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FINAL SUPPLEMENTAL  
ENVIRONMENTAL IMPACT REPORT

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***NORTH VINEYARD GREENS UNITS #1, #3, GOSAL  
ESTATES AND DAVIS PROPERTY***

*SPECIFIC PLAN AMENDMENTS, REZONES, USE PERMIT,  
VESTING TENTATIVE SUBDIVISION MAPS, TENTATIVE PARCEL  
MAP, SPECIAL DEVELOPMENT PERMITS, ABANDONMENT, AND  
AFFORDABLE HOUSING PLAN*

*Control Numbers: 03-CZB-SVB-SPP-AHS-0099,  
03-RZB-SVB-SPP-AHS-0141,  
02-RZB-UPP-PMR-AHS-0660,  
03-PMR-0214*

*State Clearinghouse Number: 2005022149*

*February 2006*

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COUNTY OF SACRAMENTO  
DEPARTMENT OF ENVIRONMENTAL  
REVIEW AND ASSESMENT  
827 7TH STREET, ROOM 220  
SACRAMENTO, CALIFORNIA 95814



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Terry Schutten

## PREPARED BY

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Department of Environmental Review and Assessment

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03-PMR-0214*

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This Environmental Impact Report has been prepared pursuant to the California Environmental Quality Act of 1970 (Public Resources Code Division 13). An Environmental Impact Report is an informational document which, when this Department requires its preparation shall be considered by every public agency prior to its approval or disapproval of a project. The purpose of an Environmental Impact Report is to provide public agencies with detailed information about the effect that a proposed project is likely to have on the environment; to list ways in which any adverse effects of such a project might be minimized; and to suggest alternatives to such a project.

Prepared by the  
COUNTY OF SACRAMENTO  
DEPARTMENT OF ENVIRONMENTAL  
REVIEW AND ASSESMENT  
827 7<sup>TH</sup> STREET, ROOM 220  
SACRAMENTO, CALIFORNIA 95814

Municipal Services Agency

Department of Environmental Review  
and Assessment

Joyce Horizumi, Director



Terry Schutten, County Executive  
Cheryl Creson, Agency Administrator

## County of Sacramento

February 23, 2006

TO: ALL INTERESTED PARTIES

**SUBJECT: FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT for North Vineyard Greens Units #1, #3, Gosal Estates and Davis Property Specific Plan Amendments, Rezones, Use Permit, Vesting Tentative Subdivision Maps, Tentative Parcel Map, Special Development Permits, Abandonment, and Affordable Housing Plan (County Control Numbers: 03-CZB-SVB-SPP-AHS-0099, 03-RZB-SVB-SPP-AHS-0141, 02-RZB-UPP-PMR-AHS-0660, and 03-PMR-0214)**

The subject Final Supplemental Environmental Impact Report (FSEIR) is attached for your review and comment. The Final Supplemental EIR and proposed project will be heard before the Sacramento County Board of Supervisors on March 8, 2006 at 6:00 P.M. in the County Administration Building, 700 H Street, Sacramento, California.

Please contact Tim Blewett of this office at (916) 874-7914 if you have any questions concerning this Draft Supplemental EIR.

Sincerely,

**[Original Signature on File]**

Joyce Horizumi

Environmental Coordinator

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## PREFACE

This Final Environmental Impact Report (EIR) for North Vineyard Greens Units #1, #3, Gosal Estates and Davis Property (North Vineyard Greens and Gosal Projects) is a Supplement to the Final Environmental Impact Report for the North Vineyard Station Specific Plan (County Control Number: 93-SFB-0238). The Sacramento County Board of Supervisors certified the prior Final EIR on August 12, 1998 and approved the General Plan Amendment, and subsequently approved the North Vineyard Station Specific Plan (NVSSP) on November 4, 1998. This Final EIR includes all comments received on the Draft EIR and responses to those comments. Comments and Responses are in Chapter 14. Changes to the EIR are shown with ~~Strikeout~~ text for deletions and Underline text for insertions. Changes are editorial in nature based on comments received on the Draft EIR.

The original North Vineyard Station Specific Plan EIR was prepared as a Master EIR under the provision of CEQA (Section 15175). The information contained in this Supplemental EIR in conjunction with the prior Final EIR for the North Vineyard Station Specific Plan will be used as the environmental documentation for the current project application.

The North Vineyard Greens and Gosal Projects Draft EIR was completed and distributed on September 23, 2005. The Draft was mailed to 75 agencies and interested parties. Five written comment letters were received on the Draft EIR. A Comments and Responses chapter was added to the Final EIR including a summary of each comment and the complete comment letter. Based on comments received, edits were made to the Executive Summary (Chapter 1) and Air Quality (Chapter 6) chapters of the Draft EIR.

The proposed project was heard at the Subdivision Review Committee (SRC) on December 16, 2005. The SRC considered the proposed vesting tentative subdivision maps and found the maps technically satisfactory, if the accompanying rezone is approved. The SRC also considered the environmental document and found the Draft Supplemental Environmental Impact Report as appropriate.

A public hearing was held before the Project Planning Commission on February 6, 2006. No comments were received on the Draft EIR at the Commission hearing. The Commission voted to close the public comment period and instructed the Department of Environmental Review and Assessment (DERA) to prepare a Final EIR for presentation to the Board of Supervisors.

The Commission recommended approval of the Amendment to the North Vineyard Specific Plan; approval of the Rezones; approval of the Vesting Large Lot Tentative Subdivision Maps; approval of the Vesting Small Lot Tentative Subdivision Maps; approval of the Tentative Parcel Map; amended language to the Special Development Permit request; approval of the Special Development Permit as amended; approval of the Use Permit, recognized the applicants request to withdraw the Abandonment;

recommended approval of the Affordable Housing Plan; and recommended adoption of the Mitigation Monitoring and Reporting Program.

The Board of Supervisors will use the EIR in making a decision as to whether to approve or deny the project.

# 1 EXECUTIVE SUMMARY AND MITIGATION MEASURES

The subject of this Supplement to a Final Environmental Impact Report (EIR) is a project known as North Vineyard Greens Units #1, #3, Gosal Estates and Davis Property Specific Plan Amendments, Rezones, Use Permit, Vesting Tentative Subdivision Maps, Tentative Parcel Map, Special Development Permits, Abandonment, and Affordable Housing Plan. The Sacramento County Board of Supervisors certified the original Final EIR, titled North Vineyard Station Specific Plan (Control Number 93-SFB-0238), on August 12, 1998 and approved the General Plan Amendment, and subsequently approved the North Vineyard Station Specific Plan (NVSSP) on November 4, 1998.

The NVSSP planning area is located in the south-central unincorporated area of Sacramento County, at the western edge of the Vineyard community. The City of Sacramento's Central Business District is located approximately eleven miles to the northwest. The Plan Area lies entirely within Sections 4 and 5 of Township 7 North, Range 6 East and within the USGS Elk Grove quadrangle map.

The Plan Area encompasses 1,590± acres of the Vineyard Community Planning Area. The Plan Area is bounded by Florin Road to the north, Gerber Road to the South, the northerly extension of the Vineyard Road on the east, and generally by Elder Creek's north and south forks. Bradshaw Road transects the Plan Area in a north/south alignment. The right-of-way of the Central California Traction Railroad transects the western portion of the planning area.

The North Vineyard Green Units #1, #3, and Gosal Estates project is located in the western half of the NVSSP area, north of Gerber Road, south of Florin Road, on each side of the Central California Traction Railroad, approximately 4,000 feet west of Bradshaw Road and approximately 2,000 feet east of Elk Grove-Florin Road. The project area consists of 14 contiguous parcels and one separate parcel for a total of 206.3 acres.

The following environmental impact and mitigation summary table (*Table 1-1 Executive Summary of Impacts and Mitigation on page 1-3*) briefly describes the project impacts and the mitigation measures recommended to eliminate or reduce the impacts. The residual impact after mitigation is also identified. Immediately following the summary table is a list of recommendations/requirements of various agencies pertaining to the project (*see Requests and Requirements of Various Agencies on page 1-18*), and a description of mandated mitigation monitoring requirements (*see on page 1-37*). Detailed discussions of each of the identified impacts and mitigation measures, including pertinent support data, can be found in the specific topic sections in the remainder of this report.

This report has identified project-related impacts associated with traffic and circulation, noise, biological resources, and cultural resources as potentially significant, which could be reduced to a less than significant level through inclusion of recommended mitigation

measures. This report concludes that the proposed project contributes to the cumulatively significant and unavoidable impacts related to air quality and traffic and circulation, as identified in the North Vineyard Station Specific Plan FEIR. Impacts associated with land use, public services, drainage and hydrology, and grading and erosion are considered less than significant.



**Table 1-1  
Executive Summary of Impacts and Mitigation**

| Impacts   | Level of Significance Before Mitigation <sup>1</sup> | Mitigation Measure  | Level of Significance After Mitigation |
|---|--|---|--|
| <b>LAND USE</b>   |  |   |  |
| <p>The North Vineyard Greens Unit 1 proposal does not result in significant land use impacts that are specific to the project site. Cumulative land use impacts of the North Vineyard Station Specific Plan area have been addressed and mitigated in the NVSSP Final EIR. Project impacts related to land use are considered less than significant.</p>  | LS   | None required.  | LS                                     |
| <b>PUBLIC SERVICES</b>  |  |   |  |
| <p>The public services impacts of the proposed North Vineyard Station Specific Plan area development were analyzed as part of the NVSSP EIR. The development of the proposed North Vineyard Greens Unit 1, 3, and Gosal Estates project is expected to increase the demands on public services over the existing use, but not significantly beyond service capacity planned for in the NVSSP. Service providers have reviewed the project and provided specific comments and requirements as noted in this section. Given that the project is developed in accordance with the applicable County standards and service provider requirements, impacts associated with public services are expected to be less than significant.</p> | LS   | None required.  | LS                                     |
| <b>TRAFFIC AND CIRCULATION</b>  |  |   |  |
| <p>The proposed project contributes to the significant and unavoidable traffic impact associated with development of the North Vineyard Station Specific Plan area, as identified in the NVSSP FEIR.</p>  | SU   | Mitigation measures were included in the NVSSP FEIR to improve operating conditions under existing and cumulative conditions. | SU                                     |

<sup>1</sup> PS = Potentially Significant    S = Significant    SU = Significant and Unavoidable    LS = Less Than Significant

| Impacts  | Level of Significance Before Mitigation <sup>1</sup> | Mitigation Measure   | Level of Significance After Mitigation |
|--|--|--|--|
| <p>The traffic study prepared for the Waterman Road intersections with 1 Street and 2 Street indicated that a traffic signal is necessary at the Waterman Road/1 Street intersection. The intersection is expected to operate at LOS F with development of the project. Mitigation is included to install the required traffic signal. The mitigation is expected to result in LOS A at the intersection. Impacts of the proposed project related to traffic and circulation are considered less than significant with mitigation.</p> | PS   | <p><b><u>North Vineyard Greens Unit 1 (03-CZB-SVB-SPP-AHS-0099) and North Vineyard Greens Unit 3 (03-RZB-SVB-SPP-AHS-0141)</u></b></p> <p>TC-1. Traffic signal control shall be installed at the Waterman Road/1 Street (north access road to Vineyard Creek subdivision) intersection. The main access to the multi-family site shall be located across from 1 Street to create the fourth leg of the intersection.</p> | LS                                     |

**AIR QUALITY**

Long-term Impacts:

The cumulative air quality impacts of project operation are considered significant and unavoidable, as identified in the NVSSP FEIR. The FEIR found that the specific Plan long-term emissions (ROG, NOx, PM<sub>10</sub>) from vehicle traffic and stationary sources would result in significant unavoidable impacts to regional air quality.

