times per day or paving of construction roads, or other dust-preventive measures.

Mitigation Measure AQ-7

All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 20 mph averaged over 1 hour.

Mitigation Measure AQ-8

Any portions of the construction site that remains inactive longer than a period of 3 months shall be reestablished with ground cover through seeding and watering. Alternatively, non-toxic soil stabilizers shall be applied to all inactive construction areas in accordance with manufacture's specifications.

Mitigation Measure AQ-9

All vehicles hauling dirt, sand, soil or other loose material shall be covered or should maintain at least two feet of freeboard in accordance with the requirements of California Vehicle Code Section 23114.

Mitigation Measure AQ-10

Prior to groundbreaking, the project proponent will coordinate with the SMAQMD and the City of Sacramento and develop a project Air Quality Mitigation Plan designed to reduce area source and operational NOx emissions by 15%. Some examples of project specific operational mitigation include bicycle/pedestrian transit features that promote alternative transportation use, mixed land uses including parks and schools within ¼ mile of residential uses, and promotion of electric landscaping equipment.

Utilizing the Urbemis results and SMAQMD's mitigation fee calculator, operational NOx emissions after the 15% reduction due to implementation of the on-site air quality mitigation plan would be reduced to 157.85 lbs/day, which is 92.85 lbs/day over the significance threshold of 65 lbs/day. The project proponent will implement **Mitigation Measure AQ-11** to reduce this impact to less than significant. The resulting required payment into the SMAQMD off-site mitigation program is \$230,384.

Mitigation Measure AQ-11

Coordinate with the SMAQMD for payment of fees into the Heavy-Duty Low-Emission Vehicle Program designed to reduce emissions within the region. SMAQMD calculates the mitigation fee for these remaining operational emissions by multiplying the NOx lbs/day over the threshold by 365 days (one year of emissions), determining the total project NOx over the threshold in tons, and multiplying that overage by the Carl Moyer Program standard of \$13,600 per ton. This fee shall be paid prior to issuance of building permits. Based upon the Urbemis emissions data and the SMAQMD's mitigation fee calculator, the

expected payment for remaining operational NOx emissions over the significance threshold will be \$230,384. If the projected operational emissions change, the applicant shall coordinate with the SMAQMD to determine if the mitigation fee needs to be re-calculated.

- C) The Natomas Central project will have a less than significant impact to air movement, moisture, temperature, or cause change in climate conditions. Construction emissions will be temporary and the operational emissions associated with residential uses are not expected to create changes in temperature or climate conditions.
- D) While odors associated with the use of diesel powered equipment may emit objectionable odors, these odors will be short-term in nature and the construction fleet will utilize all Best Available Technology as required in the mitigation measures. As such, the creation of objectionable odors from construction is considered a less than significant impact, and no mitigation is required. Odors from residential land use after build out are expected to be less than significant.

3.5.4 Findings

Per Jean Borkenhagen of SMAQMD (2005), payment of SMAQMD approved mitigation fees for use in off-site emission reduction programs for any remaining project NOx emissions over the significance threshold will reduce the impacts to air quality to less than significant for NOx and also other criteria emissions, including PM₁₀.

With the incorporation of **Mitigation Measures AQ-1** through **AQ-11** listed above, the proposed project is expected to have a less than significant impact on air quality.

3.6 Transportation and Circulation

Issues:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than significant Impact
Would the proposal result in:			
A) Increased vehicle trips or traffic congestion?			X
B) Hazards to safety from design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X
C) Inadequate emergency access or access to nearby uses?			X
D) Insufficient parking capacity on site or off site?			X
E) Hazards or barriers for pedestrians or bicyclists?			X
F) Conflicts with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?			X
G) Rail, waterborne or air traffic impacts?			X

3.6.1 Environmental Setting

Roads. The project site is located less than 1 mile southwest of the Interstate 5/Highway 99/70 Interchange and about 1 ½ miles northwest of the Interstate 5/Interstate 80 Interchange. Regional automobile access to the project site is provided primarily by the freeway system.

Specifications for interior roads and improvements to Del Paso and El Centro Roads are depicted on the Tentative Subdivision Maps (Appendix A). Additional signaling will be a required component of El Centro and Del Paso improvements, but the exact location and number required has not been finalized. Further discussion and consultation with the City’s traffic engineer will be required and may be based on updated traffic data obtained since this document was prepared.

When combining vehicular traffic with alternative forms of transportation in close proximity to each other the potential for bicycle/pedestrian or bicycle/motor vehicle conflicts increase. This issue has been addressed by including sidewalks along frontage roads and with the inclusion of bicycle travel lines on roadways. All transportation features of the project have been designed to comply with the appropriate City standards, including the design and layout of the driveways, curbs, and gutters of the project. By locating some of the pedestrian access pathways within neighborhoods and away from roads, the potential for bicycle or pedestrian/motor vehicle conflicts is lessened.

Interstate 5 (I-5) is a north-south facility located east and north of the site, and primary access to I-5 is via the Del Paso Road interchange approximately ¼-mile east of the northeast corner of the project site. To the north, I-5 provides access to Sacramento

international Airport, the City of Woodland, and other areas north and south of the region. Highway 99 is a north-south state highway that has an interchange with I-5 west of the site on Del Paso Road. Primary access to Highway 99 is provided via the Del Paso interchange or the interchange at Elkhorn Boulevard approximately two miles north of the site. Highway 99 provides access to northern portions of Sacramento County, western Placer County, Highway 70, Yuba City, Marysville, and other Central Valley communities. Interstate 80 (I-80) is primarily an east-west facility located south of the project site. Primary access to I-80 is via the West El Camino interchange (by way of El Centro Road). Access to I-80 is also available from I-5 which provides access to downtown Sacramento, southern portions of the City and County, as well as other Central Valley and outlying communities. To the west I-80 provides access to West Sacramento, Highway 50, City of Davis, and other valley communities ending in the San Francisco Bay area. To the east I-80 provides access to northern portions of Sacramento County, Placer County, and the Sierra Nevada Mountains, extending into the state of Nevada to the east.

The construction of residential and collector streets will be a necessary part of the development of the Natomas Central project. These interior roadways are designed to provide access to all parts of the subdivision, and link to major roadways adjacent to the project. Del Paso and El Centro roads make up the eastern and northern boundaries of the project and both of these roads will be improved consistent with the policies and requirements of the NNCP. Specifically, the roadways adjacent to the property will be widened to 4-lanes to accommodate the anticipated increase in traffic within the area, and will include the upgrade and installation of traffic signals. The developer will only be responsible for improving the half of the roadway directly adjacent to the project site (i.e. construction of 2 lanes of the 4-lane roadway). A traffic study prepared for the planned Westborough project located north of Del Paso road also provides traffic signal recommendations and major roadway improvements necessary for Del Paso Road (DKA Associates 1999), and based on the volume of existing traffic data, the City has determined that a site specific traffic study is not necessary to conduct for the Natomas Central project (Scott Tobey, 2004). A copy of the trip generation data used by the City of Sacramento Development Engineering and Finance Division to evaluate the traffic conditions associated with the Natomas Central project is attached as Appendix D.

The North Natomas Public Facilities Fee (PFF) is part of the City's Capital Improvement Program and was established with the adoption of the North Natomas Financing Plan (City of Sacramento 2004). The PFF addresses the funding and responsibility for improvements to roads, public facilities, parks and utilities within the NNCP area. Payment of the PFF is required of all private development projects in North Natomas to ensure basic infrastructure is in place when needed for development, the cost of infrastructure is distributed fairly among property owners, and that each developer pays a fair-share for necessary infrastructure. The improvements that will be required for Del Paso and El Centro roads are covered by the PFF. Improvement requirements and specifics will be provided by the City Development Engineering and Finance Division to the developer, including the phasing of road improvements.

Public Transportation. The NNCP was designed to encourage the use of public transportation by local residents. The plan envisions high density residential uses and intense employment generators located near transit centers (light rail, bus, and shuttle services). In addition, the integration of multiple land uses within the Natomas Community Plan Area was anticipated to decrease the distance and travel time between locations.

Sacramento Regional Transit is the major public transportation service provider within Sacramento County providing 20.6 miles of light rail service and fixed-route bus service on 77 routes covering a 418 square-mile area, 7 days a week, 365 days a year. Currently light rail service and many of the bus routes are oriented to the downtown area.

Several new light rail stations and routes were identified for the North Natomas Community in the NNCP. A light rail station is proposed to be located at the intersection of Club Center Drive and East Commerce Parkway, one mile east of the project site, east of Interstate 5. This light rail corridor runs along East Commerce Parkway east of the project site, and connects the downtown area with Sacramento International Airport.

Currently there is one Sacramento Regional Transit bus route servicing the North Natomas area, although several other bus routes are proposed for the North Natomas Community. These routes will connect the Natomas Central project to downtown Sacramento as well as other areas serviced by Sacramento Rapid Transit (City of Sacramento, Planning & Building Department 2003). Route 11 provides service between the downtown area in the vicinity of K Street Mall and North Natomas in the vicinity of Club Center Drive, Northborough Drive, and North Park Drive. The closest bus stop to the project along Route 11 is located near the intersection of Del Paso Road and Natomas Boulevard east of I-5. Once all of the proposed bus routes have been implemented though, the closest bus stop will be at the corner of Del Paso and El Centro roads. The North Natomas Transportation Management Association recently partnered with the City of Sacramento, Donahue Schriber, and Paratransit, Inc., to provide free shuttle service to residents within the North Natomas area from 10 AM to 3 PM Monday through Friday (North Natomas Transportation Management Association 2004). This shuttle is ADA accessible, and can be used to conveniently access RT bus stops (currently only for Route 11) and proposed light rail stations in North Natomas. All shuttles include bike racks to promote other forms of low-emission transportation other than the automobile. Additional information for the North Natomas Transportation Management Association is provided below.

The NNCP stresses the importance of interfacing light rail, bus and bicycle/pedestrian transit systems with vehicular streets since many transit riders use multiple forms of transportation. Careful consideration should be taken to prevent conflicts where bicycle, transit, and auto traffic meet. Multiple forms of transportation opportunities should be available during all phases of community construction within North Natomas in order to keep pace with all phases of development. Shuttle bus services may serve to provide an interim form of transportation until more permanent forms are available. The North Natomas Development Guidelines states that light rail stations and bus transit centers should serve as focal points throughout the community, and transportation centers and

associated light rail, bus and shuttle stops should be user friendly, easily identifiable and pedestrian oriented.

Pedestrian/Bikeway. Many people use these forms of transportation to commute to and from work, commercial centers, and recreational activities. These pedestrian and bikeways can serve both as an aesthetically pleasing form of recreation as well as provide routes for commuting. Pedestrian and bikeways within the project area and the North Natomas Community as a whole should be designed with the safety of users in mind as well as their functionality. Providing quality pedestrian and bicycle routes throughout the community, and allowing for easy access between neighborhoods, employment, and commercial centers will increase the likelihood that an individual will choose this mode of transportation, as opposed to using an automobile.

The NNCP provides policies for on- and off-street bike routes, pedestrian ways, and bicycle parking. Major streets should provide signed and striped bikeways as outlined in the County of Sacramento 2010 Bikeway Master Plan. Off-street pedestrian/bikeways should be provided along linear parkways and civic areas, and private developers should be encouraged to provide public pedestrian/bicycle access through large private developments to avoid impeding direct access between uses. Pedestrian ways require direct sidewalks, especially within high use areas such as parks and civic centers, and should include amenities such as benches, drinking fountains, and building directories. Pedestrian and bikeway access to the on-site elementary school should be facilitated from all neighborhoods of the project.

Several on- and off-street bikeways are proposed for the Natomas Central project. As identified in the City's Bikeway Master Plan an off-street bike trail is located adjacent to the Fisherman's Lake within the buffer. This trail will consist of a 12 foot wide pathway with a 2 foot decomposed granite shoulder on each side.

Parking. Currently there are no parking spaces as the proposed project site is vacant undeveloped land. Parking standards outlined in the NNCP are designed to promote the use of zero-emission transit services and pedestrian/bicycle modes of transportation. This is done through strategically placing parking areas adjacent or within close proximity of transit stops and pedestrian/bicycle pathways and trails, and the inclusion of electric vehicle charging stations. Parking facilities should take into consideration average and expected ridership of transit services and local availability of off-site and on-street parking. Parking facilities must protect residential neighborhoods as well as provide facilities for charging electric vehicles and electric shuttle buses. In addition to providing vehicle parking spaces for residents and commuters, adequate bicycle parking will be required to accommodate for the anticipated increased use of this form of transportation. While parking for the recreation center that is part of the land use plan for the project has not yet been designed, these parking areas will be comply with parking standards outlined in the NNCP, by promoting the use of zero-emission transit services and alternative forms of transportation. This will be done through strategically placing parking areas adjacent or within close proximity of transit stops and pedestrian/bicycle pathways and trails, and the inclusion of electric vehicle charging stations.

North Natomas Transportation Management Association. The adoption of the NNCP in 1994 required development activities in North Natomas to comply with Federal and State Clean Air Acts. Requirements include a reduction in vehicle trips by 35 percent below the single occupant vehicle baseline, and reduction of reactive organic gases (ROG) emissions by 35 percent community-wide. The North Natomas Transportation Management Association (NNTMA) was established in 1998 to assist developers, employers, residents and others with implementation of trip reduction strategies in support of NNCP goals and objectives (North Natomas Transportation Management Association 2003). Each commercial developer within the NNCP area is required to submit a Transportation Management Plan (TMP) that demonstrates how the project will help meet trip and emission reduction goals, and a requirement of each TMP is participation in the NNTMA.

3.6.2 Standards of Significance

Roadway Traffic. An impact is considered significant for roadways or intersections when the project causes the facility to change the Level of Service (LOS) C or better to LOS D or worse. For facilities that are, or will be worse than LOS C without the project, an impact is also considered significant if the project: 1) increases the average delay by 5 seconds or more at an intersection, or 2) increases the volume to capacity ratio by 0.02 or more on a roadway.

Regional Transit. An impact is considered significant if the project will cause transit boardings to increase beyond the crush load of a transit vehicle or if the project will cause a 10 percent or greater increase in travel time along any route.

Bikeways. An impact is considered significant if implementation of the project will disrupt or interfere with existing or planned (BMP) bicycle or pedestrian facilities or if the project is to result in unsafe conditions for bicyclists, including unsafe bicycle/pedestrian or bicycle/motor vehicle conflicts.

Parking. A significant impact to parking would occur if the anticipated parking demand of the project exceeds the available or planned parking supply for typical day conditions.

3.6.3 Answers to Checklist Questions

- A) The proposed project would increase vehicular traffic. Roadway improvements outlined in the traffic study prepared for the Westborough project north of Del Paso road and data provided by the City of Sacramento Development Engineering and Finance Division were used to evaluate road improvements necessary to accommodate for increased traffic associated with the project, and to ensure level of service standards consistent with the City of Sacramento's General Plan. Based on the volume of traffic data available for the area, the Westborough traffic study and supplemental data will be used to develop recommendations for phasing and implementation of roadway improvements in lieu of a site-specific traffic study. This is based on comments received by the City's traffic engineer

during the initial comment period of the project proponent original application (Scott Tobey, 2004). The developer will be required to fund the improvements of Del Paso and El Centro roads adjacent to the project site as part of the North Natomas Public Facilities Fee requirements.