SU

None recommended.

SU

Short-term Construction Impacts:

Emissions of NOx exceed the threshold of 85 lbs/day during the first each year of building construction (estimated as September to December 2006) and are considered significant. The 2006 construction-related NOx air quality impacts of the project are expected to be reduced to less than significant with proposed standard and off-site fee mitigation measures. However, overall construction-related air quality impacts are considered cumulatively significant due to the potential for many other projects in the vicinity undergoing simultaneous construction. The project is expected to disturb more than 15 acres per day during development, therefore, the singular project PM<sub>10</sub> impact is considered significant and unavoidable.

PS SU

**North Vineyard Greens Unit 1 (03-CZB-SVB-SPP-AHS-0099), North Vineyard Greens Unit 3 (03-RZB-SVB-SPP-AHS-0141), and Gosal Estates (03-RZB-UPP-PMR-AHS-0660)**

AQ-1. The project shall provide a plan for approval by the County of Sacramento and SMAQMD demonstrating that the heavy-duty (>50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average.

PS SU

| Impacts | Level of Significance Before Mitigation <sup>1</sup> | Mitigation Measure   | Level of Significance After Mitigation |
|---------|--|--|--|
|         |  | <p>AQ-2. The project representative shall submit to the County of Sacramento and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine production year, and hours of use or fuel throughput for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. 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, and name and phone number of the project manager and on-site foreman.</p>   |  |
|         |  | <p>AQ-3. The project shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity shall be repaired immediately, and the County of Sacramento and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this section shall supersede other SMAQMD or state rules or regulations.</p> |  |

| Impacts | Level of Significance Before Mitigation <sup>1</sup> | Mitigation Measure   | Level of Significance After Mitigation |
|---------|--|--|--|
|         |  | <p><u>AQ-4. The following construction-related measures apply to construction activities within the Specific Plan area:</u></p> <ul style="list-style-type: none"> <li>• <u>Water exposed, graded surfaces at least two times per day and if possible, keep soil moist at all times.</u></li> <li>• <u>Properly maintain diesel and/or gas fueled construction equipment.</u></li> <li>• <u>Water haul roads at least two times per day</u></li> <li>• <u>Use low VOC architectural coatings</u></li> </ul>  |  |
|         |  | <p><u>AQ-5. The following mitigation measures will be applied during the grading, earthmoving, and building construction phases of development to reduce PM<sub>10</sub> emissions:</u></p> <ul style="list-style-type: none"> <li>• <u>The maximum actively disturbed area shall not exceed 15 acres on any given day,</u></li> <li>• <u>all exposed soil shall be watered at a frequency that keeps soil moist at all times,</u></li> <li>• <u>all haul roads shall be watered twice daily,</u></li> <li>• <u>at least two feet of freeboard shall be maintained for all trucks hauling soil, and</u></li> <li>• <u>Use emulsified diesel or diesel catalysts on applicable heavy duty diesel construction equipment.</u></li> </ul> |  |
|         |  | <p><u>AQ-5. Comply with the adopted AQ-15 Plan.</u></p>  |  |
|         |  | <p><u>AQ-6. No wood burning appliances shall be permitted in new construction within the Specific Plan area. Fireplaces and similar "wood stoves" shall be fueled by natural gas or propane.</u></p>   |  |

| Impacts | Level of Significance Before Mitigation <sup>1</sup> | Mitigation Measure | Level of Significance After Mitigation |
|---------|--|--------------------|--|
|---------|--|--------------------|--|

AQ-4 AQ-7. Prior to the approval of improvement plans or the issuance of grading permits, the proponent will submit proof that the off-site air quality mitigation fee of ~~\$11,968~~ \$261,139 has been paid to SMAQMD, and that the construction air quality mitigation plan has been approved by SMAQMD and the lead agency. Based on percentage of development area, the fee responsibility for each of the three development projects is as follows: 66% (~~\$7,899~~ \$172,351) for North Vineyard Greens Unit 1; 27% (~~\$3,234~~ \$70,508) for North Vineyard Greens Unit 3; and 7% (~~\$838~~ \$18,280) for Gosal Estates.

**NOISE**

Noise levels from Gerber Road, Florin Road, Waterman Road, and the Central California Traction Railroad could potentially exceed the General Plan Noise Element thresholds for noise at residential receptors. Mitigation is included to ensure that residences are located an appropriate distance from the noise source or to construct noise barriers to reduce noise levels at residences. Project impacts related to traffic and railroad noise are considered less than significant with mitigation.

**North Vineyard Greens Unit 1 (03-CZB-SVB-SPP-AHS-0099) and North Vineyard Greens Unit 3 (03-RZB-SVB-SPP-AHS-0141)**

NO-1. Prior to the issuance of any building permits, construct a masonry or concrete noise barrier to a total height of 8-feet (consisting of a 6-foot masonry or concrete wall on top of a 2-foot berm) between the proposed single-family residential lots and the landscaped areas along Gerber Road; construct a masonry or concrete noise barrier to a total height of 7-feet (consisting of a 6-foot masonry or concrete wall on top of a 1-foot berm) between the proposed single-family residential lots and the landscaped areas along Florin Road; and construct a 6-foot masonry or concrete noise barrier between the proposed single-family residential lots and the landscaped areas along Waterman Road. Sound walls are not required adjacent to the multi-family residential sites along Gerber and Waterman Roads. The Gerber Road and Waterman Road noise barriers should wrap around the corners of streets and driveways accessing Gerber and Waterman Roads to provide sufficient noise attenuation at the outdoor activity areas and buildings on the adjacent lots. The Florin Road noise barrier should wrap around the corners of the northernmost lot adjacent to Florin Road. Wrapping is sufficient where the noise barrier blocks the line of sight between the noise source and the receiver. Tapering of the wall height at intersections will be required for visibility purposes.

PS

LS

| Impacts  | Level of Significance Before Mitigation <sup>1</sup> | Mitigation Measure | Level of Significance After Mitigation |
|--|--|--------------------|--|
| <b>North Vineyard Greens Unit 1 (03-CZB-SVB-SPP-AHS-0099)</b>  |  |                    |  |
| NO-2. Residential buildings built on lots adjacent to the CCTR right-of-way must be located 28 feet or more from the edge of the 100-foot CCTR right-of-way (at least 78 feet from the railroad tracks). |  |                    |  |

**DRAINAGE AND HYDROLOGY**

|  |    |                |    |
|--|----|----------------|----|
| <p>Project development must be in compliance with the NVSSP Final Master Drainage Plan and any amendments to the plan pursuant to Board of Supervisors approval. DWR recommended several conditions of project approval to comply with the requirements of the Drainage Plan. Development that is consistent with DWR conditions and County standards will ensure that drainage impacts are less than significant.</p> | LS | None required. | LS |
|--|----|----------------|----|

**GRADING AND EROSION**

|  |    |                |    |
|--|----|----------------|----|
| <p>The developer of the project site will be responsible for the design and implementation of appropriate erosion and sediment control BMPs in accordance with the Sacramento County Code, Land Grading and Erosion Control Ordinance. Project compliance with these regulations, as administered by the County Public Works Agency, will ensure that project-related grading and erosion impacts are less than significant.</p> | LS | None required. | LS |
|--|----|----------------|----|

| Impacts  | Level of Significance Before Mitigation <sup>1</sup> | Mitigation Measure  | Level of Significance After Mitigation |
|--|--|---|--|
| <b>BIOLOGICAL RESOURCES</b>  |  |   |  |
| <p>The proposed project is expected to result in the loss of 1.152 acres of seasonal wetlands, 0.974 acre of seasonal marsh, 0.150 acre of vernal pools, and 0.008 acre of seasonal wetland swale; potentially impact special-status species including special-status plants, special-status wetland invertebrate species, special-status reptiles including giant garter snake (<i>Thamnophis gigas</i>), and northwestern pond turtle (<i>Clemmys marmorata marmorata</i>), and Swainson’s hawks; and result in the loss of 49 inches dbh of native northern California black walnut trees and 31 inches dbh of native oak trees. Mitigation is recommended to reduce the potential impacts of the project to less than significant.</p>   | PS   | <p><b><u>North Vineyard Greens Unit 1 (03-CZB-SVB-SPP-AHS-0099), North Vineyard Greens Unit 3 (03-RZB-SVB-SPP-AHS-0141), and Gosal Estates (03-RZB-UPP-PMR-AHS-0660)</u></b></p> <p>BR-1. Comply with the Wetland Mitigation Plan for Elder and Gerber Creeks and the Drainage Parkway Plan for Elder and Gerber Creeks, prepared in compliance with wetlands mitigation measures BR-3 and BR-6 of the NVSSP EIR.</p> | LS                                     |
| <p>BR-2 Prior to the approval of any grading and/or building permits for any development of the site, the project applicant or property owner shall obtain all applicable permits from the U. S. Army Corps of Engineers (USCOE) and shall pay to the County of Sacramento an amount based on a rate of \$35,000 per acre if less than 1:1 replacement/compensation occurs through the Federal permitting process. The proposed North Vineyard Greens Unit 1 project is expected to result in the loss of 0.653 acres of seasonal wetlands, 0.974 acre of seasonal marsh, 0.150 acre of vernal pools, and 0.008 acre of seasonal wetland swale. The proposed North Vineyard Greens Unit 3 project is expected to result in the loss of 0.489 acre of seasonal wetlands. The proposed Gosal Estates project is expected to result in the loss of 0.010 acre of seasonal wetlands. Any payment due shall be collected by the Department of Planning and Community Development and deposited in the Wetlands Restoration Trust Fund. A copy of any required USCOE permits and verification of any required payment shall be submitted to the Department of Environmental Review and Assessment.</p> |  |   |  |

| Impacts | Level of Significance Before Mitigation <sup>1</sup> | Mitigation Measure   | Level of Significance After Mitigation |
|---------|--|--|--|
|         |  | <p>BR-3 The project site shall be surveyed for special-status plants by a qualified biologist prior to the start of construction activities (including clearing and grubbing) located within 200 feet of Gerber Creek and all other jurisdictional wetlands on the project site to determine project impact to special-status plants and habitats of special-status species. Permits must be obtained, as necessary, for the take of any protected species per the USFWS, CDFG, or other jurisdictional requirements. Results of the pre-construction survey shall be reported within 24 hours to the Department of Environmental Review and Assessment at 874-7914.</p>   |  |
|         |  | <p>BR-4 Prior to the start of construction activities (including clearing and grubbing), determinate-level special-status wetland invertebrate species surveys shall be conducted during the appropriate season(s) for identification of species by a qualified biologist. If surveys are positive, prior to the approval of any grading and/or building permits for any development of the site the applicant will comply with the U.S. Fish and Wildlife Service's <i>Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Vernal Pool Crustaceans Within the Jurisdiction of the Sacramento Field Office, California</i>. The project applicant or property owner shall obtain all applicable permits from the U.S. Fish and Wildlife Service as necessary. A copy of the survey results and all required permits shall be submitted to the Department of Environmental Review and Assessment. Any incidental take shall be reported to the USFWS at (916) 979-2725 and Department of Environmental Review and Assessment at (916) 874-7914 within one working day.</p> |  |



| Impacts | Level of Significance Before Mitigation <sup>1</sup> | Mitigation Measure   | Level of Significance After Mitigation |
|---------|--|--|--|
|         |  | <p>BR-5 The project site shall be surveyed for special-status reptiles including giant garter snake (<i>Thamnophis gigas</i>), and northwestern pond turtle (<i>Clemmys marmorata marmorata</i>) by a qualified biologist within 24 hours prior to the start of construction activities (including clearing and grubbing) located within 200 feet of Gerber Creek and all other jurisdictional wetlands on the project site. Survey of the area shall be repeated if a lapse in construction activity of two weeks or greater occurs. If a giant garter snake, northwestern pond turtle and/or other special-status reptile is encountered during construction, activities shall cease until appropriate corrective measures have been completed or it has been determined that the animal will not be harmed. Special-status reptiles encountered during construction should be allowed to move away on their own. Capture and relocation of trapped or injured individuals shall only be attempted by personnel or individuals with current USFWS recovery permits. Any incidental take shall be reported to the USFWS at (916) 979-2725 and Department of Environmental Review and Assessment at (916) 874-7914 within one working day. Any special-status amphibian or reptile sightings shall be reported within 24 hours to the Department of Environmental Review and Assessment at 874-7914.</p> |  |

| Impacts   | Level of Significance Before Mitigation <sup>1</sup> | Mitigation Measure  | Level of Significance After Mitigation |
|---|--|---|--|
| <p><b><u>North Vineyard Greens Unit 1 (03-CZB-SVB-SPP-AHS-0099) and North Vineyard Greens Unit 3 (03-RZB-SVB-SPP-AHS-0141)</u></b></p>  |  |   |  |
|   | BR-6   | <p>Prior to the approval of Improvement Plans, Building Permits, or recordation of the final map, whichever occurs first, implement one of the following options to mitigate for the loss of 96± acres of Swainson’s hawk foraging habitat on the North Vineyard Greens Unit 1 project site and 40± acres of Swainson’s hawk foraging habitat on the North Vineyard Greens Unit 3 project site:</p> <ol style="list-style-type: none"> <li>1. The project proponent shall, to the satisfaction of the California Department of Fish and Game, prepare and implement a Swainson’s hawk mitigation plan that will include preservation of Swainson’s hawk foraging habitat.</li> <li>2. The project proponent shall utilize the land dedication option established in Sacramento County’s <i>Swainson’s Hawk Impact Mitigation Program</i> (Chapter 16.130 of the Sacramento County Code).</li> <li>3. Should the County Board of Supervisors adopt a Swainson’s hawk mitigation policy/program (which may include a mitigation fee payable prior to issuance of building permits) prior to the implementation of one of the measures above, the project proponent may be subject to that program instead.</li> </ol> |  |
| <p style="text-align: center;">• North Vineyard Greens Unit 3 (03-RZB-SVB-SPP-AHS-0141) and Gosal Estates (03-RZB-UPP-PMR-AHS-0660)</p> |  |   |  |
|   | BR-7.  | <p>Tree #37 on the North Vineyard Greens Unit 3 site, and trees #4 and 5 on the property adjacent to the Gosal Estates site, shall be preserved and protected as follows:</p> <ol style="list-style-type: none"> <li>1. A circle with a radius measurement from the trunk of the tree to the tip of its longest limb shall constitute the dripline protection area of each tree. Limbs must not be cut back in order to change the dripline. The area</li> </ol>  |  |

| Impacts | Level of Significance Before Mitigation <sup>1</sup> | Mitigation Measure   | Level of Significance After Mitigation |
|---------|--|--|--|
|         |  | <p>beneath the dripline is a critical portion of the root zone and defines the minimum protected area of each tree. Removing limbs that make up the dripline does not change the protected area.</p> <ol style="list-style-type: none"> <li>2. Any protected trees on the site which require pruning shall be pruned by a certified arborist prior to the start of construction work. All pruning shall be in accordance with the American National Standards Institute (ANSI) A300 pruning standards and the International Society of Arboriculture (ISA) "Tree Pruning Guidelines."</li> <li>3. No second-story residential construction will be permitted within the dripline protection area of protected trees. Grade beam construction with raised floors and pier footings no closer than 8-feet on-center shall be required for building areas within the dripline protection area of each tree.</li> <li>4. Temporary protective fencing shall be installed at least one foot outside the driplines of the protected trees prior to the start of construction work, in order to avoid damage to the trees and their root systems.</li> <li>5. No signs, ropes, cables (except those which may be installed by a certified arborist to provide limb support) or any other items shall be attached to the protected trees. Small metallic numbering tags for the purpose of preparing tree reports and inventories shall be allowed.</li> <li>6. No vehicles, construction equipment, mobile home/office, supplies, materials or facilities shall be driven, parked, stockpiled or located within the driplines of protected trees.</li> <li>7. No grading (grade cuts or fills) shall be allowed within the driplines of protected trees.</li> <li>8. Drainage patterns on the site shall not be modified so that water collects or stands within, or is diverted across, the dripline of any protected tree.</li> <li>9. No trenching shall be allowed within the driplines of protected trees. If it is absolutely necessary to install</li> </ol> |  |

| Impacts | Level of Significance Before Mitigation <sup>1</sup> | Mitigation Measure  | Level of Significance After Mitigation |
|---------|--|---|--|
|         |  | <p>underground utilities within the dripline of a protected tree, the utility line shall be bored and jacked under the supervision of a certified arborist.</p> <p>10. The construction of impervious surfaces within the driplines of protected trees shall be stringently minimized. When it is absolutely necessary, a piped aeration system per County standard detail shall be installed under the supervision of a certified arborist.</p> <p>11. No sprinkler or irrigation system shall be installed in such a manner that sprays water or requires trenching within the driplines of protected trees. An above ground drip irrigation system is recommended.</p> <p>12. Landscaping beneath oak trees may include non-plant materials such as bark mulch, wood chips, boulders, etc. The only plant species which shall be planted within the driplines of oak trees are those which are tolerant of the natural semi-arid environs of the trees. Limited drip irrigation approximately twice per summer is recommended for the understory plants.</p> |  |

**Gosal Estates (03-RZB-UPP-PMR-AHS-0660)**

- BR-8. Prior to the approval of Improvement Plans, Building Permits, or recordation of the final map, whichever occurs first, implement one of the following options to mitigate for the loss of 10± acres of Swainson’s hawk foraging habitat on the Gosal Estates project site:
1. The project proponent shall, to the satisfaction of the California Department of Fish and Game, prepare and implement a Swainson’s hawk mitigation plan that will include preservation of Swainson’s hawk foraging habitat.
  2. The project proponent shall utilize one or more of the mitigation options (land dedication and/or fee payment) established in Sacramento County’s *Swainson’s Hawk Impact Mitigation Program* (Chapter 16.130 of the Sacramento County Code).

| Impacts | Level of Significance Before Mitigation <sup>1</sup> | Mitigation Measure   | Level of Significance After Mitigation |
|---------|--|--|--|
|         |  | <p>3. Should the County Board of Supervisors adopt a Swainson’s hawk mitigation policy/program (which may include a mitigation fee payable prior to issuance of building permits) prior to the implementation of one of the measures above, the project proponent may be subject to that program instead.</p> <p>BR-9. The removal of 49 inches dbh of native northern California black walnut trees (#1, 2, and 3 on the Gosal Estates site) shall be compensated by planting native northern California black walnut trees (<i>Juglans californica</i> var. <i>hindsii</i>) equivalent to the dbh inches lost, based on the ratios listed below, at locations that are authorized by the Department of Environmental Review and Assessment. The removal of tree #6 (21-inch northern California black walnut) from the Gosal Estates site shall be compensated by replacement planting equivalent to 50% of the dbh inches lost (10 inches), based on the ratios listed below.</p> <p>The removal of 31 inches dbh of native oak trees (#63 and 64 on the North Vineyard Greens Unit 1 site) shall be compensated by planting native oak trees (valley oak/<i>Quercus lobata</i>, interior live oak/<i>Quercus wislizenii</i>, and blue oak/<i>Quercus douglasii</i>) equivalent to the dbh inches lost, based on the ratios listed below, at locations that are authorized by the Department of Environmental Review and Assessment.</p> <p>Therefore, equivalent compensation for 59 inches of northern California black walnut trees and 31 inches of native oak trees, based on the following ratios, is required:</p> <ul style="list-style-type: none"> <li>• one deepot seedling (40 cubic inches or larger) = 1 inch dbh</li> <li>• one 15-gallon tree = 1 inch dbh</li> <li>• one 24-inch box tree = 2 inches dbh</li> <li>• one 36-inch box tree = 3 inches dbh</li> </ul> <p>Prior to the approval of Improvement Plans or building permits, a Replacement Tree Planting Plan shall be prepared by a certified arborist or licensed landscape</p> |  |

| Impacts | Level of Significance Before Mitigation <sup>1</sup> | Mitigation Measure  | Level of Significance After Mitigation |
|---------|--|---|--|
|         |  | <p>architect and shall be submitted to the Environmental Coordinator for approval. The Replacement Tree Planting Plan(s) shall include the following minimum elements:</p> <ol style="list-style-type: none"> <li>1. Species, size and locations of all replacement plantings;</li> <li>2. Method of irrigation;</li> <li>3. The Sacramento County Standard Tree Planting Detail L-1, including the 10-foot deep boring hole to provide for adequate drainage;</li> <li>4. Planting, irrigation, and maintenance schedules;</li> <li>5. Identification of the maintenance entity and a written agreement with that entity to provide care and irrigation of the trees for a 3-year establishment period, and to replace any of the replacement trees which do not survive during that period.</li> </ol> <p>No replacement tree shall be planted within 15 feet of the driplines of existing trees or landmark size trees that are retained on-site, or within 15 feet of a building foundation or swimming pool excavation. The minimum spacing for replacement trees shall be 20 feet on-center. Examples of acceptable planting locations are publicly owned lands, common areas, and landscaped frontages (with adequate spacing). Generally unacceptable locations are utility easements (PUE, sewer, storm drains), under overhead utility lines, private yards of single family lots (including front yards), and roadway medians.</p> <p>If tree replacement plantings are demonstrated to the satisfaction of the Environmental Coordinator to be infeasible for any or all trees removed, then compensation shall be through payment into the County Tree Preservation Fund. Payment shall be made at a rate of \$325.00 per dbh inch removed but not otherwise compensated, or at the prevailing rate at the time payment into the fund is made.</p> |  |

| Impacts   | Level of Significance Before Mitigation <sup>1</sup> | Mitigation Measure  | Level of Significance After Mitigation |
|---|--|---|--|
| <b>CULTURAL RESOURCES</b>   |  |   |  |
| <p>The project is not expected to impact cultural resources. However, mitigation is recommended in the event that cultural resources are found during project construction. With mitigation as recommended, impacts to cultural resources are expected to be less than significant.</p> |  | <p><b><u>North Vineyard Greens Unit 1 (03-CZB-SVB-SPP-AHS-0099), North Vineyard Greens Unit 3 (03-RZB-SVB-SPP-AHS-0141), and Gosal Estates (03-RZB-UPP-PMR-AHS-0660)</u></b></p> <p>CR-1. Should any cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains be encountered during any development activities, work shall be suspended and the Department of Environmental Review and Assessment shall be immediately notified at (916) 874-7914.</p> <p>At that time, the Department of Environmental Review and Assessment will coordinate any necessary investigation of the find with appropriate specialists as needed. The project proponent shall be required to implement any mitigation deemed necessary for the protection of the cultural resources. In addition, pursuant to Section 5097.97 of the State Public Resources Code and Section 7050.5 of the State Health and Safety Code, in the event of the discovery of human remains, all work is to stop and the County Coroner shall be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.</p> |  |
|   | PS   |   | LS                                     |