As part of the Conditions of Approval for the Natomas Central project the project developer will coordinate with the City of Sacramento Development Engineering and Finance Division for specifications and timing of the road improvements along Del Paso and El Centro roads adjacent to the project site as part of the requirements of the Capital Improvement Program funded by the North Natomas Public Facilities Fee. In addition to road construction specifications for widening these roadways, the Development Engineering and Finance Division will provide the developer with details for upgrading existing traffic signals and installation of additional traffic signals.

The proposed project is not anticipated to create any additional transportation and circulation impacts. Furthermore, the required consultation with the Development Engineering and Finance Division for specification and phasing requirements for improvements to El Centro and Del Paso roads will result in less than significant impacts from potential traffic and circulation issues as a result of the project, and no further mitigation is necessary.

- B) Public roadway improvements required for the project have been designed to comply with the City's standards, and are designed to provide a safe method of transportation for those residents traveling by vehicle, bicycle, or on foot. The project roadways as designed do not create transportation hazards and impacts are considered less than significant and no mitigation is required. .
- C) Existing road infrastructure designs will provide adequate emergency access to the proposed project site. The project site shall be designed to the appropriate standards, to the satisfaction of the City of Sacramento's Development Services Department, Development Engineering and Finance Division, and Fire Department. Potential emergency access impacts are considered to be less than significant and do not require mitigation. Roadway improvements to Del Paso and El Centro Roads that are part of the project will contribute increase the current level of service provided by these roadways and will ensure connectivity throughout the NNCP area is maintained. These roadway improvements mitigate the projects access impacts to a less than significant level and no mitigation is required.
- D) Aside from the recreation center and elementary school, a majority of the project area will not require additional parking areas aside from those included with residential driveways and streets. Additional parking needs for the elementary school and recreation center have not yet been finalized, but will be designed to encourage the use of alternative forms of transportation such as bicycle and pedestrian routes, and access to light rail and bus services. Due to the anticipated increase in population of the North Natomas area and associated residential

development including Natomas Central, it is anticipated the usage of alternative forms of transportation will reduce the need for large parking facilities associated with commercial and civic use areas. The impact to parking capacity both on and off site is considered less than significant due to the proposed availability of alternative forms of transportation on the project and within North Natomas as a whole. No mitigation required.

- E) The proposed project may increase potential bicycle/pedestrian or bicycle/motor vehicle conflicts. However, the frontage improvements along the project site will include sidewalks designed to appropriate City standards, as well as driveways, curbs, and gutters of the project. By locating some of the pedestrian access pathways within neighborhoods and away from roads, the potential for bicycle or pedestrian/motor vehicle conflicts should be lessened. Impacts arising from potential bicycle/pedestrian or bicycle/motor vehicle conflicts are considered less than significant and no mitigation would be required.

- F) Natomas Central is designed to promote the use of public transportation services and zero-emission transportation opportunities. This has been done by providing bicycle racks around parks and the recreation center, the inclusion of bicycle traveling lanes on roadways, and including electric charging stations for electric vehicles in parking areas. Major interior roadways have been designed to accommodate bus routes and a light rail station will be located within one mile of the project site and the incorporation of pedestrian and bikeway paths within the project boundaries. These project features will encourage walking and bicycling as alternative forms of transportation. Since the project by design supports the existing policies related to alternative forms of transportation, impacts and conflicts with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks) are considered less than significant and no mitigation is necessary.

- G) Light rail is a key component of the transportation features of the NNCP, and a light rail route is proposed along East Commerce Drive less than one mile from the project site. The Sacramento Northern rail line is located approximately two miles west of the project site, west of the Sacramento River, and the Western Pacific rail line is located approximately four mile east of the project site. The major roadways that residents of the project are expected to use do not cross these railroad lines, and the light rail route has been designed to minimize conflicts with vehicular traffic. The Natomas Central project will not impact these railways. No waterway routes exist in or near the project area.

The project could potentially affect air traffic patterns since the project will be located in close proximity to the Sacramento International Airport (SIA), and the increase in population of the NNCP may generate an increase in air travel. A news release from the Sacramento County Airport System (2005) indicated that in June 2002 a total of 817,079 passengers utilized SIA for air travel, which equates to about 27,236 passengers daily. Based on the potential number of SIA travelers originating from Natomas Central on any given day, the percentage of SIA

travelers originating from the Natomas Central project is not expected to significantly impact air travel at the airport. Impacts to rail, waterborne, and air traffic are considered less than significant.

Mitigation Measures

None required.

3.6.4 Findings

Because the nature of the proposed project is residential in design, vehicle trips and traffic congestion will be expected to increase. The signaling and widening improvements proposed for Del Paso and El Centro Roads will help to reduce these impacts to a less than significant level. In addition the inclusion of numerous bicycle/pedestrian paths, light rail, and other zero-emission transportation options offered as part of the proposed project and within the NNCP area further reduce project-related transportation impacts to a less than significant level.

No impacts to rail, waterborne or air traffic impacts are expected from the project. The design of the project provides for adequate emergency access and will include pedestrian and bicycle-friendly pathways, crosswalks, and traveling lanes to provide residents with a safe environment in which to participate in alternative forms of transportation. Substantial parking capacity (on or off site) will not be required for the project. The project does not conflict with policies that support the use of alternative transportation, and in fact has been designed to promote the use of zero-emission transportation options throughout the development and North Natomas as a whole. No mitigation is required to address these transportation issues.

The project is expected to have a less than significant impact on transportation and circulation, and no mitigation is necessary.

3.7 Biological Resources

Issues:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than significant Impact
Would the proposal result in impacts to:			
A) Endangered, threatened or rare species or their habitats (including, but not limited to plants, fish, insects, animals and birds)?		X	
B) Locally designated species (e.g., heritage or City street trees)?			X
C) Wetland habitat (e.g., marsh, riparian and vernal pool)?			X

3.7.1 Environmental Setting

The project site is located within the Natomas Basin, which is roughly defined as the area east of the Sacramento River, north of its confluence with the American River. The boundaries are generally defined by levees located along the western boundary of the Sacramento River, extending north along either side of Highway 99 into Sutter County, south to the area of the I-5/I-80 interchange, with the eastern boundary located approximately two miles east of Highway 99. A total of 53,537 acres are included within the basin area, which includes portions of the City of Sacramento, Sacramento County, and Sutter County. Approximately 12,836 acres of the basin reside within the City of Sacramento boundary.

The biological features of the basin have been significantly altered through agricultural activities over the last several decades, although areas containing natural and uncultivated vegetation are located in the vicinity of irrigation canals, drainage ditches, pastures, and uncultivated fields (City of Sacramento 1996). Numerous water conveyance systems operated by Natomas Mutual and RD 1000 are located throughout the basin, which have historically provided water for irrigated rice farming activities in the area. The water and vegetation surrounding these conveyance systems are an important habitat component for wildlife within the basin, providing areas for nesting and feeding, as well as functioning as a migration corridor. Historically, the Natomas Central property and surrounding area was utilized for agricultural purposes, including the production of crops such as rice, safflower, and other forage crops. Currently the site is used for agricultural practices such as the production of hay crops, and contains remnant patches of annual grassland supporting ruderal plant species that is the result of frequent mechanical disturbances (Foothill Associates 2004). Fisherman’s Lake, located along the western and southern boundaries of the site, provides habitat for the state threatened Swainson’s hawk (*Buteo swainsoni*), the federal and state threatened giant garter snake (*Thamnophis gigas*), and other special-status species. There are a few scatter willows (*Salix* spp.) located in the vicinity of the projects boundary with Fisherman’s Lake, but otherwise the site is vacant of any trees.

The 1994 NNCP required the development and implementation of a Habitat Conservation Plan as mitigation for development in North Natomas and Natomas Basin. The proposed project is located within the area of the City that is required to comply with all measures identified in the Natomas Basin Habitat Conservation Plan (NBHCP). The NBHCP is a conservation plan supporting application for incidental take permits (ITPs) under Section 10(a)(1)(b) of the Endangered Species Act and under Section 2081 of the California Fish and Game Code. The purpose of the NBHCP is to promote biological conservation in conjunction with economic and urban development within the Permit Areas of the Natomas Basin. The NBHCP establishes a multi-species conservation program to minimize and mitigate the expected loss of habitat values and incidental take of Covered Species resulting from urban development, operation of irrigation and drainage systems, and certain activities associated with The Natomas Basin Conservancy management of its system of reserves established under the NBHCP. Goals of the NBHCP include minimizing incidental take of the Covered Species in the Permit Areas, and providing mitigation for impacts of Covered Activities for Covered Species and their habitat. The NBHCP applies to the 53,537-acre Natomas Basin.

The developer has satisfied all NBHCP requirements for the purchase of land and payment of mitigation fees. The developer has transferred to The Natomas Basin Conservancy (TNBC) 216 acres of land in the vicinity of Sankey and Powerline Roads in Sutter County to be used and managed by TNBC as part of the mitigation requirements of the NBHCP. The remainder of the mitigation requirements for non-acquisition components of the mitigation fee have been paid to the City.

RD 1000 owns and manages Fisherman's Lake. Fisherman's Lake has been identified by the NBHCP as an important area for preservation and the City of Sacramento has agreed to amend the North Natomas Financing Plan to include acquisition of a 200- to 300-foot buffer along Fisherman's Lake in the Land Acquisition Program that will be funded by development impact fees, and is designed to comply with the requirements of the NBHCP. A 300 foot buffer is required along those portions of Fisherman's Lake known to support nesting of Swainson's hawk, and the buffer requirement is decreased to 200 feet for those areas that do not have historic data to support the presence of Swainson's hawk. The buffer is 52 acres in size, and will be managed by TNBC. In addition to the protection of Swainson's hawk nesting habitat, the buffer will provide habitat for giant garter snake, and other special status species such as the valley elderberry longhorn beetle.

In 1997, the NBHCP was approved by the City of Sacramento and ITPs were issued to the City by U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG). Subsequently, the 1997 NBHCP was challenged and on August 15, 2000, the U.S. District Court, Eastern District, ruled that the USFWS ITP was invalid and an Environmental Impact Statement was required. The City of Sacramento, Sutter County and the USFWS prepared a revised NBHCP and an Environmental Impact Report/Environmental Impact Statement (EIR/EIS) was approved on May 13, 2003 by the City of Sacramento. On June 27, 2003, the USFWS issued ITPs to the City of Sacramento, Sutter County, and The Natomas Basin Conservancy. CDFG issued an amended ITP on July 10, 2003.

Biological Data and Surveys. CDFG manages the California Natural Diversity Database (CNDDDB). This database provides current natural history and location information on rare, threatened, endangered, and special status species and natural communities to the public, other agencies, and conservation organizations (California Department of Fish and Game 2004). The data is used in support of conservation decisions, development operations, for research projects and also provides baseline data helpful in recovering endangered species. A review of the California Natural Diversity Database (CNDDDB) records determined that the special-status species most likely to occur within the vicinity of the project site were Swainson's hawk, giant garter snake, and western burrowing owl (*Athene cunicularia hypugea*).

Biological surveys were conducted on the project site by Foothill Associates biologists on December 23, 2003, March 30, 2004 and April 15, 2004 in an effort to identify all potential biological issues on the project site and to record the presence of active raptor nests along Fisherman's Lake. Results of these surveys identified Swainson's hawk and giant garter snake as the only potential biological constraints associated with the site.

The blue elderberry shrub (*Sambucus mexicanus*) is the host plant for the federally threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). One blue elderberry shrub was identified within the southwest portion of the project site adjacent to Fisherman's Lake. This shrub contained one stem with a basal diameter greater than five inches, and nine stems with a basal diameter of one to three inches. No exit holes were observed on the stems, which would indicate use of the host plant by the beetle. The location of the shrub along Fisherman's Lake is located within the buffer that has been established along the project's western and eastern boundaries. The U.S. Fish and Wildlife Service considers activities located at least 100 feet from shrubs as not likely to adversely affect the valley elderberry longhorn beetle. Due to its protected location within the buffer and the greater than 100 foot distance from development activities, the project is not expected to impact the valley elderberry longhorn beetle.

A pre-construction survey for the site was conducted by Foothill Associates biologists on July 23 and July 26, 2004, and on March 31, 2005. The purpose of these surveys were to complete the pre-construction survey checklist requirements outlined in the NBHCP, and to identify the status and presence of special status species likely to occur in the project area. The site was surveyed on foot with special emphasis on surveying those areas identified in the NBHCP that had the potential to support special-status species or areas that contained rare habitats. Additional special-status species included in the surveyed included valley elderberry longhorn beetle, tricolored blackbird (*Agelaius tricolor*), loggerhead shrike (*Lanius ludovicianus*), bank swallow (*Riparia riparia*), white-faced ibis (*Plegadis chihi*), California tiger salamander (*Ambystoma californiense*), midvalley fairy shrimp (*Branchinecta mesoallensis*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardii*), western spadefoot toad (*Spea hammondi*), Bogg's Lake hedge-hyssop (*Gratiola heterosepala*), Colusa grass (*Neostapfia colusana*), Delta tule pea (*Lathyrus jepsonii* var. *jepsonii*), legenere (*Legenere limosa*), Sacramento Orcutt grass (*Orcuttia viscida*), Sanford's arrowhead (*Sagittaria sanfordii*), and slender Orcutt grass (*Orcuttia tenuis*) (**Table 9**).

Results of the preconstruction survey did not identify any special-status species on the project site. The property does not contain any vernal pools or seasonal wetland habitat that would support any special-status species that are dependent upon these wetland habitats. In addition, no wetlands were identified within 250-feet of project activities.

While no Swainson's hawks were observed directly on the project site, a juvenile and adult Swainson's hawk were observed foraging and perched within the vicinity of the site. No active nests were identified on site or along Fisherman's Lake during the preconstruction surveys conducted in July 2004, but this area did contain several old stick nests that did not contain signs of active use.

3.7.1.1 Special-Status Species of the Natomas Basin

The NBHCP has designated 22 special status species with the potential to occur in the Natomas Basin (**Table 9**). The list includes seven species of plants, four species of invertebrates, two species of amphibians, two species of reptiles, and seven species of birds. Of these species, Swainson's hawk and giant garter snake are the most prominent within the Natomas Basin area, and six of the seven bird species are migratory (the loggerhead shrike is the only resident bird). Burrowing owls are also documented as inhabiting the Natomas Basin. Each species of special concern is associated with one of three habitat categories: wetlands, uplands, or vernal pools. Appendix C contains the California Natural Diversity Database (CNDDB) information for special-status plant and animal species that have been recorded within a five-mile radius of the project site.