## REQUESTS AND REQUIREMENTS OF VARIOUS AGENCIES

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### 1. Sacramento County Department of Water Resources

#### Comments Related to All 3 Maps

- a. Destroy all abandoned wells on the proposed project site in accordance with the requirements of the Sacramento County Environmental Health Division. Clearly show all abandoned/destroyed wells on the improvement plans for the project. Prior to abandoning any existing agricultural wells, applicant shall use water from agricultural wells for grading and construction.
- b. Reserve a 40-foot wide permanent easement for the Freeport Regional Water project pipeline. Permanent exclusive easement shall have a contiguous border with the future back of curb of Gerber Road. In addition, provide a temporary 110-foot wide construction easement, with a contiguous border to the permanent exclusive easement. Permanent and temporary easements shall not be separated and shall extend the entire length of the developed frontage on Gerber Road. Prior to final map recordation, the property owner shall enter into a reservation agreement with the Freeport Regional Water Authority regarding the purchase of said easement.
- c. Prior to tentative subdivision map approval, the Sacramento County Water Agency requires either fee simple title or sale agreements or reservation agreements for a water treatment plant site as identified in the most current approved North Vineyard Station Specific Plan Water Supply Master Plan. In addition, prior to final map recordation, the affected property owner, future successors or interests shall enter into an agreement with SCWA consistent with Chapter 22.50 of the Sacramento County Code and Government Code Title 7, Division 2, Article 4.
- d. The Sacramento County Water Agency (SCWA) will not issue water connection permits or sign improvement plans until adequate water supplies have been secured. In addition, the final map shall not be recorded until the SCWA has secured fee simple title to the North Vineyard Station WTP.

The following DWR comments are required project conditions, not subject to tentative map approval:

- e. Prior to the issuance of any building permits for the project, the project developer/owner shall pay Zone 40 development fees applicable at the time of building permit issuance in accordance with Sacramento County Water Agency Ordinance No. 18.



- f. Prior to the issuance of any building permits for the project, the project shall conform to the specific provisions of the Sacramento County Landscape Water Conservation Ordinance (Chapter 14.10 of the Sacramento County Code) to the satisfaction of the County Landscape/Oak Tree Coordinator.

North Vineyard Greens Unit 1 Specific Comments

- g. Please change the designation of Lot #[378] from “Future Residential” to “Future Water Treatment Site” prior to tentative subdivision map approval.
- h. Prior to tentative subdivision map approval, prepare a Water Supply Master Plan, to the satisfaction of the Sacramento County Water Agency.
- i. Project proponents, future successors or interests shall reserve a minimum 100-foot by 100-foot water well site and necessary easements to the satisfaction of the Sacramento County Water Agency (SCWA). [The well site shall be located on lots #123 & 124.] Acceptance and approval of the site shall be subject to meeting Department of Health Services (DHS) setback requirements and obtaining acceptable results from hydrogeologic evaluations (exploratory drilling). If these conditions cannot be satisfied, then an alternate site on the North Vineyard Greens Unit #1 Subdivision shall be selected and similarly evaluated. Prior to final map approval, the project proponent shall grant right-of-entry to SCWA to conduct hydrogeologic evaluations. In addition, prior to final map recordation, the property owner shall enter into an agreement with SCWA consistent with Chapter 22.50 of the Sacramento County and Government Code Title 7, Division 2, Article 4.
- j. Project proponents, future successors or interests shall reserve Lot #[378] for use as a water treatment expansion site as identified in the most current approved North Vineyard Station Specific Plan Water Supply Master Plan. In addition, prior to final map recordation, the property owner shall enter into an agreement with SCWA consistent with Chapter 22.50 of the Sacramento County Code and Government Code Title 7, Division 2, Article 4.

North Vineyard Greens Unit 3 Comments

- k. Prior to tentative subdivision map approval, prepare a Water Supply Master Plan, to the satisfaction of the Sacramento County Water Agency.

Gosal Estates Specific Comments

- l. Water supply will be provided by the Sacramento County Water Agency.
- m. Provide separate public water service with separate water meters to individual condominium units.

- n. Dedicate maintenance easements in all public and private streets over all water lines to the satisfaction of the Sacramento County Water Agency prior to Final Map approval.

## **2. County Sanitation District 1 and Sacramento Regional County Sanitation District**

### Comments Related to All 3 Maps

- a. Connection to the public sewer system shall be required to the satisfaction of CSD-1. Sacramento County Improvement Standards apply to sewer construction.
- b. Each lot shall have a separate connection to the CSD-1 sewer system.
- c. In order to obtain sewer service, construction of public sewer is expected to be required. Sewer easements may be required. Trunk sewer design and construction may be reimbursed by CSD-1 under the terms of a Reimbursement Agreement. Collector sewer design and construction may qualify for reimbursement under the terms of a Participation Agreement. Prior to initiating design of any sewer facility, contact CSD-1 for details. It will be necessary to schedule a meeting to discuss reimbursement requirements with appropriate CSD-1 staff prior to any design. Failure to strictly comply with the provisions of the CSD-1 Ordinances may jeopardize all sewer reimbursement.
- d. Sewer easements may be required. All sewer easements shall be dedicated to CSD-1 in a form approved by the District Engineer. All sewer easements shall be 20 feet in width and ensure continuous access for installation and maintenance.
- e. The trunk and collector sewer system for the project will not be accepted for maintenance and building occupancy will not be granted until the downstream sewer system serving the project is also accepted for maintenance.

### North Vineyard Greens Unit 1 Specific Comments

- f. CSD-1 shall require an approved sewer study prior to the submittal of improvement plans for plan check to CSD-1. Portions of the subject project shall flow into the BR Florin Road Trunk Shed and other portions shall flow into the BR Gerber Road Trunk Shed in accordance with the Sanitary Sewer Study for the North Vineyard Station Specific Plan prepared by MacKay & Somps Civil Engineers, Inc. and approved by CSD-1 on July 22, 2002. If the Final Map is filed before improvement plans are submitted for approval, then an approved sewer study shall be required prior to the filing and recording of the Final Map.
- g. Impact fees for CSD-1 shall be paid prior to filing and recording the Final Map or issuance of Building Permits, whichever is first.

North Vineyard Greens Unit 3 Specific Comments

- h. CSD-1 shall require an approved sewer study prior to the approval of Final Map or submittal of improvement plans for plan check to CSD-1, which ever comes first.
- i. Prior to the recordation of the Final Map, the applicant will enter into and record an agreement, in a for approved by the District Engineer and District Counsel of Sacramento Regional County Sanitation District (SRCSD), to require the property owner(s) to reserve lands for acquisition by the District to install District pipelines and facilities for public health purposes and in conformance with the District Master Plan. The District shall exercise the agreement and acquire the reserved lands within two years of the completion and acceptance of required public improvements.
- j. A Temporary Construction Easement (TCE) will be required along both sides of the Bradshaw Interceptor, which is currently under design. The width of the required TCE shall be determined by SRCSD prior to recording the agreement for the interceptor land reservation. The Final Map shall clearly show the TCE unless released by SRCSD.
- k. Impact fees for CSD-1 shall be paid prior to filing and recording the Final Map or issuance of Building Permits, which ever is first.

Gosal Estates Specific Comments

- l. CSD-1 requires their sewers to be located 10 feet from other parallel utilities (water, drain, electrical, etc.). Prior to recording of the Final Map, the applicant shall prepare a utility plan that will demonstrate that this condition is met.
- m. All structures along private drives shall have a minimum 10-foot setback so that CSD-1 can properly maintain sewer services.
- n. Private drives shall have structural street sections that meet County of Sacramento Improvement Standards. This will prevent pavement damage by CSD-1 maintenance and repair operations.
- o. The Homeowners Association By-Laws of the subject project will be required to include a provision to repair and/or replace all non-asphalt and/or enhanced surface treatments of streets and driveways damaged by CSD-1 maintenance and repair operations.
- p. Prior to the recordation of the Final Map, the applicant will enter into and record an agreement, in a for approved by the District Engineer and District Counsel of Sacramento Regional County Sanitation District (SRCSD), to require the property owner(s) to reserve lands for acquisition by the District to install District pipelines and facilities for public health purposes and in

conformance with the District Master Plan. The District shall exercise the agreement and acquire the reserved lands within two years of the completion and acceptance of required public improvements.

- q. The area of land will be 75 feet wide, near the northwest corner of the project. Additionally, Temporary Construction Easements (TCE) will be necessary along both sides of the future interceptor. The required TCE shall be 42.5 feet wide on each side of the permanent 75-foot wide interceptor easement. The Final Maps shall clearly show the TCE, and the applicant shall coordinate the areas required with SRCSD and clearly show the areas by metes and bounds on the Final Maps. The TCE shall be in effect until January 30, 2007, or completion of construction, which ever comes first.
- r. Construction of any and all improvements, including but not limited to grading, streets, utilities, houses and other structures, within the TCE shall be prohibited until such time the TCE is released by SRCSD, unless approved by the District Engineer.
- s. Walls, footings for walls, underground utilities and other above and below ground structures shall not be permitted within the lands to be reserved for the SRCSD interceptor unless approved by the District Engineer.

### **3. Sacramento Municipal Utility District**

#### Comments Related to All 3 Maps

- a. Dedicate the Landscape Corridors as a public utility easement for overhead and underground facilities and appurtenances.
- b. The owner/developer must disclose to future/potential buyer the following existing and potential 69 kV electrical facilities.

There is a proposed overhead electrical 69 kV line located along the north side of Gerber Road.

There is an existing overhead electrical 69 kV line located along Gerber Road.

#### North Vineyard Greens Unit 1 and Davis Property Specific Comments

- c. Dedicate a 12.5-foot public utility easement for overhead and underground facilities and appurtenances adjacent to all public street rights-of-way.
- d. Dedicate any private drive, ingress and egress easement, or Irrevocable Offer of Dedication and 12.5 feet adjacent thereto as a public utility easement for underground facilities and appurtenances.