3.7.1.2 Special-Status Plants

The NBHCP lists seven special-status plants as occurring within the Natomas Basin. The Delta tule pea (*Lathyrus jepsonii* ssp. *jepsoni*) and Stanford's arrowhead (*Sagittaria sanfordii*) are the two state listed plant species of concern that are associated with marshes and shallow water habitat. Neither of these habitat types occur on site. In addition, the biological survey of the site did not document either of these plant species. The federally threatened species, Colusa grass (*Neostapfia colusana*), state endangered Bogg's Lake hedge-hyssop (*Gratiola heterosepala*), state and federally threatened Sacramento Orcutt grass (*Orcuttia viscida*), state listed endangered slender Orcutt grass (*Orcuttia tenuis*), and state sensitive legenere (*Legenere limosa*) are also listed by the NBHCP as having a potential to occur within vernal pools of the Natomas Basin. No vernal pool habitat is located on the project site and these species were not identified as occurring on the project site during the preconstruction surveys.

While not listed in the NBHCP, dwarf downingia (*Downingia pusilla*) and rose-mallow (*Hibiscus lasiocarpus*) have CNDDB records within 5-miles of the project site (Appendix C). Neither dwarf downingia nor rose-mallow are state or federally listed. California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (2001) includes the dwarf downingia and rose-mallow as List 2 plants, which are those plants classified as rare, threatened, or endangered in California, but are more common elsewhere. Dwarf downingia occurs within vernal pool habitat and rose-mallow occurs in swampy or marshy areas. Since neither of these habitat types occur within the project

boundaries, there is no potential for either dwarf downingia or rose-mallow to occur on site.

3.7.1.3 Special-Status Invertebrates

Several CNDDDB records for valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) are located within five miles south of the project and are concentrated along the Sacramento River to the south and northeast of confluence with the American River. The USFWS considers any blue elderberry shrub having stems with a basal diameter of at least one inch to be potential habitat for the federally threatened valley elderberry longhorn beetle. The single elderberry shrub identified in the southwest portion of the site has 10 stems that would meet this criterion; although no indication of active use by beetle larvae were observed during the preconstruction survey. The shrub is located within the buffer required along the project’s boundary with Fisherman’s Lake. The U.S. Fish and Wildlife Service considers construction activities located at least 100 feet from shrubs as not likely to adversely affect the valley elderberry longhorn beetle. The elderberry shrub will be avoided and will not be removed. Furthermore, due to its protected location within the buffer and the greater than 100 foot distance from development activities, the project is not expected to impact the valley elderberry longhorn beetle.

CNDDDB records for California linderiella (*Linderiella occidentalis*) and vernal pool fairy shrimp (*Branchinecta lynchi*) are located within five miles east of the project site, and are concentrated in the vicinity of the railroad line approximately three miles east of I-5. No vernal pool habitat is present on site, and as such there is no potential for the federal species of concern midvalley fairy shrimp (*Branchinecta mesovallensis*) and California linderiella, the federally threatened vernal pool fairy shrimp, or the federally endangered tadpole shrimp (*Lepidurus packardi*) to occur on site.

Table 9 — Natomas Basin Habitat Conservation Plan List of Special-Status Wildlife Species (USFWS and CDFG 2003)

Species	Federal Status	State Status	Habitat Notes
Aleutian Canada goose <i>Branta canadensis leucoparia</i>	SC		Grazes in marshes and stubble fields, roosts on water.
bank swallow <i>Riparia riparia</i>		T	Nests in river banks, forages for insects over open water, croplands, and grasslands.
burrowing owl <i>Athene cucularia</i>		SCC	Prefers open, dry grassland and desert habitats.
loggerhead shrike <i>Lanius ludovicianus</i>	SC	SCC	Prefers open habitats with scattered shrubs, trees, fences, and posts. Will use cropland.

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Species	Federal Status	State Status	Habitat Notes
Swainson's hawk <i>Buteo swainsoni</i>		T	Breeds in riparian forest. Known nesting sites in trees along Sacramento River in Natomas Basin. Forages for small mammals in grasslands and croplands.
tricolored blackbird <i>Agelaius tricolor</i>	SC	SSC	Nests in marshes with bulrush, blackberry, or cattails; three known occurrences in Natomas Basin. Forages on the ground in grasslands and croplands.
white-faced ibis <i>Plegadis chihi</i>	SC	SSC	Forages in flooded rice fields.
giant garter snake <i>Thamnophis gigas</i>	T	T	Forages in marshes, low gradient open waterways and flooded rice fields, hibernates in canal berms and other upland; several known occurrences in Natomas Basin.
northwestern pond turtle <i>Clemmys marmorata marmorata</i>	SC	SSC	Lives in permanent bodies of water; requires floating vegetation, logs, rocks or banks for basking. Hibernates and lays eggs in uplands.
California tiger salamander <i>Ambystoma californiense</i>	C	SSC	Winters in ground squirrel burrows or other holes; breeds in vernal pools, stock ponds, and other seasonal wetlands.
western spadefoot toad <i>Scaphiopus hammondi</i>	SC	SSC	Primary habitat is grasslands; breeds in shallow temporary pools.
valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T		Lives and reproduces on elderberry shrubs found along rivers and canals.
midvalley fairy shrimp <i>Branchinecta mesovallensis</i>			Vernal pool obligate often found in small pools; likely to occur in Natomas Basin Plan Area
vernal pool fairy shrimp <i>Branchinecta lynchi</i>	T		Vernal pool obligate; widely distributed in Sacramento County.
vernal pool tadpole shrimp <i>Lepidurus packardii</i>	E		Vernal pool obligate; widely distributed in Sacramento County.
Bogg's Lake hedge-hyssop <i>Gratiola heterosepala</i>		E	Low-terrace species found in shallow water margins of vernal pools
Colusa grass <i>Neostapfia colusana</i>	T		Occurs in large and small pools with substrates of adobe mud; known in Yolo County.
delta tule pea <i>Lathyrus jepsonii</i> spp. <i>jepsoni</i>	SC		Perennial twining vine occurs in both riparian and marsh habitats.
legenere <i>Legenere limosa</i>	SC		Found in wet places or vernal pools below 400 feet in elevation.

Species	Federal Status	State Status	Habitat Notes
Sacramento Orcutt grass <i>Orcuttia viscida</i>	E	E	Found in relatively large, deep vernal pools in eastern Sacramento County.
Sanford's arrowhead <i>Sagittaria sanfordii</i>	SC		Tuberose perennial likely to occur in drainage or irrigation ditches.
slender Orcutt grass <i>Orcuttia tenuis</i>	T	E	Found in relatively large, deep vernal pools in eastern Sacramento County.
Key to Abbreviations			
Federal - E = Endangered; T = Threatened; C = Candidate for federal listing, data sufficient; SC = Species of Concern- informal category (data for listing insufficient);			
State - E = Endangered; T = Threatened; R = Rare; SSC = Species of Special Concern			

3.7.1.4 Swainson's Hawk

Swainson's hawk is a state threatened species, and is known to occur throughout the Central Valley. Typically this species is present in California during the breeding season (April through August) and winters outside of the U.S. in Mexico and South America, although some records exist of them wintering in the Sacramento-San Joaquin Delta. Although the Swainson's hawk population is considered to be declining (California Department of Fish and Game 1988 and 1992), the Central Valley's breeding population has remained stable over the last decade (Estep 2000). There are 49 CNDDDB records for Swainson's hawk within five miles of the project site (Appendix C).

Swainson's hawks are opportunistic foragers, feeding on prey such as small rodents and insects from fields, pastures and grasslands adjacent to their nest. They prefer to nest in large trees such as valley oak (*Quercus lobata*), cottonwood (*Populus fremontii*), or willow (*Salix goodingii*) which provide a wide view of their foraging area, although they will select smaller trees if large trees are unavailable. Nesting sites are often located in riparian areas and are generally associated with agricultural fields including hay, grain, row crops, rice, vineyards, and fallow fields. Most Swainson's hawk sightings within the Natomas Basin have occurred along the Sacramento River where large trees are available, and 24 known nesting sites have been identified within the Basin (U.S. Fish and Wildlife and California Department of Fish and Game 2003). Three active nests were identified along Fisherman's Lake in the 2000 Annual Survey for Swainson's Hawk (Estep 2000).

Swainson's hawks have been observed foraging within the vicinity of the Natomas Central project site, including a juvenile and adult Swainson's hawk observed foraging and perched within the project vicinity. The NBHCP Conservation Strategy is to both preserve Swainson's hawk habitat adjacent to the Sacramento River and enhance and expand the hawk's habitat by ensuring the availability of suitable nesting trees and groves located near upland foraging habitat. Impacts to Swainson's hawks will be reduced through compliance with requirements of the NBHCP and through identification of active

raptor nests during a raptor survey conducted within 30-days of the project commencing construction activities. In addition the City has adopted a 200 to 300-foot buffer requirement along the portion of Fisherman's Lake adjacent to the project. The buffer will contain open space/parkway areas that will have restricted access during the Swainson's hawk nesting season.

3.7.1.5 Loggerhead Shrike

The loggerhead shrike is a state species of special concern. This small bird forages in agricultural fields and grasslands, and is often observed perching on fence posts or tree limbs. These lookout posts are used to swoop down to prey on insects, rodents, snakes, and smaller birds. Since this bird species lacks talons, it impales its' prey on thorns or barbed wire. It is widespread throughout much of North America, and is a resident of the lowlands and foothills of California. Recent population declines have occurred throughout much of its range, although California populations appear to be stable (U.S. Fish and Wildlife and California Department of Fish and Game 2003).

No loggerhead shrikes were observed on the project site during the preconstruction survey. Suitable habitat for the loggerhead shrike is available throughout the Natomas Basin, but the project site lacks areas of suitable cover, which reduces the likelihood for this species to occur on site. Furthermore, the NBHCP states that the loggerhead shrike habitat within the Community Plan area is of low quality and only a few individuals have been observed in the Plan area during reconnaissance-level and habitat mapping surveys (U.S. Fish and Wildlife Service and CA Dept. of Fish and Game 2003). As such minimal effects to loggerhead shrikes within the City limits are expected to occur as a result of development, and no impacts to nesting loggerhead shrikes are expected to occur as a result of the proposed project.

3.7.1.6 Burrowing Owl

Although not currently listed under the Federal or California Endangered Species Acts, the burrowing owl is considered a Species of Concern by the USFWS. This small raptor is considered a year-long resident of California, and nests in ground burrows vacated by ground squirrels, or other artificial structures such as culverts or debris piles. Its preferred habitat is open, dry grasslands and desert habitats of the Central Valley, California deserts, and coastal areas. The reduction of prey items including ground squirrels and other small rodents is thought to have contributed to the decline of this species, as well as the fragmentation of its habitat.

Three occurrences of this species are reported in the 2001 CNDDDB for the Natomas Basin, and four CNDDDB records exist within five miles of the site (Appendix C). No individuals were observed on or within 300 feet of the project site during the July 2004 preconstruction surveys, and due to the frequent disking activities that occur on site, the site does not contain suitable burrows. Although suitable burrows were observed along the southern and western berms of Fisherman's Lake (Foothill Associates 2004), these appear to be occupied by California ground squirrels (*Spermophilus beecheyi*). Although the annual grassland of the site could potentially provide habitat for this species, due to

the lack of suitable burrows, no impacts to burrowing owls are expected to occur as a result of this project.

3.7.1.7 Giant Garter Snake

The giant garter snake (GGS) is listed as a federally threatened species under the Federal Endangered Species Act and the California Endangered Species Act. It is a large aquatic snake that can reach lengths of 4.5 feet or greater, and is endemic to wetland habitat of the Central Valley. Historically this species was observed from Butte County south to Bakersfield. While the current population distribution for GGS is concentrated within the Sacramento Valley, small isolated populations exist within the San Joaquin Valley (U.S. Fish and Wildlife and California Department of Fish and Game 2003). GGS activities within the Natomas Basin are strongly linked to agricultural activities. One CNDDDB record for GGS is located in the northeast corner of the project site and an additional 30 records are located within five miles of the project site, including two records along Fisherman's Lake. Use of Fisherman's Lake by GGS has also been documented by U.S. Geological Survey (Wylie 2000).

GGS typically enter suitable hibernation sites, such as burrows, rubble piles, or canal banks during October, and emerge in late March or early April. They may utilize canals that retain water throughout the summer months, which also contain adequate emergent vegetation that provides cover, and these canals must also have an abundant food supply such as small fish, tadpoles, and frogs. Although drainage canals exist within the project area, current canal maintenance activities, such as vegetation removal, have rendered many canals unsuitable habitat for the GGS. Rice fields with significant growth provide cover for wildlife and may also be used by GGS. However, GGS will move away from fields after they have been drained prior to harvesting. At this time the snake moves back to the canal habitat area where they may find prey stranded in isolated pools of water.

Daily activities of the GGS generally include emerging from burrows after sunrise to bask and warm its internal temperature, which will allow for foraging and courting activities that take place throughout the rest of the day. They can travel up to five miles over the course of a few days, but typically move between 0-30 meters a day.

The habitat requirements of the GGS include agricultural wetlands and other waterways such as irrigation and drainage canals, flooded rice fields, marshes, sloughs, ponds, small lakes, low gradient streams, and adjacent uplands of the Central Valley. Population declines have resulted from through the reduction in available habitat and habitat fragmentation.

Most important to GGS's survival is the availability of permanent water sources that contain emergent vegetation as well as an abundant food supply. Suitable overwintering habitat should also be located in close proximity to its foraging habitat. This species of snake is commonly observed in close proximity to a combination of permanent and seasonal freshwater sources. Because of the scarce availability of natural permanent marsh habitat within the Basin, GGS has adapted to survive in the inundated rice fields and their associated irrigation and drainage canals. Recent population estimates for the

GSS within the Natomas Basin is 277 (U.S. Fish and Wildlife Service and California Department of Fish and Game, 2003).

Suitable GGS habitat and a CNDDDB record are located within and along the boundaries of the project site (Fisherman's Lake), and numerous CNDDDB records exist within five miles of the site.

3.7.1.8 Other Special-Status Species

Several other special-status species have CNDDDB records as occurring within five miles of the project site and a discussion of the habitat requirements, CNDDDB occurrence within the project vicinity, and the potential for each species to occur on site is provided below.

3.7.1.9 Sacramento Splittail

A CNDDDB record for the Sacramento splittail (*Pogonichthys macrolepidotus*), a minnow that is a federal species of concern, is located approximately two miles south of the project site in the Sacramento River (Appendix C). This species is dependent on the temperate freshwater flows of riverine systems for survival and reproduction. Although freshwater habitat exists nearby with the presence of numerous water supply canals including Fisherman's Lake, this freshwater habitat is not hydrologically connected to riverine systems, and/or does not permit fish access between the two waterbodies. There is no potential for the Sacramento splittail to occur near the project site due to the lack of hydrological connectivity between the Sacramento River and Fisherman's Lake.

3.7.1.10 Migratory Bird Treaty Act

Raptors (birds of prey), migratory birds, and other avian species are protected by a number of state and federal laws. The federal Migratory Bird Treaty Act (MBTA) prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of Interior. Section 3503.5 of the California Fish and Game Code states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." The following bird species are covered by the MBTA and have the potential to use the project site for foraging or use the trees located along Fisherman's Lake for nesting or rookeries.

3.7.1.11 Black-crowned Night Heron

One CNDDDB record for the black-crowned night heron (*Nycticorax nycticorax*), a Bureau of Reclamation sensitive species, is located approximately four and one-half miles northwest of the project site (Appendix C). This species is dependent on wetland/open water habitat for breeding and feeds mostly on fish and aquatic invertebrates. The black-crowned night heron may use the nearby canals to forage for food, and the presence of suitable open water habitat for breeding along Fisherman's Lake increases the potential

for this species to occur on site. Based on the presence of suitable habitat located in close vicinity of the site and the CNDDDB record within five miles of the site, there is a high potential for the black-crowned night-heron to occur on site.

3.7.1.12 Great Blue Heron

A CNDDDB record for the great blue heron (*Ardea herodias*), a California Department of Forestry and Fire Protection sensitive species, is located approximately four miles east of the project site (Appendix C). This listing is for rookery habitat only, and would only warrant special protection during timber harvesting activities.

The great blue heron is dependent on wetland/open water habitat for breeding and feeds mostly on fish and aquatic invertebrates. The great blue heron may use the nearby canals, including Fisherman's Lake to forage for food, and the presence of open water habitat required for breeding and fish foraging increases the potential for this species to occur on site. As such there is a high potential for this species to occur on the project site.

3.7.1.13 Great Egret

Two CNDDDB records for great egret (*Ardea alba*), a California Department Forestry and Fire Protection sensitive species, are located north and east of the project site (Appendix C). This listing is for rookery habitat only, and would only warrant special protection during timber harvesting activities.

The great egret is dependent on wetland/open water habitat for breeding and feeds mostly on fish and aquatic invertebrates. The great egret may use the nearby canals, including Fisherman's Lake to forage for food, and the presence of suitable open water habitat necessary for breeding and fish foraging increases the potential for this species to occur on site. As such there is a high potential for this species to occur on the project site.

3.7.1.14 Snowy Egret

A CNDDDB record for the snowy egret (*Egretta thula*), a United States Bird Conservation Watch List species, is located approximately four miles north of the project site (Appendix C). This listing is for rookery habitat only. The snowy egret is dependent on wetland/open water habitat for breeding and feeds mostly on aquatic invertebrates. The snowy egret may use the nearby canals, including Fisherman's Lake to forage for food, and the presence of suitable open water habitat for breeding and foraging increases the potential for this species to occur on site. As such there is a high potential for this species to occur on the project site.

3.7.1.15 White-tailed Kite

Four CNDDDB records for the white-tailed kite (*Elanus leucurus*), a Federal Species of Concern for nesting habitat only, are located approximately within five miles east of the project site (Appendix C). The white-tailed kite is a yearlong resident in coastal and

valley lowlands of California, and inhabits farmland, grasslands, and fields. The white-tailed kite is a medium sized raptor that is monogamous and breeds from February to October (Zeiner et. al. 1990). This species nests near the top of dense oak, willow, or other large trees. Suitable nesting trees are located within the vicinity of the site along Fisherman's Lake and the project site is considered suitable foraging habitat. As such there is a high potential for this species to be present.

3.7.1.16 Cooper's Hawk

Cooper's hawk, a California species of concern, is a yearlong resident throughout most of the wooded portions of the state. This species typically resides in dense stands of oak woodland habitat, riparian, or forest habitats near water. Their elevation range spans habitats from sea level to above 8,860 feet. The Cooper's hawk breeding period is March through August and nests are typically found in the crotches of deciduous trees and conifers (Zeiner et al. 1990). One CNDDDB record for Cooper's hawk is located approximately four miles southeast of the project site and based on potential foraging and nesting habitat located on or in close proximity to the project site, there is a high potential for this species to be present.

3.7.2 Standards of Significance

For purposes of this environmental document, an impact would be significant if any of the following conditions or potential thereof, would result with implementation of the proposed project:

- Creation of a potential health hazard, or use, production or disposal of materials that would pose a hazard to plant or animal populations in the area affected.
- Substantial degradation of the quality of the environment, reduction of the habitat, reduction of population below self-sustaining levels of threatened or endangered species of plant or animal.
- Affect other species of special concern to agencies or natural resource organizations (such as regulatory waters and wetlands).
- Violate the Heritage Tree Ordinance (City Code 12.64.040).

3.7.3 Answers to Checklist Questions

- A) The project is located within the portion of the City of Sacramento that is covered by the NBHCP. A revised NBHCP was approved by the City of Sacramento, USFWS, and CDFG in 2003. The project is subject to compliance with the applicable provisions of the revised NBHCP including the payment of HCP fees or purchase of mitigation lands for conservation. The developer has transferred to THBC 216 acres of land in the vicinity of Sankey and Powerline Roads in Sutter County to be used and managed by TNBC as part of the mitigation requirements of the NBHCP.

Special-status species that will likely be affected by the project include giant garter snake (GGS), Swainson's hawk, burrowing owl, and loggerhead shrike, and birds protected by the MBTA. As a result, measures to reduce impacts to these species will be implemented as part of the requirements of the NBHCP and by conducting pre-construction surveys. Take avoidance, minimization and mitigation requirements for special-status species required by the NBHCP will include pre-construction surveys, and measures to implement in the event any special-status species are observed on the project site (healthy, sick, dead, or injured). In addition to the purchase of lands as part of the North Natomas Financing Plan Land Acquisition Program, the project developer will be subject to NBHCP mitigation. These non-land acquisition related mitigation fees have been previously paid to the City. An additional buffer adjacent to Fisherman's Lake has been identified along the project's western and southern boundary, consistent with the NNCP, NNFP, and the NBHCP.

The NBHCP also provides avoidance criteria for active Swainson's hawk and raptor nests, and removal requirements if any active nesting trees will be removed. While no suitable nesting trees are located on the project site, raptor and Swainson's hawk mitigation is required for nesting trees located within ½-mile of the project site, and this would apply to those trees located along Fisherman's Lake within ½-mile of the site. Additional road improvements for roads and utilities could impact trees that are suitable for raptor or Swainson's hawk nesting. If potential raptor nesting trees are affected by off-site improvements, or are located within ½-mile of the project site, recommendations outlined in the NBHCP will be implemented. While it is not anticipated that Swainson's hawk nest trees will be removed as part of this project, additional tree planting mitigation will be required as outlined in the NBHCP, if it is determined at a later date that it is necessary to remove such trees.

The establishment of a 200- to 300- foot buffer along Fisherman's Lake will provide high quality nesting habitat for Swainson's hawk, aquatic habitat for the giant garter snake, and will provide grassland, riparian, and aquatic habitat for other wildlife species, including special status species. While this buffer will help mitigate the impacts to Swainson's hawk, giant garter snake and other special status species, additional mitigation is required.

The following mitigation measures will be implemented and will reduce impacts to special-status species and their habitat to a less than significant level.

Mitigation Measures

Mitigation Measure BR-1

The project applicant/developer shall complete the pre-construction surveys for potential special-status species not less than 30 days or more than 6 months prior to construction activities in accordance with the 2003 NBHCP. The pre-

construction survey shall be conducted by a qualified biologist, botanist, or related expert. The site will be surveyed for giant garter snake, Swainson's hawk, loggerhead shrike and burrowing owl.

Mitigation Measure BR-2

The project applicant/developer shall further: (i) comply with all requirements of the 2003 NBHCP, together with any additional requirements specified in the NNCP EIR; (ii) comply with any additional mitigation measures identified in the NBHCP EIR/EIS; and (iii) comply with all conditions of the ITPs issued by the USFWS and CDFG.

3.7.3.1 Giant Garter Snake

Pre-construction surveys will be completed as identified in **Mitigation Measure BR-1**, and **Mitigation Measures BR-3, BR-4, BR-5, and BR-6** will be implemented in accordance with the requirements of the NBHCP.

Mitigation Measure BR-3

For sites that contain GGS habitat, the project area will be surveyed for the presence of GGS no more than 24 hours prior to the start of construction activities (site preparation or grading). If construction activities stop for a period of two weeks or more a new GGS survey will be completed no more than 24 hours prior to resuming these activities.

Clearing will be confined to the minimal area necessary to facilitate construction activities. GGS habitat within and adjacent to the project site will be designated with flags as an "Environmentally Sensitive Area" to ensure avoidance by construction personnel. The project developer will ensure all construction personnel associated with the project are alerted to the location of the protected habitat.

Mitigation Measure BR-4

Construction personnel conducting site preparation and grading operations will receive environmental awareness training that is approved by USFWS. This training will provide workers on instructions for identifying GGS and their habitat, and the procedures to follow if GGS is encountered on site during construction activities. At this time an on-site biological monitor will be selected in accordance with U.S. Fish and Wildlife Service requirements.

Mitigation Measure BR-5

If a live GGS is found during construction activities, the USFWS and the assigned biological monitor will immediately be notified. Escape routes for giant garter

snake should be determined in advance of construction, and flagged for easy identification. The biological monitor or his/her assignee shall do the following:

Stop construction in the vicinity of the snake. Monitor the snake and allow it to leave the area on its own. The monitor should remain in the area for the remainder of the work day to ensure the snake is not harmed, or if it does leave the site, that it does not return. Escape routes for the snake should be determined in advance of construction and snakes should be allowed to leave on their own. If the snake does not leave within one working day, further consultation with USFWS is required.

Mitigation Measure BR-6

GGS may use fill or construction debris as an over-wintering site. Upon completion of construction activities all excess fill and/or construction debris will be removed from the site. If the material is located near undisturbed GGS habitat, it will be removed between October 1 and April 30, and inspected by a qualified biologist to ensure that GGS is not using the material for hibernation.

Material that could entangle snakes (i.e. plastic, monofilament, jute, or similar erosion control matting) will not be placed within 200 feet of snake aquatic habitat. Substitutions for these materials include coconut coir matting, tactified hydroseeding compounds or other materials approved by the USFWS.

3.7.3.2 Loggerhead Shrike

Pre-construction surveys will be completed as identified in **Mitigation Measure BR-1**. If suitable loggerhead shrike habitat is located within the project site, **Mitigation Measure BR-7** will be implemented in accordance with the requirements of the NBHCP.

Mitigation Measure BR-7

If an active loggerhead shrike nest is identified on site that will be impacted by the project, brightly colored construction fencing will be installed to provide a 100-foot buffer from the nest. No disturbance associated with development of the project shall occur within the 100-foot buffer zone during the nesting season of March 1 through July 31. A qualified biologist, with concurrence with USFWS, will determine when the young have fledged or that the nest is no longer occupied prior to disturbance of the nest site.

3.7.3.3 Burrowing Owl

Pre-construction surveys will be completed as identified in **Mitigation Measure BR-1**. If burrowing owls are discovered to be using the site for foraging or nesting, **Mitigation Measure BR-8** will be implemented in accordance with the requirements of the NBHCP.

Mitigation Measure BR-8

If burrowing owls are found to be using the site for foraging or nesting, a program for removal will be agreed to by the City of Sacramento and the developer prior to initiation of any physical disturbance on the site. USFWS and CDFG shall be contacted regarding suitable mitigation, which may include a 300-foot buffer from the nest site during the breeding season (February 1 – August 31), or a relocation effort for the owls if: 1) the birds have not begun egg-laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival. If relocation of the owls is approved for the site by USFWS or CDFG, a qualified biologist will prepare a plan for relocating the owls to a suitable site.

If on-site avoidance is required, the location of the buffer zone will be determined by a qualified biologist. The buffer zone shall be marked with yellow caution tape, stakes, or temporary fencing, and maintained throughout the construction period.

3.7.3.4 Migratory Birds and Other Raptors

As discussed, several species of raptors and migratory birds may forage on site or nest in the area of the site. Black-crowned night heron, great blue heron, great egret, snowy egret, white-tailed kite, and Cooper’s hawk all have the potential to use the project site for foraging or use suitable trees located along Fisherman’s Lake for nesting or establishment of a rookery. Active raptor nests are protected by the California Fish and Game code Section 3503.5 and the MBTA, and the loss of foraging habitat for species covered under the MBTA is considered a significant impact. The implementation of **Mitigation Measure BR-9** will mitigate potential impacts to species protected by the MTBA and other raptors to a less than significant level.

Mitigation Measure BR-9

If active nests are found on the site during pre-construction surveys, then CDFG should be consulted for mitigation measures that may be required. Typically CDFG will recommend that no construction activities occur within 500 feet of the nests, until the young have fledged or until the biologist determines that the nest is no longer active. If no active nests are identified during the pre-construction survey, no further mitigation is necessary. If construction activities are proposed to occur during non-breeding season (September-January), a pre-construction survey is not required and no further studies are necessary.

3.7.3.5 Swainson’s Hawk

In July 2005, the Sacramento City Council adopted a resolution to implement a 200- to 300-foot buffer along the portion of Fisherman’s Lake located adjacent to the project. This buffer addressed the NBHCP requirement for the City’s establishment of the buffer and will provide habitat and protection for the populations of Swainson’s hawk, giant

garter snake and other special status species known to inhabit the area in close proximity to Fisherman's Lake.

Pre-construction surveys will be completed as identified in **Mitigation Measure BR-1**. If active Swainson's hawk nest sites are located within ½ mile of the project site, **Mitigation Measure BR-10** will be implemented in accordance with the requirements of the NBHCP.

Mitigation Measure BR-10

Passive recreation use of the parkway and open space parcels located along Fisherman's Lake will be authorized between the months of September 1st to March 30th. To minimize disturbance to Swainson's hawks during breeding and nesting activities, use of the open space and park buffers located along Fisherman's Lake will have restricted access during the Swainson's hawk nesting season. Gates will be installed along pedestrian and bicycle paths and other areas of recreation along Fisherman's Lake between April 1st and August 31st to restrict access to these areas where potential nesting trees located along Fisherman's Lake could be utilized by Swainson's hawks.

- B) No locally designated species including heritage trees or City of Sacramento street trees are located on the project site. As such a less than significant impact to locally designated tree species will result from this project.

- C) According to the preconstruction survey conducted by Foothill Associates in July 2004, there are no jurisdictional waters of U.S. or wetland habitat (marsh, riparian, or vernal pool) located on the project site. The impact to wetland habitat associated with Natomas Central project is considered less than significant.

3.7.4 Findings

The project has the potential to impact endangered, threatened or rare species or their habitats, through habitat disturbance and loss, and construction activities. These impacts to special status species are reduced to a less than significant with the incorporation of **Mitigation Measures BR-1** through **BR-10** listed in this section. Impacts to heritage trees and jurisdictional wetlands are considered less than significant since none are located on the project site, and no mitigation is required for these issues.

3.8 Energy

Issues:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than significant Impact
Would the proposal result in impacts to:			
A) Power or natural gas?			X
B) Use non-renewable resources in a wasteful and inefficient manner?			X
C) Substantial increase in demand of existing sources of energy or require the development of new sources of energy?			X

3.8.1 Environmental Setting

The NNCP contains measures designed to provide the community with adequate power and natural gas services, while ensuring that they do not conflict with adjacent land uses, or existing levels of service. Currently the City of Sacramento is supplied with natural gas services through PG&E, and Sacramento Municipal Utilities District (SMUD) supplies electrical power throughout most of Sacramento County.