- e. Label SMUD's transmission line easement as a "Restricted Building and Use Area."
- f. Prior to construction, submit grading, landscape, or any other drawings that show changes to the areas within the transmission line easement to SMUD for review.
- g. Prior to the issuance of any grading or building permits, the developer shall obtain a joint-use agreement from SMUD consenting to the proposed development within SMUD's transmission line easement.
- h. The owner/developer must disclose to future/potential buyer the following existing and potential 230 kV electrical facilities.

There is an existing overhead electrical 230 kV line located through this subdivision map.

- i. All cut, fill, and grading within SMUD's easement must be conducted in a manner so that minimum horizontal and vertical clearances are maintained in accordance with the California Public Utilities Commission General Order No. 95. Any violations shall be corrected at the owner's expense.
- j. Vehicular access must be provided to the steel towers at all times.
- k. All metal fixtures placed within the easement area must be properly grounded. A grounding plan shall be submitted to SMUD's Property Administrator for review and approval.
- l. Tree, landscaping, light standards and equipment shall not exceed 15 feet in height within the easement area.
- m. No structures or buildings are permitted within the easement area including swimming pools, spas, gazebos, wells and man-made reservoirs, lakes, or similar bodies of water.
- n. The above list is not all-inclusive and does not constitute SMUD's consent to use its transmission line easement. Such consent may be issued upon receipt, evaluation, and approval of final plans and becomes effective when signed by the owner/developer.

#### North Vineyard Greens Unit 3 Specific Comments

- o. Dedicate a 12.5-foot public utility easement for underground facilities and appurtenances adjacent to all public street rights-of-way.
- p. Dedicate any ingress and egress easement, or Irrevocable Offer of Dedication and 12.5 feet adjacent thereto as a public utility easement for underground facilities and appurtenances.

Gosal Estates Specific Comments

- q. Dedicate any private drive, ingress and egress easement, or Irrevocable Offer of Dedication and 12.5 feet adjacent thereto as a public utility easement for underground facilities and appurtenances.
- r. Dedicate the common area as a public utility easement for underground facilities and appurtenances except for those areas where structures or pool are located.

**4. Pacific Gas and Electric Company**

North Vineyard Greens Units 1 and 3 Comments

- a. PG&E operates and maintains a tower line in a 75-foot easement crossing the site. Land use is restricted within the easement. One of PG&E's concerns is for continued access to the structures with heavy equipment for maintenance and repair of the towers, insulators, and wires. Another is for adequate ground clearance from the wires as set forth in California Public Utilities Commission General Order No. 95 for the proposed streets and levees as shown on the plan. Should an infraction occur, the developer will be responsible for costs in raising the lines.
- b. A thorough review of proposed construction and uses within PG&E's easement must be made prior to any construction.
- c. Dedicate a standard 12.5-foot Public Utility Easement for underground facilities and appurtenances adjacent to all public ways, private drives and/or Irrevocable Offer of Dedication.

North Vineyard Greens Unit 3 Specific Comments

- d. The project should provide all weather access to the existing tower located within Lot E. PG&E may need to access this location with heavy equipment during the winter months. In order to avoid damage to landscape areas and tracking debris onto adjacent roadways, a paved or graveled access road to and around the tower will be required.
- e. The project should avoid placing any new trees or site lighting incidents within the easement strip. In the event such incident must occur, a 10-foot offset from the drop line of the wires must be observed. In addition to the 10-foot offset, the incidents must not exceed a maximum height of 15 feet.
- f. The project must control its excavations and digging, including spoils, in such a manner as to not decrease the ground-to-conductor clearance below pre-existing conditions. Any requirements that would diminish this vertical clearance should be reviewed and approved by PG&E.

**5. Sacramento County Sheriff's Department**

- a. Refer to Appendix PS-1 for complete comment letters.

**6. Sacramento Metropolitan Fire District**

- a. Refer to Appendix PS-2 for complete comment letter.

**7. Sacramento County Land Division and Site Improvement Review**

Park land dedication comment

- a. Prior to recordation of a final map or certificate of compliance, dedicate land or pay in lieu fees, or both, for park purposes, as required by and in accordance with the procedures and standards set forth in Chapter 22.40, Title 22 of the Sacramento County Code.

Access and Circulation comments – North Vineyard Greens Unit 1

- b. Grant the County right-of-way for Gerber Road and Waterman Road, based upon an ~~84-foot standard~~ 72-foot modified arterial (the six-foot meandering sidewalk shall be installed in an adjacent pedestrian/landscape/public utility easement)<sup>2</sup> and agree to pay for installation of public street improvements pursuant to the Sacramento County Improvement Standards on a prorated basis according to street frontage.
- c. Dedicate right-of-way for the indicated streets, and install public street improvements pursuant to the Sacramento County Improvement Standards.
- d. Portions of this tentative map north of Gerber Creek are dependent on adjacent development for access. Off-site road easements may be necessary to develop these portions of this map.
- e. Dedicate a standard 12.5-foot Public Utility Easement for underground facilities and appurtenances adjacent to all public ways, private drives and/or Irrevocable Offer of Dedication (IOD).
- f. The applicant shall annex the subject properties to the County of Sacramento, Community Facilities District 2004-5 to support the maintenance of the landscaped frontage. The applicant shall dedicate the landscaped lots with landscape improvements to the County of Sacramento. In the event the project is not able to annex, the applicant shall provide a maintenance entity with a funding source in perpetuity acceptable to the County of Sacramento.

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<sup>2</sup> Condition revised per County DOT condition to include 6-foot sidewalks within easements adjacent to roadways.

- g. Prior to recordation of a final map or certificate of compliance, dedicate land or pay in lieu fees, or both, for park purposes, as required by and in accordance with the procedures and standards set forth in Chapter 22.40, Title 22 of the Sacramento County Code.
- h. If phasing of this project is proposed, with units being divided along major streets designated Waterman Road within this tentative map, the first unit constructed will be required to build all class A improvements within it's boundary plus the landscape median and 17 feet of pavement for the lanes outside the unit.
- i. Grant the County right-of-way for Florin Road, based on a 108-foot standard and install public street improvements pursuant to the Sacramento County Improvement Standards.
- j. Provide off-site right-of-way for "L" Street and install partial improvements per 4-8 of the Improvement Standards for a 50-foot total width, and for "7" Court to a 40-foot width.
- k. Construct taper for off-site portion of "L" Street and Florin Road per 4-12 drawing in the Improvement Standards.

Access and Circulation comments – North Vineyard Greens Unit 3 Large Lot Tentative Map

- l. Prior to recordation of a final map or certificate of compliance, dedicate land or pay in lieu fees, or both, for park purposes, as required by and in accordance with the procedures and standards set forth in Chapter 22.40, Title 22 of the Sacramento County Code.
- m. The final map shall show an Irrevocable Offer of Dedication (IOD).
- n. Dedicate a standard 12.5-foot Public Utility Easement for underground facilities and appurtenances adjacent to all public ways, private drives and/or Irrevocable Offer of Dedication (IOD).
- o. Obtain off-site private road easements to serve parcels 1 and 2; or, obtain off-site road right-of-way over "1" Street to Waterman Road or Gerber Road. Either option must be complete prior to recordation.
- p. If private road option is used, record a private road maintenance agreement for all affected parcels.
- q. Construction of the private street(s) shall be a standard of 2 inches of asphaltic concrete over a minimum of 6 inches aggregate base to a 20-foot section width, including adequate turnaround facilities at the end of the road. Secure approval of a civil engineered site improvement plan from the LD&SIR Section of the Public Works Agency for construction of the private road.



Access and Circulation comments – North Vineyard Greens Unit 3 Rezone and Tentative Subdivision Map

- r. Grant the County right-of-way for Gerber Road, based on a ~~84-foot standard~~ 72-foot modified arterial (the six-foot meandering sidewalk shall be installed in an adjacent pedestrian/landscape/public utility easement)<sup>3</sup> and install public street improvements pursuant to the Sacramento County Improvement Standards.
- s. Dedicate right-of-way for the indicated streets, and install public street improvements pursuant to the Sacramento County Improvement Standards.
- t. Dedicate a standard 12.5-foot Public Utility Easement for underground facilities and appurtenances adjacent to all public ways, private drives and/or Irrevocable Offer of Dedication (IOD).
- u. Prior to recordation of a final map or certificate of compliance, dedicate land or pay in lieu fees, or both, for park purposes, as required by and in accordance with the procedures and standards set forth in Chapter 22.40, Title 22 of the Sacramento County Code.
- v. Obtain off-site road right-of-way for “1” Street from lots 68 and 69 to either Waterman Road or Gerber Road prior to recording of final map for area north of Gerber Creek.
- w. The applicant shall annex the subject properties to the County of Sacramento, Community Facilities District 2004-5 to support the maintenance of the landscaped frontage. The applicant shall dedicate the landscaped lots with landscape improvements to the County of Sacramento. In the event the project is not able to annex, the applicant shall provide a maintenance entity with a funding source in perpetuity acceptable to the County of Sacramento.

Access and Circulation comments – Gosal Estates

- x. Grant the County right-of-way for Gerber Road, based on a ~~84-foot standard~~ 72-foot modified arterial (the six-foot meandering sidewalk shall be installed in an adjacent pedestrian/landscape/public utility easement)<sup>4</sup> and install public street improvements pursuant to the Sacramento County Improvement Standards.

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<sup>3</sup> Condition revised per County DOT condition to include 6-foot sidewalks within easements adjacent to roadways.

<sup>4</sup> Condition revised per County DOT condition to include 6-foot sidewalks within easements adjacent to roadways.

- y. Dedicate a standard 12.5-foot Public Utility Easement for underground facilities and appurtenances adjacent to all public ways, private drives and/or Irrevocable Offer of Dedication (IOD).
- z. Any security gates shall comply with 16.70 of the Sacramento County Code which requires access for emergency service providers. Provide sufficient area at the entry gate to allow two cars. The geometrics of the entry design shall be approved by the Transportation Division of the Public Works Agency.
- aa. Park in lieu fees for multiple family lots shall be paid upon approval of final development plan as set forth in Section 201-04(1) of the Sacramento County Zoning Code for development plan review.

## 8. Sacramento County Department of Transportation

### Comments Related to All 3 Maps

- a. Grant the County right-of-way on Gerber Road, based on a 72-foot modified arterial (the six-foot meandering sidewalk shall be installed in an adjacent pedestrian/landscape/public utility easement) and install public street improvements pursuant to the North Vineyard Station Specific Plan, the Sacramento County Improvement Standards, and to the satisfaction of the Department of Transportation.
- b. Dedicate the landscaped lots to the County of Sacramento and provide a maintenance entity with an ongoing funding source. The maintenance entity shall be approved and found acceptable by County representatives. Annexation to a current Lighting and Landscape District or a Mello Roos Community Finance District may be possible and is the preferred course of action.
- c. Visibility easements shall be included where needed per the Sacramento County Improvement Standards and to the satisfaction of the Department of Transportation. Visibility easements will be determined at time of improvement plan submittal.