Natomas Central will require additional energy supplies (electricity and natural gas), than currently exist on the project site, in order to sustain the community. Plans for the Community include the supply of electricity through SMUD, and natural gas supplied by PG&E. These supplies will be necessary for both public and private uses throughout the project area, and installation measures should be implemented that will allow for further growth within the North Natomas Community. Underground electric and natural gas lines are proposed, and will be coordinated to prevent the digging of multiple trenches, or digging in established streets.

The North Natomas Development Guidelines encourages a multi-use function of utility right-of-ways such as they might provide passive recreation opportunities, pedestrian and bikeways, drainage, community gardens, or urban forests. In addition, the guidelines promote the orientation of homes to facilitate the use of solar panels and the planting of deciduous trees to provide shade in the summer and allow solar heating effects in the winter.

3.8.2 Standards of Significance

Gas Service. A significant environmental impact would result if a project would require PG&E to secure a new gas source beyond their current supplies.

Electrical Services. A significant environmental impact would occur if a project resulted in the need for a new electrical source (e.g., hydroelectric and geothermal plants).

3.8.3 Answers to Checklist Questions

- A) The General Plan states that PG&E does not anticipate any problem in serving newly developed areas within the City, and while SMUD also does not anticipate any problems in meeting the electrical demands of new development within the City, they anticipate the need to develop additional electrical distribution facilities (City of Sacramento 1988). Regardless of these projections, the Natomas Central project has the potential to impact existing power or natural gas resources. However, the proposed project is within the area anticipated by the NNCP for this type of development.

Prior to development, as identified in the NNCP, the developer will consult with SMUD and PG&E as required, to ensure that major transmission and distribution lines and stations have been installed with sufficient capacity to serve the project, or will be provided through a funded program. Access to the project will be provided through a public utility easement as a condition of project approval.

Transmission lines will be located, when feasible, within existing SMUD transmission right-of-ways or anticipated right-of-ways for other proposed projects. If possible these lines will be located in the following locations in the order specified:

- 1) adjacent to railroads, or freeways
- 2) along, adjacent, or through arterial streets where commercial or industrial uses are planned
- 3) along arterial streets with a density of R-2 or greater density
- 4) through dominantly commercial areas that also have residential uses
- 5) through residential areas, including side and rear yards, irregardless of density

Substations will be located in the following rank order as specified in an adopted plan:

- 1) areas designated for industrial or commercial land use;
- 2) undeveloped areas designated for residential use;
- 3) agricultural areas; and
- 4) sites designated for residential use and surrounded by existing residential uses.

CEQA requirements for off-site utility improvements and facilities that are required to be developed as a result of the development in the NNCP area will be subject to a site specific environmental review.

Through compliance with the City and NNCP development requirements, the proposed project is not anticipated to have a significant impact on power and natural gas supplies.

- B) The development of the Natomas Central project has the potential to impact non-renewable resources due to an increase in demand for natural gas and electrical services. The NNCP has outlined several measures in the developmental design of North Natomas to prevent the wasteful and inefficient use of non-renewable resources.

The NNCP requires developers to consult with SMUD's New Construction Service staff to incorporate SMUD energy efficiency programs where feasible. The New Construction Service program is designed to maximize the energy efficiency potential of new construction projects consistent with SMUD system design capacity and energy conservation goals through cost-effective investments and technical assistance for designers and builders.

Compliance with the development guidelines outlined in the NNCP and North Natomas Development Guidelines will reduce potentially significant impacts from wasteful and inefficient use of non-renewable resources to a less than significant level, since these were provided as part of the environmental review process for the community plan. No additional mitigation is required.

- C) The Natomas Central development will generate an increase in the demand for existing sources of energy, including natural gas and electrical services. These impacts were addressed through the North Natomas Development Guidelines and NNCP and this project must be in compliance with these documents.

The North Natomas Development Guidelines require that homes be orientated to facilitate the use of solar panels, thus decreasing the demand for electrical services. Deciduous shade trees will be planted in such a way to provide shade benefits during the summer and solar heating benefits during the winter. The North Natomas Development Guidelines also lists the appropriate tree species which are adapted to the climate conditions of the Natomas Basin, and this document will be used as a reference when selecting trees for planting within the project site.

In addition to the home orientation requirement of the North Natomas Development Guidelines, the NNCP requires that homes be designed to maximize their energy efficiency potential. Homes will be constructed to utilize appropriate glazing and building materials, efficient lighting systems and interior use of day lighting, efficient heat, ventilation, and air conditioning systems, efficient motor and processing equipment, use of "District" heating and cooling, and use of alternative and renewable energy systems, including solar technology, fuel cells, and photovoltaics.

The EIR prepared for the NNCP identified mitigation measures that would reduce impacts from the anticipated increase in demand for existing and new energy sources, and included development requirements. Compliance with the development guidelines outlined in the NNCP and North Natomas Development Guidelines, and verification of compliance prior to issuance of building permits by the City will reduce potentially significant impacts to existing sources of energy and the development of new sources of energy to a less than significant level, and no mitigation is required.

Mitigation Measures

None required.

3.8.4 Findings

The project by design will require additional power and natural gas resources for implementation and operation, including an increased demand on non-renewable resources. The proposed project was anticipated for development during the design of the NNCP and energy-related environmental impacts of the NNCP were evaluated during the EIR process. The City, along with local utility providers have been anticipating the need for these energy demands and have been preparing for providing these services to residents of the North Natomas over time. Based on density calculations consistent with those provided by the NNCP, the project as proposed is 425 units less than what would be allowed by the NNCP. Furthermore, the calculations used to generate residents per household during the EIR and NNCP development process has likely decreased over the roughly 20 years since inception of the plan area. This results in a further reduction in the population assumptions used when estimating impacts to the environment. In addition, a major component of the project is a active adult community, which on average would have two or less persons per household, which is below the residential occupancy averages according to 2002 Census data for the City of Sacramento. Based on the project components and assumptions used to generate the project's impact on the environmental issues discussed in this document, the proposed project should fall at or below the significance thresholds generated for the project site as determined through the NNCP EIR process. As a result, the project as proposed will have a less than significant impact on energy resources, and no mitigation is required.

3.9 Hazards

Issues:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than significant Impact
Would the proposal involve:			
A) A risk of accidental explosion or release of hazardous substances (including, but not limited to: oil, pesticides, chemicals or radiation)?			X
B) Possible interference with an emergency evacuation plan?			X
C) The creation of any health hazard or potential health hazard?			X
D) Exposure of people to existing sources of potential health hazards?			X
E) Increased fire hazard in areas with flammable brush, grass, or trees?			X

3.9.1 Environmental Setting

A Phase I Site Assessment was conducted for the project site by Wallace-Kuhl & Associates (**Appendix I**), and results of this assessment determined that the Natomas Central project site (including the proposed elementary school site) is not located in an area known to contain hazardous materials or in an area that would expose people to potential health hazards.

The Cortese List, developed by the California Department of Toxic Substances Control, provides information about the location of hazardous materials release sites throughout the state. A review of the Cortese List determined that no hazardous waste sites are located within the vicinity of the project. Historically the area has been agriculturally farmed, but no pesticides have been applied since 1999, and no contaminated soils are expected to occur on site. However, nearby aerial applications of pesticides to agricultural lands could present a hazard to local residents of Natomas Central.

Section 15186 of the CEQA Guidelines establishes special guidelines for the selection of school sites in relation to potential health impacts resulting from exposure to hazardous materials, wastes and substances in order to limit the exposure of school children and others to toxic or hazardous substances, as required by the Public Resources Code, Sections 21151.4 and 21151.8. The CEQA Guidelines specify that the lead agency must carefully evaluate this potential as well as consult with other agencies. Specifically, when a project involves the purchase of a school site or construction of a secondary or elementary school, prior to project approval and certification by the school board, the lead agency must prepare a negative declaration or environmental impact report containing sufficient information to determine whether the property is:

- The site of a current or former hazardous waste or solid waste disposal facility and whether or not wastes have been removed;

- A hazardous substance release site identified by the Department of Toxic Substance Control (DTSC); or
- The site of one or more buried or above-ground pipelines carrying hazardous substances, acutely hazardous materials, or hazardous wastes;

3.9.2 Standards of Significance

For the purposes of this document, an impact is considered significant if the proposed project would:

- expose people (e.g., residents, pedestrians, construction workers) to existing contaminated soil during construction activities;
- expose people (e.g., residents, pedestrians, construction workers) to asbestos-containing materials; or
- expose people (e.g., residents, pedestrians, construction workers) to existing contaminated ground water during dewatering activities.

3.9.3 Answers to Checklist Questions

- A) No significant amount of hazardous materials are expected to be used or located within the development area during or after construction is completed because of the proposed land uses. In addition, transportation restrictions exist to prevent the transport of hazardous materials within residential and school zones located on and in the vicinity of the project site. As such, the risk of accidental explosion or release of hazardous substances (including, but not limited to: oil, pesticides, chemicals or radiation) is considered less than significant.
- B) Proposed design and configuration of street is subject to review and approval by the City's Department of Transportation. The primary responsibility of the City engineers in reviewing improvement plans is to "*ensure a safe roadway facility with functional use for vehicles, bicycles and pedestrians.*" The City adopted road design standards in May 2004. All proposed street designs on tentative maps, as well as any site plans containing City streets must comply with the City's adopted Standards. These standards specify requirements for street design and construction as well as intersections, bus stops, school zones, and parking. Therefore, since proposed road and access configurations within Natomas Central would be subject to review and approval by the City's department of Transportation, the project would not interfere with an emergency evacuation plan, and impacts to emergency evacuation plans are considered less than significant.
- C) Development of the Proposed Project would involve residential development, as well as the development of an elementary school, recreation center, and fire station. Customary use of hazardous materials associated with residential and school land uses typically involves paints, herbicides, insecticides, household

cleansers, and other over-the-counter materials available to the public at large. The use, transport and disposal of these materials are subject to stringent federal and State regulations and standards as prescribed by product labeling. As defined under Section 8.64 of the City's Ordinance Code the City of Sacramento assumes responsibility for the implementation of Chapter 6.95 of Division 20 of the California Health and Safety Code and designates the Sacramento fire department as the administering agency responsible for administering and enforcing Chapter 6.95 of Division 20 of the California Health and Safety Code. Any business or person storing hazardous materials in excess of 500 pounds or 55 gallons per month is subject to filing a hazardous materials disclosure form with the City fire department. Violations of the specified standards for the use, handling and storage of hazardous materials are enforceable through federal, State, and local regulations and ordinance codes. Therefore, the development of the Natomas Central project is not expected to create any health hazards or expose people to potential health hazards. Impacts related to the creation of a health hazard through exposure to hazardous materials are considered less than significant.

- D) A Phase I Environmental site assessment was prepared for the project site in November 2003, which revealed no Recognized Environmental Conditions. The Phase I Environmental Site assessment also did not reveal any visible evidence of hazardous materials on site and the soil sample results indicated a low risk for exposure to agricultural pesticides due to the short-half life of the common pesticides used in the area.

Much of the area surrounding the site is expected to be developed. However, areas to the west of the project area may remain in close proximity to continued agricultural activities. Although Fisherman's Lake and the adjacent parkway and open space buffer will distance the developed portions of the project from potential nearby agricultural uses, the potential for residents of Natomas Central to be exposed to nearby aerial spraying of agricultural pesticides exists as a potential health hazard due to the nearby locations of agricultural fields to the west. While this may represent a potentially significant health hazard to future residents, health and safety requirements specified by State and federal regulations and required of all applicators including restrictions related to wind and other climatic conditions, licensing requirements for applicators and buffer zones, would reduce the risk of exposure from aerial pesticide applications to a less than significant level.

No impact from contaminated ground water is expected to occur to residents, pedestrians and construction workers within the Natomas Central project area, as contaminated groundwater has not been identified in the area. Any discharge of water resulting from proposed dewatering activities associated with construction of the proposed storm water detention basin, would be subject to compliance with the Clean Water Act through regulation of water quality standards specified by the Regional Water Quality Control Board under the terms of Water Quality Certification, National Pollution Discharge Elimination System and Waste Discharge Requirements.

A search of historical records associated with the project site as part of the Phase 1 Environmental Site Assessment indicates the project site was historically cultivated for wheat and rice production. The project is located in an area with soil that has previously been contaminated with thiobencarb (Bolero), which is used as an herbicide in rice cultivation practices. The half-life of this contaminant is from 168-280 days in soil under dry conditions and significantly less under wet conditions (USEPA 1997). The last application of thiobencarb was June 30, 1998.

Cultivated surficial soils on the project site have the potential to contain residual persistent pesticide concentrations related to historical agricultural operations. Previous soils sampling and testing in the Natomas area within parcels subject to similar agricultural practices determined that there are insignificant to non-detectable concentrations of persistent pesticide residuals. Many of the previously developed sites have been approved by the City for residential development based on these conclusions. These determinations are further supported by DTSC reviews of previous Phase I Environmental Site Assessments for school sites in the North Natomas Area beginning in January 2000.

Based on the conclusions contained within the Phase I Environmental Site Assessment completed for the project site, no further assessment, mitigation, or remediation is required to address on-site hazardous materials related to pesticide residuals. The results of the study also indicate that the impacts from existing sources of potential health hazards are less than significant.

- E) The project will not represent an increased fire hazard in areas with flammable brush, grass, or trees, and the design of the development will comply with local fire ordinances as outlined in the City's General Plan. The project provides beneficial effects by reducing the amounts of brush and grass on site. As such, a less than significant impact to fire hazards is expected from this project.

Mitigation Measures

None required.

3.9.4 Findings

A Phase 1 Environmental Site Assessment has been completed for the project site, which determined that the site is not located in an area that would increase residents to a risk of accidental explosion or release of hazardous substances, or create any health hazards or potential health hazards. The site has been designed to provide adequate emergency access and will not interfere with an emergency evacuation plan. The site is not located in an area that would expose residents to increased fire hazards associated with flammable brush, grass or trees. The site location and conditions will result in less than significant impacts from hazards and no mitigation is required.

3.10 Noise

Issues:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than significant Impact
Would the proposal result in: A) Increases in existing noise levels? Short-term Long Term		X	
B) Exposure of people to severe noise levels? Short-term Long Term		X	

3.10.1 Environmental Setting

The Natomas Central project site is located less than ½-mile southwest of the Highway 99/70-I-80 interchange, and approximately three miles southeast of Sacramento International Airport, all of which are considered noise generators. Along with these noise generators, the traffic anticipated along Del Paso and El Centro roads bordering the north and east boundaries respectively were considered when analyzing the anticipated noise constraints for the site.

Recently, flight paths associated with Sacramento International Airport were revised, and based on the Sacramento International Airport Comprehensive Land Use Plan, the Natomas Central project would reside outside of the 60 CNEL (Community Noise Equivalent Level) contour (Sacramento Area Council of Governments 2004b). As such the project site is not expected to be affected by over flight noise associated with air traffic from Sacramento International Airport.

The General Plan considers noise levels less than 60 dB (decibel) L_{dn} (day/night average sound level) as normally acceptable for residential areas. Noise attenuation measures are not required by the General Plan for residential projects that have existing noise levels less than 60dB L_{dn} . Levels less than 70 dB L_{dn} are considered conditionally acceptable, and new construction in these areas require a detailed analysis of noise reduction options and necessary noise insulation features in the development design. The maximum day-night average noise levels (L_{dn}) for residential areas is less than 60 dB for exterior locations, and less than 45 dB for interior locations. The same requirements apply to schools and libraries, with the exception of a maximum L_{dn} of less than 40 dB for the interior locations of schools during the noisiest hour of the school day. Mitigation Measure 4.6-1 (A) of the Supplement to the NNCP EIR (1986 NNCP DEIR, page g-24) requires development plan review to ensure compliance with the General Plan. The mitigation measure also requires a development design that will ensure exterior noise levels do not exceed an L_{dn} of 60 dB, and indoor noise levels should not exceed an L_{dn} of 45 dB.

3.10.2 Standards of Significance

Thresholds of significance are those established by the Title 24 standards and by the City's General Plan Noise Element and the City Noise Ordinance. Noise and vibration impacts resulting from the implementation of the proposed project would be considered significant if they cause any of the following results:

- Exterior noise levels at the proposed project which are above the upper value of the normally acceptable category for various land uses (SGPU DEIR AA-27) caused by noise level increases due to the project.
- Residential interior noise levels of 45 L_{dn} or greater caused by noise level increases due to the project.
- Construction noise levels not in compliance with the City of Sacramento Noise Ordinance.
- Occupied existing and project residential and commercial areas are exposed to vibration peak particle velocities greater than 0.5 inches per second due to project construction.
- Project residential and commercial areas are exposed to vibration peak particle velocities greater than 0.5 inches per second due to highway traffic and rail operations.
- Historic buildings and archaeological sites are exposed to vibration peak particle velocities greater than 0.25 inches per second due to project construction, highway traffic, and rail operations.

Construction-generated sound is exempt from limits if construction activities take place between the hours of 7:00 a.m. and 6:00 p.m. Monday-Saturday and between 9:00 a.m. and 6:00 p.m. on Sundays as specified in Section 8.68.080 of the City of Sacramento Noise Ordinance.

3.10.3 Answers to Checklist Questions

- A) The project will result in a short term increase in existing noise levels as a result of construction-related activities and a long term increase in the ambient noise levels associated with the completed residential community. Construction activities may result in noise levels that periodically exceed the 60 db L_{dn} standard set by the General Plan for nearby residential communities and the junior high school; however, if in compliance with the operating hours authorized in the City's Build and Construction Noise Ordinance, construction noise is exempted and is therefore considered less than significant. Long-term increases in the ambient noise levels associated with the completed development, such as normal human-related activities within a residential land use, are not expected to result in violations of the City of Sacramento noise ordinance. However, project related noise such as traffic has the potential for exceeding standards set forth in the noise ordinance (especially along the frontages of Del Paso Road and El Centro Road)

and therefore is considered to be potentially significant. **Mitigation Measure N-3** will reduce that level to less than significant.

While short-term construction-related noise is expected to be short in duration and will only occur during normal day-light working hours, the construction has the potential to generate noise levels that are in excess of the City Code levels. City Code (Chapter 8.68.080) requires construction-related activities to be limited to the hours of 7 AM to 7 PM, Monday through Friday. Work may be permitted on Saturday, but only by a City of Sacramento-approved special permit. Compliance with the City Code relating to timing limitations for construction-related activities will reduce short-term noise levels associated with the Natomas Central project to less than significant. However, implementation of **Mitigation Measures N-1** and **N-2** will further reduce the impacts by reducing engine noise at its source and by locating noise generating activities as far away as feasible from existing schools and residences.

Mitigation Measure N-1

Utilize best available noise control techniques, i.e. manufacturer installed or improved mufflers, equipment redesign, intake silencers, ducts, engine enclosures and noise attenuating shields or shrouds on all heavy equipment and all stationary noise generating construction equipment (i.e. diesel generators).

Mitigation Measure N-2

Equipment warm up areas, water tanks, and equipment storage, staging, and maintenance areas will be located as far away from existing residential areas as is feasible.

Residents of the existing homes in the area as well as students at the junior high school may potentially be exposed to elevated noise levels, both short term due to construction activities and long term due to increases by project and area related traffic. The project will be constructed in phases and it is expected that once residences are occupied, people living there would be exposed to short-term noises associated with adjacent areas under construction. Vibration peak particle velocities greater than 0.5 inches per second may be experienced during the grading phases due to the number and engine noise associated with graders, excavations, bull dozers, etc. commonly used during grading. However, it is expected that activities that would generate the highest sustained noise levels (grading equipment and grading operations) would be completed during the first phases of development prior to home construction activities commencing. As a result the residents occupying homes adjacent to active construction areas would be exposed to noise associated with home building operations, which are expected to be temporary in nature, and are expected to be within the General Plan noise limitations. These noises would be greatest for residents when conducting outdoor activities and indoor noise limits are not expected to be exceeded due to

noise attenuation generated by the fencing, and insulating qualities of the doors and windows that will be used in construction of the homes.

- B) Short term exposures will be reduced by **Mitigation Measures N-1** and **N-2** outlined above. With the construction activity limited to the Code restricted hours of operation, these impacts will be less than significant. A site-specific noise analysis was not conducted for Natomas Central. For long term impacts, traffic noise associated with the adjacent portions of Del Paso and El Centro roads could subject residents of lots located in close proximity to these roadways to exterior noise levels in excess of 60 dB, which would exceed the City of Sacramento's 60 dB Ldn exterior noise exposure criterion. To provide noise attenuation, and to ensure compliance with the General Plan noise standards, noise barriers may be necessary along portions of Del Paso and El Centro roads adjacent to the project boundary. The implementation of **Mitigation Measures N-3** and **N-4** below will ensure exterior noise impacts are reduced to a less than significant level.

Mitigation Measure N-3

Prior to project grading, conduct a noise analysis to determine if traffic noise within the development is expected to exceed the City of Sacramento noise ordinance. As approved by the City, incorporate any recommendations from the noise study into the project design.

Mitigation Measure N-4

All second story floors for lots with adjacent to Del Paso and El Centro roads will have all exterior windows and doors that have a laboratory-tested sound transmission class (STC) ratings of 31 or greater. All exterior doors will have appropriate perimeter weather stripping and threshold seals.

3.10.4 Findings

The project has the potential to expose residents to potentially severe noise sources, especially when compared to existing noise levels associated with the project site. Short term noise impacts related to adjacent construction activities are authorized to occur during the operations hours outlined in the City's Building and Construction Noise Ordinance and are therefore considered less than significant. However, **Mitigation Measures N-1** and **N-2** will further reduce these impacts.

Noise impacts related to traffic along El Centro and Del Paso Roads, if significant, may be reduced by incorporating sound attenuation barriers along El Centro and Del Paso Road where necessary. Traffic-related noise impacts will be reduced to a less than significant level through implementation of **Mitigation Measures N-3** and **N-4**, by reducing the exposure of residents residing adjacent to these roadways.

3.11 Public Services

Issues:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than significant Impact
Would the proposal have an effect upon, or result in a need for new or altered government services in any of the following areas:			X
A) Fire protection?			X
B) Police protection?			X
C) Schools?			X
D) Maintenance of public facilities, including roads?			X
E) Other governmental services?			X

3.11.1 Environmental Setting

Police and fire protection will be required for the development once houses have been established. These services will be provided by City of Sacramento and the increased need for these services has been anticipated by approval of the NNCP. While a police stations is not proposed to be located on the project site, a 2.5-acre site has been designated for construction of a fire station.

The NNCP estimates the need for fourteen elementary schools (K-6), three junior high schools (7-8), and two high schools (9-12) within the North Natomas Community area. Five public school districts have been created as part of the Community Plan (Del Paso, Robla, Rio Linda Elementary School Districts, Natomas Unified School District and Grant Joint Union High School District). The Natomas Central project will provide 8.0 acres of the site for construction of an elementary school for the NNCP area and this school will serve residents of the Natomas Unified School District. An existing junior high school is also located adjacent to the northern project boundary along Del Paso Road. Three existing high schools are located with the Natomas Unified School District and these are located east and southeast of the project site, and would serve residents of the project.

3.11.2 Standards of Significance

For the purposes of this report, an impact would be considered significant if the project resulted in the need for new or altered services related to fire protection, police protection, school facilities, roadway maintenance, or other governmental services.

3.11.3 Answers to Checklist Questions

- A) Two fire stations have been proposed for North Natomas in the NNCP. One of these, the North Natomas Fire Station is currently in the design and planning

stage. The other fire station servicing North Natomas will be provided by the proposed project. The development anticipated in the NNCP area has taken into consideration the increased demand for fire services, and the Natomas Central project will contribute to this anticipated increased demand for fire protection services by providing a 2.5-acre site designated for the construction of a fire station. The construction of this fire station will be consistent with the policies and anticipated growth considered in the General Plan and NNCP. Potential environmental impacts related to construction of the fire station are discussed in relevant sections of this document.

Prior to issuance of grading/building permits, the developer will be required to consult with the City Fire Department to receive verification that adequate fire protection services, including equipment and personnel, exists to serve the project to achieve and maintain a fire insurance rating of 2.0. The City will require this verification as part of the project's approval, and will provide the developer with the required phasing and completion of the on-site fire station. This will mitigate potential impacts from fire related services to a less than significant level.

- B) The development anticipated in the NNCP area has taken into consideration the increased demand for police protection services. While the Natomas Central project would require additional police protection, the development is consistent with the policies and anticipated growth of the General Plan and NNCP.

Prior to issuance of grading/building permits, the developer will be required to consult with the City Police Department to receive verification that adequate police protection services, including equipment and personnel, exists to serve the project to achieve and maintain a police protection service rating of 1.60 officers per 1,000 residents, and 1.0 non-sworn personnel for every 1.60 officers. This results in a need of 4 police officer and 2.5 non-sworn personnel required for the project. The City will require this verification as part of the project's approval. The Police Department requires a police substation be provided prior to 60 percent of the land being developed within the North and South Natomas areas, and that they are able to accommodate the projected 220 officers and non-sworn personnel needed. This police station is part of the planned buildout of North Natomas and is covered by the NNCP. The 220 officers and personnel that will be accommodated at the police station planned for North Natomas will provide adequate police services required by project. Compliance with the consultation and verification process as part of the projects approval from the City, and the provision of a police station in North Natomas required by the NNCP will reduce impacts related to additional police protection services for the project to a less than significant level.

- C) The need for additional school services have been incorporated into the development plans for the North Natomas Community. Although the Natomas Central project will increase the need for school services, the project will provide additional school services, and several schools are currently available in the North Natomas area. A portion of the required school services anticipated for the

project will be provided by the 8.0-acre elementary school site that is part of the proposed development plans. The project proponent will also be required to submit required school impact fees to the City of Sacramento. The incorporation of the elementary school into the design of the Natomas Central project and other existing and planned schools within the NNCP area have been based on the anticipated need for additional school services. The provision of an elementary school on the project site and the payment of school development fees will reduce impacts related to schools to a less than significant level.

Environmental impacts related to development of the school site are addressed in other sections of this document.

- D) Maintenance of public facilities, including roads, will be provided by the City of Sacramento as anticipated in the NNCP and North Natomas Financing Plan. Private drives within the residential community however will be provided and maintained by the Natomas Central Homeowner Association. No impact to public facilities is expected.
- E) The North Natomas Library is a joint-use facility serving the North Natomas community, as well as the students, faculty and staff of both Inderkum High School and the Natomas Center of American River College. The library opened to the public on September 13, 2004, and is currently located on the campus of the Inderkum High School. A separate 23,000 square-foot facility will be built next to the school when funding becomes available.

The library offers a variety of programs, including a regular preschool story time and programs for teens, young children, and families. The North Natomas Library is planned to be the heart of the Natomas Education Center, which also encompasses the high school and community college center. Librarians partner with local organizations, businesses, and schools to take innovative library services to the entire community.

Governmental services are provided by the City of Sacramento. No hospitals are currently located in North Natomas, but several medical hospitals including U.C. Davis Medical Center and Sutter General Hospital are located in the downtown area of the city. Current governmental services located in North Natomas and the nearby downtown are considered adequate to service project residents. Impacts to governmental services are considered a less than significant impact.

Mitigation Measures

None required.

3.11.4 Findings

The project will result in an increased need for fire and police protection services. The significant impacts associated with the increased demand for these public services will be

reduced to a less than significant level by participating in the NNFP, the provisions of a services covered in the NNCP, and through implementing the required consultation with the City of Sacramento. A portion of these services (fire protection) will be provided by the project. No additional mitigation is necessary.

The project will result in an increased need for public schools. The incorporation of an elementary school into the development design for the NNCP area addresses the need for additional school services, and the payment of school impact fees required by the City of Sacramento will reduce impacts from schools to a less than significant level. No additional mitigation is required.

The project is not expected to have a significant affect on maintenance of public facilities or governmental services since these additional services are currently available in North Natomas and the City of Sacramento. Furthermore these service demands were anticipated as part of the NNCP and North Natomas Financing Plan. No mitigation is required.

3.12 Utilities

Issues:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than significant Impact
Would the proposal result in the need for new systems or supplies, or substantial alterations to the following utilities:			X
A) Communication systems?			
B) Local or regional water supplies?			X
C) Local or regional water treatment or distribution facilities?			X
D) Sewer or septic tanks?			X
E) Storm water drainage?			X
F) Solid waste disposal?			X

3.12.1 Environmental Setting

Presently the site is vacant and undeveloped, and no existing utilities are located on the project site. Communications services in the area are provided by SBC, Comcast Cable and other providers such as cellular phone companies may provide services as well. Sewer services for the area are provided by Sacramento Regional Sanitation District, and storm water drainage will be provided through the local drainage system for the site and through the City's storm drain system. Solid waste services will be provided by the City County Solid Waste Joint Powers Authority.

3.12.1.1 Water Services

The City of Sacramento provides water services to areas within the City limits and will provide water and water treatment services for the project. Currently the City operates two active water diversion and treatment facilities. The Sacramento River Water Treatment Plant has a reliable capacity of 110 million gallons per day (mgd), and the E.A. Fairbairn Water Treatment Plant has a reliable capacity of 90 mgd (Johnson, personal communication, July 07, 2004). In addition to these water treatment facilities, the City also operates and maintains 10 storage reservoirs, 25 active municipal water wells, and approximately 1,420 miles of water mains ranging from 4-60-inches in diameter. This results in a total of 445 mgd of reliable water treatment capacity (wells and treatment plants). The City also owns water rights to 192,000 acre-feet per year (AFY) of Sacramento and American river water, and this amount will increase incrementally until 2030 for a total of 326,899 AFY. For the fiscal year 2002-2003 citywide water demand was 135,536.6 AFY, resulting in an excess supply of 54,240 AFY of water.