### North Vineyard Greens Unit 1 Specific Comments

- d. Grant the County right-of-way on Florin Road, based on a 96-foot modified thoroughfare (the six-foot meandering sidewalk shall be installed in an adjacent pedestrian/landscape/public utility easement) pursuant to the North Vineyard Station Specific Plan, the Sacramento County Improvement Standards, and to the satisfaction of the Department of Transportation.
- e. Dedicate additional right-of-way on Florin Road and L Way for intersection widening per the Sacramento County Improvement Standard Drawing 4-5 and to the satisfaction of the Department of Transportation. Note: A bus turnout will be required on Florin Road.

- f. Dedicate additional right-of-way on Gerber Road and 2 Street for intersection widening per the Sacramento County Improvement Standard Drawing 4-6B and to the satisfaction of the Department of Transportation. Note: A bus turnout will be required on Gerber Road.
- g. Dedicate additional right-of-way on Waterman Road and 6 Street for intersection widening per the Sacramento County Improvement Standard Drawing 4-6B and to the satisfaction of the Department of Transportation. Note: A bus turnout will be required on Waterman Road.
- h. Grant the right of direct vehicular access to the County of Sacramento along Florin Road, Gerber Road, and Waterman Road except for approved street and driveway locations to the satisfaction of the Department of Transportation.
- i. The spacing between 2 Street and the nearest proposed street to the west must be a minimum of 420 feet apart in order to accommodate two left turn pockets on Waterman Road.
- j. Show the required raised median on the Waterman Road street section.
- k. No more than 100 units with access to L Way shall be constructed until there is a second point of access.
- l. Grant the County right-of-way on Waterman Road, based on a 72-foot modified arterial (the six-foot meandering sidewalk shall be installed in an adjacent pedestrian/landscape/public utility easement) and install public street improvements pursuant to the North Vineyard Station Specific Plan, the Sacramento County Improvement Standards, and to the satisfaction of the Department of Transportation.
- m. All pedestrian access ramps must be installed/upgraded pursuant to the State of California Title 24 Code of Regulations and to the satisfaction of the Department of Transportation.
- n. Traffic control devices shall be installed where needed to the satisfaction of the Department of Transportation. Traffic control locations will be determined at time of improvement plan submittal.

North Vineyard Greens Unit 3 Specific Comments

- o. Grant the County right-of-way on Waterman Road, based on a 72-foot modified arterial (the six-foot meandering sidewalk shall be installed in an adjacent pedestrian/landscape/public utility easement) and install public street improvements pursuant to the North Vineyard Station Specific Plan, the Sacramento County Improvement Standards, and to the satisfaction of the Department of Transportation.

- p. Install Type 2 curb, gutter, and sidewalk along all open space and drainage easement areas pursuant to the County of Sacramento Improvement Standards and to the satisfaction of the Department of Transportation.
- q. The proposed public street entrance from Gerber Road shall be a minimum of 50 feet in width for a distance of 100 feet pursuant to the County of Sacramento Improvement Standards and to the satisfaction of the Department of Transportation.
- r. The “L” Street entrances (east and west) from Waterman Road shall be a minimum of 50 feet in width for a distance of 100 feet pursuant to the County of Sacramento Improvement Standards and to the satisfaction of the Department of Transportation.
- s. Provide an adequate turnaround at the west end of the proposed residential street near lots 25 and 26 pursuant to the Sacramento County Improvement Standards and to the satisfaction of the Department of Transportation.
- t. Traffic control devices shall be installed where needed to the satisfaction of the Department of Transportation. Traffic control locations will be determined at time of improvement plan submittal.

Gosal Estates Specific Comments

- u. The size, number, and location of driveways shall be to the satisfaction of the Department of Transportation. Note: Driveway widths of 45 feet shall be provided on Gerber Road.
- v. Grant the right of direct vehicular access to the County of Sacramento along Gerber Road except for the approved driveway location to the satisfaction of the Department of Transportation.
- w. Stop signs shall be installed where needed to the satisfaction of the Department of Transportation. Traffic control locations will be determined at time of improvement plan submittal.
- x. The site design does not accommodate access control gates as shown. If access control gates are to be added at any time in the future, they must be designed to the satisfaction of the Department of Transportation, the Planning and Community Development Department, the county Sanitation District 1, the Sacramento County Sheriff’s Department and the Fire Prevention Bureau of the fire district/department having jurisdiction.

**9. Sacramento Metropolitan Air Quality Management District**

- a. We recommend that all required street trees be a minimum 24-inch box size. Larger trees provide shade that reduces heat, and are also more attractive to pedestrians for short trips to parks and neighborhood facilities.

- b. If gas appliances are to be installed in the residential units, District staff recommends the use of low NOx (Nitrogen Oxides) furnaces, water heaters, and cooking facilities.
- c. We recommend that the developer install “Energy-Star” labeled roofing materials.
- d. We recommend that the project comply with SMUD Advantage (Tier II or III) energy standards.
- e. The requirements of District Rule 403 – FUGITIVE DUST will apply to any grading/clearing operations for these developments. This Rule is available at the District web site at [www.airquality.org](http://www.airquality.org).
- f. Any architectural coatings used must comply with District Rule 442 – Architectural Coatings. The developer/contractor is required to use coatings that comply with the volatile organic compound content limits specified in Rule 442.

## 10. Sacramento County Department of Water Resources

### Comments Related to All 3 Maps

- a. Provide drainage easements and install facilities pursuant to the Sacramento County Floodplain Management Ordinance, Sacramento County Water Agency Code, and Sacramento County Improvement Standards, including any fee required by the Sacramento County Water Agency Code.
- b. Offsite drainage improvements and easements shall be provided pursuant to the Sacramento County Floodplain Management Ordinance, and the Sacramento County Improvement Standards.
- c. Submit to FEMA for a Letter of Map Revision, prior to Building Permit issuance.
- d. A Conditional Letter of Map Revision, pursuant to the Sacramento County Floodplain Management Ordinance, and the Sacramento County Improvement Standards, must be approved by FEMA prior to approval of improvements.
- e. Provide a permanent concrete stamp, or other permanently applied message to the satisfaction of DWR not including paint, which reads “No Dumping-Flows to Creek” or other approved message at each storm drain inlet.
- f. The Water Agency shall compensate developers for the acquisition of land for regionally beneficial off-line peak flow and storm water quality detention basins pursuant to an approved Drainage Master Plan and the Zone 11 Drainage Impact Fee Plan.

- The Agency shall pay fair market value, hereby reserved pursuant to the California Subdivision Map Act, appraised at the date of the filing of the tentative parcel or subdivision map or use permit plus associated carrying costs. The Agency may terminate the reservation due to revised drainage master plan or disagreement of price. In no case will the compensation exceed the per acre value used in the Zone 11 Drainage Impact Fee Plan worksheet [\$100,000 per acre plus ENR inflator since 8/16/04]
  - Compensation shall be in the form of a fee credit agreement and reimbursements shall be made pursuant to the Sacramento County Water Agency Code, Section 2.60.
  - The credit amount shall be adjusted by an appropriate percentage pursuant to Section 2.55.020 of the Sacramento County Water Agency Code to account for inefficiencies of the system.
  - No payment shall be made for land acquisition for basins which only serve the needs of a single developer; such as but not limited to, a detention basin for a storm water pump plant, a basin that mitigates for floodplain reclamation.
  - No compensation shall be allowed for interim facilities.
  - No credit is allowed for basin land associated with in-fill projects where peak flow attenuation is required, in order to accommodate the limitations of the downstream conveyance, pursuant to Section 9-1 of the County Improvement Standards.
- g. Development within the North Vineyard Station Specific Plan shall implement the improvements described in the NVSSP Final Master Drainage Plan (MacKay & Soms, January 30, 1998), as amended by the NVSSP Drainage Master Plan Update and Phasing, Revised Draft (Wood Rodgers, January 2003), or any subsequent amendment or revision thereof approved by the County Water Resources Department. Such improvements shall be designed and constructed to achieve the primary objectives of the Drainage Master Plan: to provide 10-yr design storm gravity drainage service to developing areas within the Specific Plan Area; to provide 100-yr flood protection to the Specific Plan Area consistent with Sacramento County's standards; to ensure that peak 100-yr flows are not being increased at the City limits; to limit 100-yr runoff peaks and volumes to the capacity of existing Elder Creek improvements downstream of Millbrook Circle; and to provide storm water quality management facilities in compliance with the County's 2003 discharge permit requirements and to the satisfaction of the County DWR. Construction of the improvements may be phased as outlined in the approved drainage master plans and subject to the approval of the DWR, so long as the project proponent(s) provide hydrologic / hydraulic analyses which demonstrate that

the phased improvements are consistent with the objectives of the overall drainage master plans to the satisfaction of the DWR.

- h. Detailed plans for the design and construction of all proposed drainage, flood control and water quality improvements, consistent with the final master drainage plans referenced above shall be submitted to the County DWR for review and approval.
- i. Plans for the design and construction of any joint-use park/detention facilities shall also be subject to the approval of the Southgate Park and Recreation District.
- j. Development within the NVS Specific Plan area shall provide stormwater quality source and treatment measures consistent with the current edition of the City / County Guidance Manual for On-site Stormwater Quality Control Measures.
- k. Implementation of the improvements, or any phase thereof, described in the NVSSP Final Master Drainage Plan (MacKay & Soms, January 30, 1998), as amended by the NVSSP Drainage Master Plan Update and Phasing, Revised Draft (Wood Rodgers, January 2003), or any subsequent amendment or revision thereof approved by the County Water Resources Department, shall comply with the wetland mitigation plan prepared by ECORP Consulting, dated December 31, 2002 and as approved by the US Army Corps of Engineers.
- l. Implementation of the Final Master Drainage Plan and Amendment improvements, or any phase thereof, shall not occur until all necessary permits and / or agreements for the proposed improvements have been obtained from the US Army Corps of Engineers, US Fish and Wildlife Service and California Department of Fish and Game.
- m. Dedicate rights-of-way required for implementation of drainage and parkway / channel corridor improvements, consistent with the requirements of the NVSSP and within the limits of the property being re-zoned.
- n. Off-site rights-of-way necessary to construct required drainage and parkway / channel corridor improvements shall be acquired prior to recordation of any final subdivision map creating buildable lots. Sacramento County shall acquire any such right-of-way not previously acquired by Developer. Developer shall advance funding to the County for acquisition of such right-of-way, if necessary, subject to the receipt of credits and/or reimbursements as provided by the NVSSP PFFP.
- o. Development within the NVSSP area shall construct gravity pipe drainage systems described in the NVSSP Final Master Drainage Plan (MacKay & Soms, January 30, 1998), as amended by the NVSSP Drainage Master Plan Update and Phasing, Revised Draft (Wood Rodgers, January 2003), or any

subsequent amendment or revision thereof approved by the County Water Resources Department, in accordance with the most current County design standards to the satisfaction of Water Resources.

- p. Any fee required by the Sacramento County Water Agency Code shall be set at improvement plan approval, rather than any other time allowed under the vesting map provisions under the State Subdivision Map Act.