3.12.1.2 Storm Water Drainage

A Comprehensive Drainage Plan (CDP) is currently under development for the entire NNCP area by Wood-Rodgers, and the final review and approval of the Drainage Master Plan required by the City of Sacramento Department of Utilities was completed and approved in March 2005. Drainage for the North Natomas Community area is expected to occur through drainage canals, and these constructed canals will be used to convey urban runoff to the Sacramento River, and are designed to detain surface runoff in land detention basins before being released slowly and in a controlled manner into the river. On-site detention for the Natomas Central project will be provided by the proposed 25.9-acre Natomas Central Lake, and discharges from this lake into Fisherman's Lake will be controlled to keep discharges below 0.1 cfs/acre as is required by RD 1000.

3.12.2 Standards of Significance

For purposes of this environmental document, an impact is considered significant if the proposed project would:

- Result in a detriment to microwave, radar, or radio transmissions;
- Create an increase in water demand of more than 10 million gallons per day;
- Substantially degrade water quality;
- Generate more than 500 tons of solid waste per year; or
- Generate storm water that would exceed the capacity of the storm water system.

3.12.3 Answers to Checklist Questions

- A) The Natomas Central project will by necessity require new communication systems. The development of the North Natomas area has been approved by the City of Sacramento and these additional services have been anticipated.

Prior to development, the developer will consult with the appropriate utility agencies (i.e. SBC, cellular phone companies, Comcast Cable, and others) to verify that applicable transmission and distribution lines have been installed with sufficient capacity to serve the project. Coordination with the City and other utility companies is required to ensure the efficient installation of all utilities. Local utility access shall be provided by establishment of a public utility easement, and shall be a condition of the project approval.

Development of the Proposed Project would include residential development as well as the development of an elementary school, a fire station and a recreational center. No detrimental impacts to microwave, radar, or radio transmissions would result from project development; therefore, impacts are considered less than significant.

- B) In 2001, Senate Bill 610 (SB 610) was enacted that requires developers of large projects to provide substantial evidence of adequate water supply, and requires suppliers of public water supplies to develop a water supply assessment for all

large projects, including residential developments containing over 500 units. Since the Natomas Central proposes the construction of 2533 residential units, this project is subject to the requirements of SB 610. **Table 10** shows the anticipated water demand for residential units and parks and open space for the project to be 1276.2 AFY upon completion.

Table 10 — Proposed Project Water Demand

Land Use	Amount	Rate	Demand (AFY)
Residential	286.3 acres	3.6 AFY	1030.7
Parks and Open Space	58.7 acres	4.2 AFY/acre	245.5
Total			1276.2

Development of the North Natomas area, including Natomas Central will increase the demand for potable water. Development of the North Natomas area has been approved by the City of Sacramento and the additional water supply needed to service this area has been anticipated and is estimated to result in the demand for approximately 50 million gallons of water per day at buildout.

The Proposed Project would require approximately 1276.2 AFY (**Table 10**). The City’s excess water supply of 54,250 AFY would enable the City to provide water for this project as well as for future projects planned within the City limits. The City’s excess water supply is expected to be adequate to accommodate for the increased water demand from the project.

The EIR prepared for the North Natomas Community Plan Update determined that mitigation for required expansion of the City’s Water Treatment Plant and conveyance infrastructure would be included in the Community Facilities Element of the Plan. The North Natomas Financing Plan establishes fees for development projects within the plan area in order to provide all or a portion of the funds which will be necessary to design, construct, install or acquire public infrastructure required to meet the needs of and address the impacts caused by development activity.

Prior to issuance of building permits, the developer would be required to pay impact fees associated with the demand of project development, as identified by the North Natomas Financing Plan and required by Section 18.24 of the City’s Municipal Code. The City has established impact fees to facilitate public infrastructure and related impacts for development in the North Natomas Area in order to support growth in the area as identified by the Community Plan. The project developer would be subject to development impact fees prior to issuance of any building permits and project development would not result in; therefore impacts are considered less than significant.

- C) Project development would be subject to water quality standards specified by the federal Clean water Act and regulated by the State Porter Cologne Water Quality Act through the National Pollution Discharge Elimination System (NPDES). Project applicants proposing the disturbance of one acre or more are subject to the requirements of filing a Notice of Intent (NOI) to comply with the Construction General Permit and may be required to prepare a Storm Water Pollution Prevention Plan, specifying proposed construction and post-construction best Management Practices for erosion control and sediment detention. Additionally, the City has adopted a Storm Water Management Plan as part of the requirements specified by the Municipal NPDES permit. The City has also adopted a Storm Water Management and Discharge Ordinance and a Grading Ordinance for the purpose of maintaining water quality. Compliance with federal, State and local ordinances related to grading activities as well as storm water discharge would ensure federally mandated water quality standards are maintained.
- D) The Natomas Central project will by necessity require additional sewer services. The development of the NNCP area has been approved by the City of Sacramento and the need for additional services has been anticipated. A Sewer Master Plan has been developed for Natomas Central by Wood Rodgers (2004b) and improvements to the Natomas Pump Station and Lower Northwest Interceptor will be necessary to provide sewer service to Natomas Central. These improvements are scheduled for 2006 for the pump station and will be followed by improvement of the interceptor to convey flows to the Regional Treatment Plan.

As is required by the developer prior to requesting building permits, consultation with the Sacramento Regional County Sanitation District (SRCSD) and County Sanitation District No. 1 (CSD-1) will be conducted to verify that adequate sanitary sewer system capabilities exist to serve the project, or will be provided through a funded program as a condition of project approval. The SRCSD requires development connection (or impact) fees for the purpose of connecting to or expanding the use of any sanitary sewer tributary to sewerage facilities owned, maintained, or operated by the District, and for annexation to the District. Similarly, CSD-1 requires connection fees for development, although CSD-1 fees are based on net acreage, rather than individual dwelling unit. No further mitigation is necessary and a less than significant impact is expected to sewer services.

- E) The need for additional storm water drainage facilities will be required for the project. A Preliminary Drainage Master Plan has been prepared for the project (Wood Rodgers 2004a), and prior to or concurrent with the submittal of improvement plans to the City, a final project specific drainage study as described in section 11.7 of the City Design and Procedures Manual shall be approved by the Department of Utilities (DOU). All drainage improvements will be required to be developed to the satisfaction of the DOU. All drainage lines shall be placed within the asphalt section of public-right-of-ways as per the City's Design and Procedures Manual. The storm drain system shall be designed to conform to the

master drainage plan for the area. The final Drainage Master Plan for the project is being prepared and is expected to be finalized by December 2005.

As required by the City's Municipal Code, drainage impact fees are required for development in the North Natomas Area in order to provide for drainage improvements and the acquisition of required public land to provide collection and conveyance of storm water to drainage basins and discharge to canals to serve the various drainage sub-basins specified in the North Natomas finance plan area, which improvements and land are described in the North Natomas community plan, North Natomas financing plan and the nexus study. The project developer would be responsible for the payment of drainage impact fees for the provision of adequate drainage storage and conveyance facilities prior to issuance of a building permit. Through the payment of impact fees adequate storm drainage facilities would be constructed to accommodate storm water generated by the Proposed Project; therefore impacts are considered less than significant.

- F) According to 2000 census data, the average City of Sacramento household has 2.57 people. According to the California Integrated Waste Management Board, residential solid waste generation in Sacramento County is two pounds per resident per day. Based on these figures project development would result in the generation of approximately 2,376 tons of solid waste annually. The Keifer Landfill is permitted through the year 2064 and has a remaining capacity of 86,163,462 cubic yards.

The Natomas Central project will result in the need for additional solid waste disposal services associated with the completed development. Prior to issuance of building permits, the developer is required to consult with the City County Solid Waste Joint Powers Authority to verify that adequate waste removal service and disposal facilities exist to serve the project, or will be provided through a funded program. A curbside recycling program shall be required as part of the collection service. Additionally, the project is required to comply with Chapter 17.72 of the Sacramento City Code regarding recycling and solid waste. Consultation with the City County Solid Waste Joint Powers Authority will reduce potential impacts to solid waste disposal as a result of the project to a less than significant level.

Mitigation Measures

None required.

3.12.4 Findings

The project will require additional communication systems, water supply, water treatment facilities, solid waste disposal, and storm water drainage. The project applicant will be required to consult with the appropriate utility agencies to verify that applicable transmission and distribution lines have been installed with sufficient capacity to serve the project, and coordination with the City and other utility companies is required to ensure the efficient installation of all utilities.

Prior to issuance of building permits, the developer will consult with the City Utilities Department to verify that adequate water supply system capacity exists to serve the specific project area, or will be provided through a funded program and/or a condition of project approval. The required consultation and approval by the City for the projects expected demand on local water supply systems capacity will ensure that potential significant impacts from the installation and supply of these services are mitigated to a less than significant level

Consultation with the City's Utility Department is a required component of the Improvement Plan process and is subject to the City's approval. This consultation process will ensure that impacts associated with additional water treatment services is reduced to a less than significant level and no mitigation is required.

Consultation with the Sacramento Regional County Sanitation District and County Sanitation District No. 1 will be conducted to verify that adequate sanitary sewer system capabilities exist to serve the project, or will be provided through a funded program will occur as a condition of project approval. This will reduce project-related impacts to existing sewer services to a less than significant level.

Consultation with the City County Solid Waste Joint Powers Authority will reduce potential impacts to solid waste disposal as a result of the project to a less than significant level.

The proposed project was anticipated for development during the design of the NNCP and energy-related environmental impacts of the NNCP were evaluated during the EIR process. The City, along with local utility providers have been anticipating the need for these public utility service and have been preparing for providing these services to residents of the North Natomas over time. Based on density calculations consistent with those provided by the NNCP, the project as proposed is 425 units less than what would be allowed by the NNCP. Furthermore, the calculations used to generate residents per household during the EIR and NNCP development process has likely decreased over the roughly 20 years since inception of the plan area. This results in a further reduction in the population assumptions used when estimating impacts to the environment. In addition, a major component of the project is an active adult community, which on average would have two or less persons per household, which is below the residential occupancy averages according to 2002 Census data for the City of Sacramento. Based on the project components and assumptions used to generate the project's impact on the environmental issues discussed in this document, the proposed project should fall at or below the significance thresholds generated for the project site as determined through the NNCP EIR process. As a result, the project as proposed will have a less than significant impact on utilities and associated services, and no mitigation is required.

3.13 Aesthetics, Light, and Glare

Issues:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than significant Impact
Would the proposal:			
A) Affect a scenic vista or adopted view corridor?			X
B) Have a demonstrable negative aesthetic effect?			X
C) Create light or glare?		X	
D) Create shadows on adjacent property?			X

3.13.1 Environmental Setting

The proposed project site is currently vacant undeveloped land. To the northeast of the site is the I-5/Highway 70/99 interchange. Directly to north on the opposite side of Del Paso road is the Westborough subdivision which is comprised of single-family residential units. Fisherman’s Lake is adjacent to the southern and western project boundaries. There are no designated scenic vistas or adopted view corridors within the project vicinity.

3.13.2 Standards of Significance

Shadows. New shadows from developments are generally considered to be significant if they would shade a recognized public gathering place (e.g., park) or place residences/child care centers in complete shade.

Glare. Glare is considered to be significant if it would be cast in such a way as to cause public hazard or annoyance for a sustained period of time.

3.13.3 Answers to Checklist Questions

- A) Natomas Central is not located in an area that contains a scenic vista or adopted view corridor. A less than significant impact to scenic vistas or view corridors is expected from this project.
- B) The existing site conditions will be altered as a result of the project. Aesthetic impacts are considered less than significant however, since the changes are compatible with the approved zoning and land use designations for the project site, and the existing development within the North Natomas area.
- C) Outdoor lighting will be a component of the facilities associated with the Recreation Center, elementary school, proposed parks and associated parking areas, and street lamps will be located along the residential streets, and these have the potential to be sources of light and glare. The North Natomas Development

Guidelines include the requirement for home builders to mitigate for light and glare impacts by choosing building materials, and building orientation, that takes into consideration their proximity to sensitive light receptors. The orientation of the outdoor lighting associated with outdoor facilities (tennis courts and ball fields) and parking areas could impact adjacent residents. Compliance with the North Natomas Development Guidelines during construction of the Natomas Central project will ensure that lighting and glare from the project does not cause a public hazard or annoyance for a sustained period of time, and the implementation of **Mitigation Measures ALG-1** through **ALG-3** will reduce impacts from reflective materials and lighting that can create additional sources of light and glare to a less than significant level.

Mitigation Measure ALG-1

Reflective materials, including reflective windows, shall be limited to areas of facilities and building surfaces such that glare from the reflective materials does not unduly impact adjacent residences.

Mitigation Measure ALG-2

All outdoor lighting fixtures, including those used to illuminate sports fields, courts, and parking areas, shall be shielded or constructed so that light emitted by the fixture is focused on the surface to be illuminated.

Mitigation Measure ALG-3

Lighting on the project site shall not indirectly illuminate adjacent residences at a level greater than one foot-candle in intensity when measured from the portion of the residence facing the illuminated area. If indirect illumination at a residence is greater than one foot-candle, the developer shall ascertain the cause of the indirect illumination, and if necessary, implement appropriate measures to reduce such illumination.

- D) New shadows from development of the residential sites are not expected to significantly shade recognized public gathering places (e.g., parks) or place residences/child care centers in complete shade, due to the building heights expected. The maximum building height of the three story structures proposed for the high density parcels which will provide multi-family and apartment complexes will be 65 feet. Properties adjacent to the site include Fisherman's Lake, areas of future development, areas of current residential development, and Del Paso and El Centro roads. Shadows from residential homes and three story structures are expected to have less than significant impacts and are consistent with the current character of development of the area. No mitigation is required.

3.13.4 Findings

No impacts to scenic vistas or adopted view corridors are expected from this project, and the project will not create a demonstrable negative aesthetic effect. Impacts from lights and glare resulting from the outdoor lighting associated with the Recreation Center facilities, school, parks, parking areas and street lamps will be reduced to a less than significant level through implementation of **Mitigation Measures ALG-1, ALG-2, and ALG-3**, and no further mitigation is necessary. Impacts from shadows are not expected to occur as a result of the project since the maximum height of the multi-family and apartment buildings will be 35 feet, and no mitigation is required.

3.14 Cultural Resources

Issues:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than significant Impact
Would the proposal:			
A) Disturb paleontological resources?		X	
B) Disturb archaeological resources?		X	
C) Affect historical resources?		X	
D) Have the potential to cause a physical change which would affect unique ethnic cultural values?			X
E) Restrict existing religious or sacred uses within the potential impact area?		X	

3.14.1 Environmental Setting

Cultural resources can include historic and archaeological objects, structures, records, and sites which are associated with past human activities. Properties of historical significance in California are designated in one of three state registration programs: State Historical Landmarks, Points of Historical Interest, and the California Register of Historic Place. The California Department of Parks and Recreation Office of Historic Preservation is the governmental agency responsible for administering the historic preservation program in California including oversight of the designation program and maintenance of the list of registered sites. All sites registered with the Office of Historic Preservation are tracked by listing number.

A substantial adverse change in the significance of an historical resource means the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired. (Section 15064.5 (b)(1), CEQA Guidelines).

Per the CEQA Guidelines, historical resources include the following:

- A resource listed in, or eligible for listing in, the California Register of Historical Resources (California Pub. Res. Code SS5024.1, Title 14 CCR, Section 4850 et seq.)
- A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code
- Any object, building, structure, site, area, place, record, or manuscript, which:
 - 1) is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

- 2) is associated with the lives of persons important in our past;
- 3) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic value; or
- 4) has yielded, or may be likely to yield, information important in prehistory or history.

Per Public Resources Code Section 21983.2(g), an archaeological resource shall be considered unique if "it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person."

3.14.2 Standards of Significance

Cultural resource impacts may be considered significant if the proposed project would result in one or more of the following:

- Cause a substantial change in the significance of a historical or archaeological resource as defined in CEQA Guidelines Section 15064.5; or
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

3.14.3 Answers to Checklist Questions

A) No known paleontological resources are located on the Natomas Central project site. Furthermore, the Natomas Central project site has been disked as a result of recent production of hay and rice crops, and evidence of historic habitation of the site would have likely been encountered during previous disking activities on the site, although paleontological resources have the potential to be deeply buried. Due to the frequent disturbance associated with the past use of the site, future grading of the site to support development of the Natomas Central project is not expected to indirectly or directly destroy unique paleontological resources, or unique geologic features, however a site specific cultural resource investigation has not been conducted.

According to the NNCP EIR the Natomas Central site was not specifically covered by a cultural resource study, and is designated as a high sensitivity since in regards to archaeological resources. This is considered a potentially significant impact.

A comprehensive field reconnaissance shall be conducted in accordance with **Mitigation Measure CR- 1** will reduce potential impacts to paleontological resources to a less than significant level. In addition grading and other construction activities could uncover these features during the development of the project. **Mitigation Measures CR-2** and **CR-3** below will ensure these potentially significant impacts to the paleontological resources are mitigated to a less than significant level.

Mitigation Measure CR-1

A comprehensive field reconnaissance shall be completed for the project site prior to initiating grading on the project site. This survey should be at least as comprehensive as the investigations completed for the EIR. A copy of the survey, along with conclusions and recommendations will be included in the application for land use entitlement submitted to the City.

In addition to the field reconnaissance survey, a subsurface archaeological testing program will be initiated. This will include excavating auger holes and small shovel units (approximately 1 x 1 meter). The subsurface testing will focus on defining the vertical and horizontal extent and cultural complexity and significance of the resources. All testing activities will be accomplished within the context of an acceptable archaeological research design and in full consultation with the Native American community and the State Historic Preservation Office. Upon completion of the testing procedure, the archaeological data will be compared to the detailed development plans for the project and used to identify specific impact and mitigation measures to be implemented. If archaeological resources are identified on the project site, the preferred method of mitigation is in place preservation of archaeological sites, and would require redesign of the development plan to incorporate the archaeological site into an open space preserve area. Alternative measures may be adopted if on site preservation cannot be accomplished.

- B) Due to the historic pattern of frequent ground disturbance, the Natomas Central project is not expected to cause a significant change to archaeological resources as defined in CEQA Guidelines Section 15064.5. However, grading and other construction activities could uncover these features during the development of the project. **Mitigation Measures CR-2** and **CR-3** will ensure the potentially significant impacts to potential archaeological resources discovered on site are mitigated to a less than significant level.

Mitigation Measure CR-2

If subsurface archaeological, historical or paleontological remains are discovered during construction, work in the area shall stop immediately and a qualified archaeologist shall be consulted. If additional mitigation measures are recommended by the archaeologist, these will be implemented to reduce any archaeological impacts to a less than significant level before construction continues.

Mitigation Measure CR-3

If human burials are encountered, all work in the area shall stop immediately and the Sacramento County Coroner's office shall be notified immediately. If the remains are determined to be Native American in origin, both the Native American Heritage Commission and any identified descendants must be notified and recommendations for treatment solicited (CEQA Section 15064.5); Health and Safety Code Section 7050.5; Public Resources Code Section 5097.94 and 5097.98.

- C) The Natomas Central project is not expected to cause a significant change to historical resources as defined in CEQA Guidelines Section 15064.5. However, grading and other construction activities could uncover these features during development of the project. **Mitigation Measures CR-2 and CR-3** will ensure these potentially significant impacts to the historical resources are mitigated to a less than significant level.

The Witter Ranch Historical Farm is located south of the project site and is jointly operated by the Witter Family and Sacramento County Parks (U.C. Davis, 2005). This farm is listed on the National Register of Historic Places and the State Points of Historic Interest. This site is used for education purposes, mainly for children in grades K-6 to expose them to the farming process and contains original farm structures dating from 1920 to 1934. The development of the Natomas project will not negatively impact this historic resource due to its protection by the county park system. The ranch is currently surrounded by existing development, so the addition of the Natomas Central project in North Natomas is not expected cause additional impacts to this historic farm. Residents of the project will live in close proximity to this site and have opportunities to visit the site to obtain information related to historic farming sites and practices of the area.

- D) The Natomas Central will cause a physical change in the environment. However, the project is not expected to cause a significant physically change or affect any unique cultural values, since none have been identified in the project area. Impacts to unique cultural values are considered less than significant. No mitigation required.
- E) The Natomas Central project is not expected to restrict existing religious or sacred uses within the potential impact area based on available information regarding

these sites. However, the project applicant will consult with the Native American Heritage Commission requesting comments regarding development of the project site. Impacts to potential Native American religious sites are considered potentially significant and **Mitigation Measure CR -4** will reduce these impacts to a less than significant level.

Mitigation Measure CR-4

The developer will consult with the Native American Heritage Commission requesting comment on the location of potential religious sites in the project area as would be located in the Sacred Land Files, prior to initiating grading activities on the project site.

3.14.4 Findings

The potential to uncover archaeological, historical, or paleontological resources, sites, or unique geological features and the potential to impact Native American religious and sacred sites exist during construction of the project, and are considered potentially significant impacts unless mitigated. These impacts will be reduced to a less than significant level through incorporation of **Mitigation Measures CR-1, CR-2, CR-3 and CR-4**.

No mitigation is required for impacts to ethnic cultural values within the potential impact area.

3.15 Recreation

Issues:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than significant Impact
Would the proposal:			
A) Increase the demand for neighborhood or regional parks or other recreational facilities?		X	
B) Affect existing recreational opportunities?			X

3.15.1 Environmental Setting

Development of Natomas Central will generate an increased need for local recreational facilities and parks. However, several recreation opportunities exist within the North Natomas area that provide a variety of recreational options. These include Discovery Park located along the Sacramento and American Rivers to the south, the Witter Ranch Park site located southeast of the project, and several other park sites located in nearby residential developments. As buildout the North Natomas area continues more parks will be come available in the project area.

The project will help accommodate for this increased need through development of four parks totaling 31.0 acres, and an open space area located along Fisherman’s Lake totaling 27.7 acres. A 10.0-acre neighborhood park is proposed for the area immediately south of the adjacent existing junior high school site, a second 5.0-acre park is located adjacent to the proposed elementary school, the third 6.0-acre park site will be centrally located within the project, adjacent to the southern shore of Natomas Central Lake, and the fourth park consists of a 10.0 linear parkway located along the northwestern boundary along Fisherman’s Lake. The park locations are consistent with the NNCP which requires that parks be evenly distributed throughout residential neighborhoods, and the size requirement of 2-10 acres for neighborhood parks, as outlined in the Community Plan will be obtained.

A Recreation Center is also included in the project plan for Natomas Central, and will include tennis courts, a Bocci ball area, barbeque pits, and a swimming pool. The Recreation Center will also provide a community center which will house a gymnasium, multi-purpose rooms, and conference rooms as well as other amenities. A total of 7.0 acres has been designated for the recreation center site.

In addition to the parks located within the project boundaries, a 200-acre regional park is planned for the North Natomas Community. Other recreational opportunities that will be located within the North Natomas Community area include Northpointe Golf Course, Witter Ranch Historic Farm, Northborough Lake, several large areas of open space, and other community and neighborhood parks associated with additional residential development. A 185.4-acre sports complex is also proposed to be centrally located as part of the NNCP.

The numerous pedestrian walks and bikeways that will be included within the project area and the community as a whole can also be used for recreational purposes and a total of 267.8 acres of park space have been proposed as part of the NNCP. The NNCP requires 2.5 acres of park space for every 1,000 residents, and with the population estimated at 66,910 at full build-out, the 167.3 acres of park space required will be exceeded by approximately 100 acres of park space.

3.15.2 Standards of Significance

Impacts from recreation would normally be significant if the project would cause or accelerate substantial physical deterioration of existing area parks or recreational facilities, or have an adverse effect on the environment by creating a need for construction or expansion of recreational facilities.

3.15.3 Answers to Checklist Questions

- A) The increased demand for parks and recreational facilities associated with the project will be provided for with several parks and a Recreation Center located on site, as well as recreational improvements within the larger NNCP area. The increased demand for recreation parks and facilities was considered when the design of the NNCP was created and the incorporation of numerous park and recreation facilities throughout the NNCP area will mitigate the increased demand for park and recreational facilities from expected population growth to a less than significant level.

Requirements of the NNCP in regard to park and recreational facilities include the provision that neighborhood parks be located along small residential streets or similar connections between neighborhoods to facilitate easy access on foot. In addition, residential back-on lots or side lots adjacent to parks will be minimized or avoided if possible, to reduce impacts to surrounding residents from traffic, noise, and lighting from the park areas. The Natomas Central park layout conforms to this requirement since the parks are spaced throughout the project site to provide all residents with easy, safe access via streets, sidewalks, and pathways.

Other requirements of the NNCP include that parks be developed with a joint use agreement with other compatible uses where possible to provide financial savings, and that 80 percent of residential units be located within 880 feet (walking distance) of some form of public or private open space element. Elements of the open space provision include public or private parks, linear parkways, agricultural buffer areas, drainage corridors, and other open space opportunities. The Natomas Central project exceeds the 880-foot walking distance requirement since 90 percent of the residential lots are located within 880-feet of parks, recreation, or open space elements. Joint use of the parks has also been addressed on site with parks proposed adjacent to existing and proposed schools.

Timeline requirements outlined in the NNCP for parks and recreation services and facilities require that neighborhood parks are provided when a minimum of 50 percent of the residential land development within the park service area is completed. To ensure that impacts from the demand for recreational services and facilities are reduced to a less than significant level, **Mitigation Measure R-1** will be implemented.

Mitigation Measure R-1

The project developer will ensure that parks have been provided for project residents when a minimum of 50 percent of the residential land within the project boundaries has been completed.

The three interior parks, open space/parkway area along the Fisherman's Lake, and Recreation Center proposed for the Natomas Central project, and plans for the 200-acre regional park within the Community Plan area will provide sufficient park and recreation opportunities to residents of the development and no further mitigation is necessary.

- B) No impact to existing recreational opportunities will result from this project since none currently exist within the project boundaries. The project will contribute to existing recreational opportunities of the area, by providing a more varied choice of activities to local residents through the on-site Recreation Center. Impacts to existing recreational opportunities will be reduced to a less than significant level through implementation of **Mitigation Measure R-1**. No additional mitigation is required.

3.15.4 Findings

The project is expected to increase the demand for neighborhood or regional parks or other recreational facilities. Residents of Natomas Central will be provided adequate recreation facilities through the provision of several parks, a parkway, open space corridor, as well as recreation center that will be constructed on the project site, and the impacts from demands for recreational facilities on and off the project site will be reduced to a less than significant level through implementation of **Mitigation Measure R-1**. No additional mitigation is required.

3.16 Mandatory Findings of Significance

Issues:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigated	Less than significant Impact
A) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X	
B) Does the project have the potential to achieve short-term, to the disadvantage of long-term environmental goals?			X
C) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)		X	
D) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? Disturb paleontological resources?		X	

3.16.1 Mandatory Findings of Significance Discussion

- A) As discussed in this document, impacts on biological resources and cultural resources could occur with development of the Natomas Central project. However, implementation of Mitigation Measures BR-1 through BR-10, W-1, and CR-1 through CR-4 provided in this document would reduce impacts to biological and cultural resources to a less than significant level.
- B) The proposed project would provide for additional growth in the City of Sacramento. As discussed in this Initial Study, the Natomas Central project is part of the NNCP. Although a General Plan and NNCP amendment will be necessary to implement the project, the development of the site was taken into account in the EIR for the General Plan and NNCP, and the project is being developed in accordance with these planning documents. Therefore, the project does not have the potential to achieve short-term, to the disadvantage of long-term environmental goals.

- C) The Natomas Central project would provide housing for the additional growth expected within the City of Sacramento. As discussed in this document, this project is part of the planning area targeted for growth by the City of Sacramento, and development of the North Natomas area was taken into account in City planning efforts and analysis. The design of the North Natomas Community as a whole, including Natomas Central, has been designed to allow for numerous forms of low and zero emission transportation opportunities. The project's contribution to cumulative increases in criteria pollutants for which the Sacramento Valley is in non-attainment would be less than significant after payment of the required mitigation fee.

The project as proposed contains 425 less units than is allowed under the NNCP guidelines. Furthermore, the factor used to generate residents per household during the EIR and NNCP development process has likely decreased over the roughly 20 years since inception of the plan area. This results in a further reduction in the population assumptions used when estimating impacts to the environment. In addition the large component of active adult residents proposed for the project, will on average have two or less persons per household, which is below the residential occupancy averages according to 2002 Census data for the City of Sacramento. Based on the project components and assumptions used to generate the project's impact on the environmental issues discussed in this document, the proposed project should fall at or below the significance thresholds generated for the project site as determined through the NNCP EIR process. Therefore the Natomas Central project's contribution to cumulatively considerable impacts would be less than significant.

As discussed earlier in this document, Natomas Central would not require extensive use or transport of hazardous materials. Natural hazards that could endanger project residents such as groundshaking are unlikely to occur on the project site. Hazards to residents from flooding are less than significant due to the recent FEMA designations for the project area that were the result of levee improvements. The project's contribution to criteria pollutants for which the Sacramento Valley is in non-attainment would be less than significant after payment of the required mitigation fee. To reduce potential construction-related air quality impacts and potential construction-related noise impacts Mitigation Measures AQ-1 through AQ-X have been provided. Implementation of Mitigation Measures CR-1, CR-2, CR-3 and CR-04 would reduce potential impacts to cultural and Native American religious or sacred sites, historical, archaeological and paleontological resources to a less than significant level. The Natomas Central project is not expected to result in substantial adverse effects on human beings, and this impact is considered less than significant with the incorporation of mitigation.

4.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below potentially would be affected by this project.

	Land Use and Planning		Hazards
	Population and Housing	X	Noise
X	Geological Problems		Public Services
X	Water		Utilities and Service Systems
X	Air Quality	X	Aesthetics, Light and Glare
	Transportation/Circulation	X	Cultural Resources
X	Biological Resources		Recreation
	Energy and Mineral Resources	X	Mandatory Findings of Significance
	None Identified		

5.0 DETERMINATION

On the basis of the initial evaluation:

	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
X	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the project-revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

Signature

Date

Printed Name

6.0 REPORT PREPARATION AND REFERENCES

6.1 Report Preparation

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6.3 References

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