North Vineyard Greens Unit 1 Specific Comments

- q. Incorporate stormwater quality measures in conformance with applicable County ordinances & standards, and state and federal law and the North Vineyard Station Specific Plan. The area north of Gerber creek and south of the Central California Traction Railroad shall provide separate on-site stormwater quality treatment.
- r. Phase A-2 and B development within the NVSSP area shall be responsible for construction of the following drainage facilities consistent with the NVSSP Drainage Master Plan Update and Phasing and to the satisfaction of the County DWR:
- Detention Pond E26 with connecting outlet pipe (a 22 acre flood control / water quality detention pond with a total volume of 117 acre-feet and outlet pipe to Elder Creek);
  - Detention Pond E24A (a 12 acre flood control / water quality detention pond with a total volume of 101 acre-feet, all associated appurtenances - inlet and outlet structures, weirs, maintenance access, landscaping, etc.);
  - An interim 10 cfs pump station at Detention Pond E24A;
  - Gerber Creek Reach 2A(a) channel and parkway corridor construction from the upstream limits of the proposed Vineyard Creek subdivision downstream to Basin E24A.
  - Elder Creek Reach 3 off-site channel improvements from the end of existing off-site channel improvements at Millbrook Circle to the western Specific Plan boundary.
  - Elder Creek Reach 1A(a) channel and parkway corridor improvements from the western Specific Plan boundary upstream to the Community Park, connecting to Phase A-2 improvements;
  - Gerber Creek Reach 2A(a) channel and parkway corridor improvements from the confluence with Elder Creek upstream to Basin E24A, connecting to Phase A-2 improvements;



- Gerber Creek Reach 2A(b) channel and parkway improvements from the limits of Phase A-2 improvements at Vineyard Creek subdivision boundary upstream to the CCTCRR;
- Gerber Creek crossings at Passalis Lane (east and west).
- It is important to note that the facilities listed above offer flood and water quality mitigation to all of the developing lands combined within Phase A-2 areas, subsequent to Phase A-1 facilities having been constructed. Should the various properties within Phases A-2 and B wish to develop independent from one another ("sub-phase), hydrologic and hydraulic studies will need to be submitted to the DWR by the subject project proponent which demonstrate the extent and scope of required drainage facilities necessary to mitigate said project's drainage impacts consistent with the objectives of the overall drainage master plans to the satisfaction of the DWR.
- Elder Creek Reach 1A(b) channel and parkway corridor from the Community Park boundary to Florin Road;
- Off-site Elder Creek Reach 1B upstream of Florin Road;
- An upgraded / improved CCTC RR crossing of Elder Creek;

North Vineyard Greens Unit 3 Specific Comments

- s. Incorporate stormwater quality measures in conformance with applicable County ordinances & standards, and state and federal law and the North Vineyard Station Specific Plan. The area north of Gerber creek shall provide separate on-site stormwater quality treatment.
- t. Phases B and D development within the NVS SP area shall be responsible for construction of the following drainage facilities consistent with the NVSSP Drainage Master Plan Update and Phasing and to the satisfaction of the County DWR:
  - Detention Pond E24A (a 12 acre flood control / water quality detention pond with a total volume of 101 acre-feet, all associated appurtenances - inlet and outlet structures, weirs, maintenance access, landscaping, etc.);
  - An interim 10 cfs pump station at Detention Pond E24A;
  - Gerber Creek Reach 2A(a) channel and parkway corridor construction from the upstream limits of the proposed Vineyard Creek subdivision downstream to Basin E24A.

- Elder Creek Reach 3 off-site channel improvements from the end of existing off-site channel improvements at Millbrook Circle to the western Specific Plan boundary.
- Elder Creek Reach 1A(a) channel and parkway corridor improvements from the western Specific Plan boundary upstream to the Community Park, connecting to Phase A-2 improvements;
- Gerber Creek Reach 2A(a) channel and parkway corridor improvements from the confluence with Elder Creek upstream to Basin E24A, connecting to Phase A-2 improvements;
- Gerber Creek Reach 2A(b) channel and parkway improvements from the limits of Phase A-2 improvements at Vineyard Creek subdivision boundary upstream to the CCTCRR;
- Gerber Creek crossings at Passalis Lane (east and west).
- It is important to note that the facilities listed above offer flood and water quality mitigation to all of the developing lands combined within Phase A-2 areas, subsequent to Phase A-1 facilities having been constructed. Should the various properties within Phases A-2 and B wish to develop independent from one another (“sub-phase), hydrologic and hydraulic studies will need to be submitted to the DWR by the subject project proponent which demonstrate the extent and scope of required drainage facilities necessary to mitigate said project’s drainage impacts consistent with the objectives of the overall drainage master plans to the satisfaction of the DWR.

#### Gosal Estates Specific Comments

- u. Incorporate stormwater quality measures in conformance with applicable County ordinances & standards, and state and federal law and the North Vineyard Station Specific Plan. The area north of Gerber Creek shall provide separate on-site stormwater quality treatment.
- v. Phases B and D development within the NVSSP area shall be responsible for construction of the following drainage facilities consistent with the NVSSP Drainage Master Plan Update and Phasing and to the satisfaction of the County DWR:
  - Detention Pond E24A (a 12 acre flood control / water quality detention pond with a total volume of 101 acre-feet, all associated appurtenances - inlet and outlet structures, weirs, maintenance access, landscaping, etc.);
  - An interim 10 cfs pump station at Detention Pond E24A;

- Gerber Creek Reach 2A(a) channel and parkway corridor construction from the upstream limits of the proposed Vineyard Creek subdivision downstream to Basin E24A.
- Elder Creek Reach 3 off-site channel improvements from the end of existing off-site channel improvements at Millbrook Circle to the western Specific Plan boundary.
- Elder Creek Reach 1A(a) channel and parkway corridor improvements from the western Specific Plan boundary upstream to the Community Park, connecting to Phase A-2 improvements;
- Gerber Creek Reach 2A(a) channel and parkway corridor improvements from the confluence with Elder Creek upstream to Basin E24A, connecting to Phase A-2 improvements;
- Gerber Creek Reach 2A(b) channel and parkway improvements from the limits of Phase A-2 improvements at Vineyard Creek subdivision boundary upstream to the CCTCRR;
- Gerber Creek crossings at Passalis Lane (east and west).
- It is important to note that the facilities listed above offer flood and water quality mitigation to all of the developing lands combined within Phase A-2 areas, subsequent to Phase A-1 facilities having been constructed. Should the various properties within Phases A-2 and B wish to develop independent from one another (“sub-phase), hydrologic and hydraulic studies will need to be submitted to the DWR by the subject project proponent which demonstrate the extent and scope of required drainage facilities necessary to mitigate said project’s drainage impacts consistent with the objectives of the overall drainage master plans to the satisfaction of the DWR.

## MITIGATION MONITORING AND REPORTING PROGRAM

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Comply with the Mitigation Monitoring and Reporting Program (MMRP) for this project as follows:

1. The applicant shall comply with the MMRP for this project, including the payment of 100% of the Department of Environmental Review and Assessment staff costs, and the costs of any technical consultant services incurred during implementation of the MMRP. The initial estimate of these costs is \$ . If the initial estimate exceeds the actual monitoring costs, the balance shall be

refunded to the applicant, and if the actual monitoring costs exceed the initial estimate, the applicant shall be responsible to pay the additional amount.

2. Until the MMRP has been recorded and the estimated MMRP fee has been paid, no final parcel map or final subdivision map for the subject property shall be approved; and no encroachment, grading, building, sewer connection, water connection or occupancy permit from Sacramento County shall be approved.

## 2 PROJECT DESCRIPTION

### INTRODUCTION

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This Draft Supplemental EIR (DSEIR) consists of four applications made to the Sacramento County Planning Department for development of parcels within the North Vineyard Station Specific Plan (NVSSP) area. The four development applications are: North Vineyard Greens Unit 1 (Control number: 03-CZB-SVB-SPP-AHS-0099); North Vineyard Greens Unit 3 (Control number: 03-RZB-SVB-SPP-AHS-0141); Gosal Estates (Control number: 03-RZB-UPP-PMR-AHS-0660); and Davis Property (Control number: 03-PMR-0214). The detailed entitlement requests of each of the four applications are listed below in the "Project Proposal" section of this chapter. For the purposes of this DSEIR, the four development applications will be collectively referred to as the Project.

The DSEIR is supplemental to the North Vineyard Station Specific Plan Final Environmental Impact Report (February 1998) which addresses the urban development of the community in which the Project is located. The DSEIR will address site specific issues not covered in the NVSSP FEIR and defer to the conclusions of the FEIR where applicable. A more recent Supplemental Environmental Impact Report was prepared for the North Vineyard Station Specific Plan Amendment, Financing Plan, Water Treatment Facilities, Vineyard Point Subdivision, and Vineyard Creek Subdivision (FSEIR), and was finalized in October 2004. This DSEIR will reference the 2004 FSEIR where analyses supersede the original 1998 NVSSP FEIR.

### BACKGROUND

The North Vineyard Station Specific Plan (County Control Number: 93-SFB-0238) Final Environmental Impact Report (FEIR) was certified by the Board of Supervisors on August 12, 1998. The Board approved the General Plan Amendment and the NVSSP on November 4, 1998. The NVSSP planning area is located in the south-central unincorporated area of Sacramento County, at the western edge of the Vineyard community. The NVSSP boundaries are Florin Road on the north, Vineyard Road on the east, Gerber Road on the south, and approximately Elder Creek on the west. The Specific Plan area encompasses 1,596± acres of the Vineyard Community Planning Area.

The FEIR found that the North Vineyard Station Specific Plan would result in significant and unavoidable impacts associated with traffic and circulation, traffic noise to existing receptors, cumulative loss of wildlife habitats, and cumulative ground water decline (interim impact). Significant impacts which could be avoided by recommended mitigation measures were associated with land use, short-term (construction-related) air quality, traffic noise to future development, hydrology and flooding, water supply (long-term), biological resources, cultural resources, and hazardous materials. Impacts

associated with public services and sewer service were found to be less than significant.

Approximately 72% of the NVSSP area is dedicated for residential use and the remaining 18% is dedicated for commercial, open space, and public facilities. The plan focuses the majority of the commercial, business/professional, and higher density residential areas in the central portion of the plan area, on either side of Bradshaw Road. Overall, the NVSSP includes 6,063 residential dwelling units and 279± acres of parks and open space. The proposed North Vineyard Greens Unit 1, Unit 3, and Gosal Estates project site is located in the western half of the NVSSP area, north of Gerber Road, south of Florin Road, on each side of the Central California Traction Railroad, approximately 4,000 feet west of Bradshaw Road and approximately 2,000 feet east of Elk Grove-Florin Road. The project site makes up about 13% of the total Plan area.

A Final Supplemental Environmental Impact Report (FSEIR) was prepared for the North Vineyard Station Specific Plan Amendment, Financing Plan, and Water Treatment Facilities, as well as the Vineyard Point and Vineyard Creek subdivisions located within the NVSSP area (County Control Numbers: 03-CPB-0082, 02-PWE-0532, 04-PWE-0144, 02-RZB-SDB-SVB-0293, AND 03-RZB-SVB-0385). The FSEIR was certified by the Board of Supervisors on November 10, 2004. The FSEIR evaluated the project-specific impacts of the Vineyard Point and Vineyard Creek subdivisions, located adjacent to properties of the proposed North Vineyard Greens Unit 1 and 3 projects. The FSEIR also evaluated impacts related to public facilities financing and water treatment, which are issues relevant to the entire NVSSP area. Project-related impacts associated with air quality were identified as significant and unavoidable. Impacts related to traffic and circulation, noise, biological resources, and cultural resources were found to be potentially significant, but could be reduced to a less than significant level through inclusion of recommended mitigation measures. Impacts associated with land use, public services, public facilities financing, water supply drainage and hydrology, and sewer service were considered less than significant.

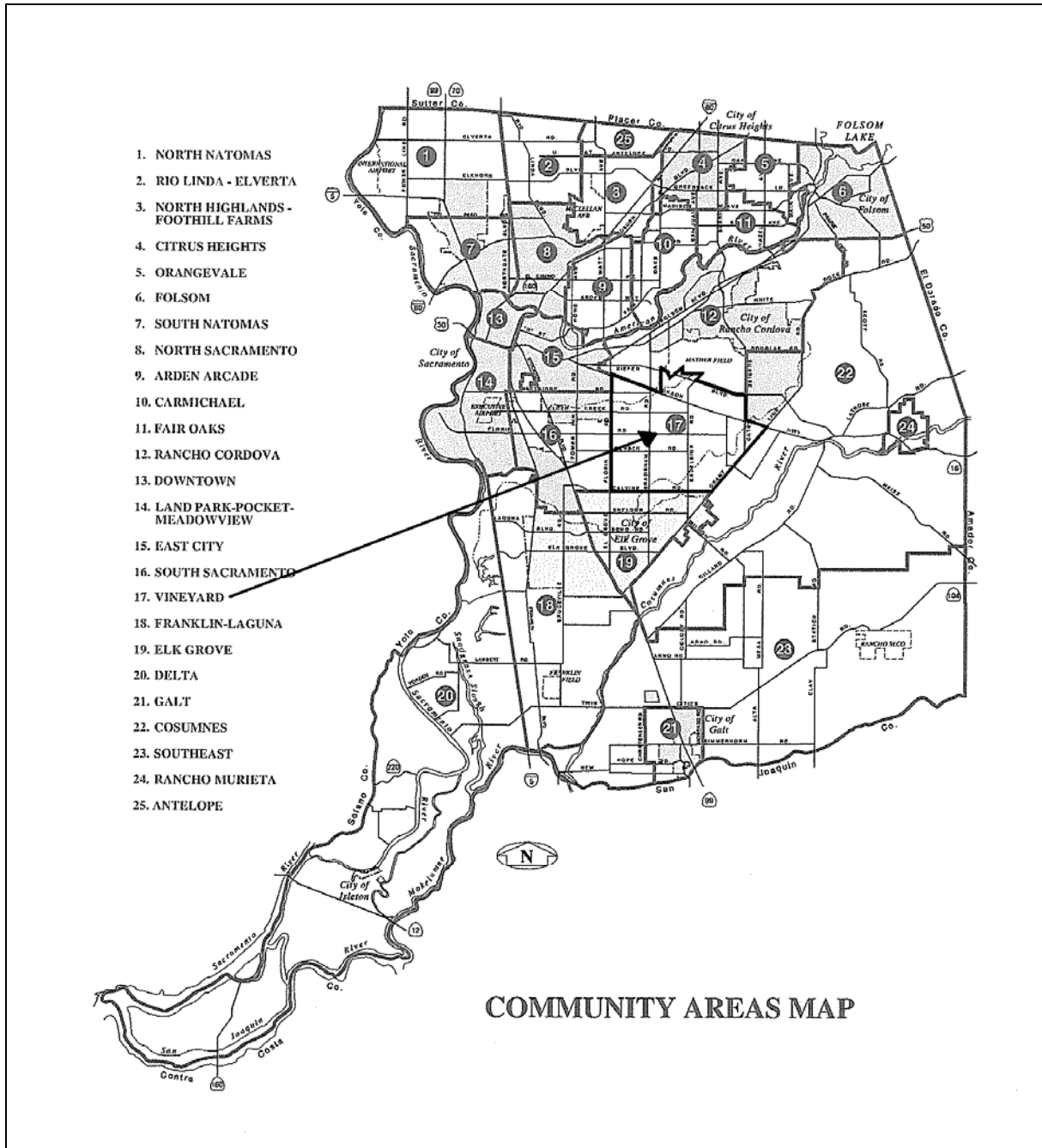
## PROJECT LOCATION

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The project site is located within the North Vineyard Station Specific Plan (NVSSP) Area. The NVSSP planning area is located in the south-central unincorporated area of Sacramento County, at the western edge of the Vineyard Community (Plate PD-1, Regional Location). The project site is located in the western half of the NVSSP area, north of Gerber Road, south of Florin Road, on each side of the Central California Traction Railroad, approximately 4,000 feet west of Bradshaw Road and approximately 2,000 feet east of Elk Grove-Florin Road. The site is located within Sections 5 and 6 of Township 7 North, Range 6 East, Mt. Diablo baseline and meridian.

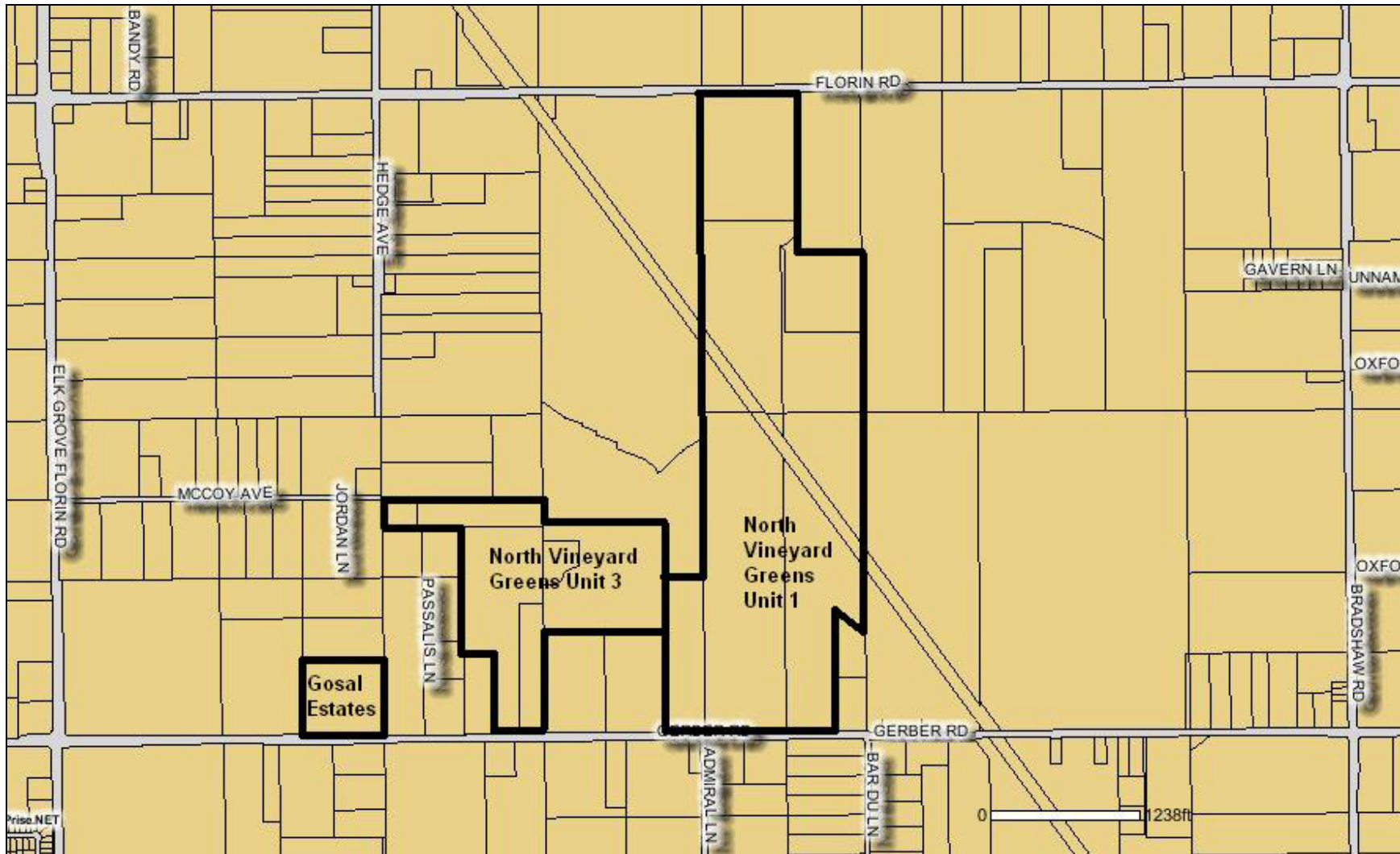
The project area consists of 14 contiguous parcels and one separate parcel for a total of 206.3 acres. The project encompasses three separate proposed subdivisions: North Vineyard Greens Unit 1 (the Davis property is located within the North Vineyard Greens

**Plate PD-1. Vineyard Community Location**



Unit 1 boundaries), North Vineyard Greens Unit 3, and Gosal Estates (Plate PD-2, Individual Subdivision Application Sites). The Sacramento County Assessor's parcel numbers for all the properties in the proposed project are: 065-0080-027, 029, 057, 064, 080, and 090; 066-0070-020, 043, 044, 045, and 046; 066-0080-001, 002, 003, and 016.

Plate PD-2. North Vineyard Greens Unit 1, Unit 3, and Gosal Estates Subdivision Locations





PROJECT PROPONENTS

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**Owners:**

**North Vineyard Greens #1**

1992 Munoz Revocable Trust  
1516 Sherwood Avenue  
Sacramento, CA 95822

Filomena H. Togonon  
9351 Gerber Road  
Sacramento, CA 95829

**North Vineyard Greens #3**

Charles and Linda Galvez  
9171 Gerber Road  
Sacramento, CA 95829

Roger and Nadine Simmons  
9100 McCoy Avenue  
Sacramento, CA 95829

Ezra Properties  
10787 Milhous Dr.  
Nevada City, CA 95959

**Gosal Estates**

Gurmukh Gosal and KGD Trust  
720 Howe Avenue, #103  
Sacramento, CA 95825

**Davis Property**

Donald R. and Rose A. Davis Family Trust  
9307 Gerber Road  
Sacramento, CA 958290

**Applicants:**

**North Vineyard Greens #1  
North Vineyard Greens #3  
Davis Property**

North Vineyard Greens, GP  
Attn: Peter Daru  
720 Howe Avenue, #103  
Sacramento, CA 95825

**Gosal Estates**

Gurmukh Gosal and KGD Trust  
720 Howe Avenue, #103  
Sacramento, CA 95825

**Engineer:**

**All Projects**

Mackay and Soms  
1771 Tribute Road, #E  
Sacramento, CA 95815

ENVIRONMENTAL SETTING

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**NORTH VINEYARD GREENS UNIT 1 & DAVIS PROPERTY**

The North Vineyard Greens Unit 1 site consists of approximately 146.7± gross acres of land located in the Vineyard community on the north side of Gerber Road and the south

side of Florin Road (refer to Plate PD-2). The project site extends from Gerber Road to Florin Road and is bisected by the Central California Traction Railroad (CCTR). The Davis Property is a 36± acre parcel that is included in the North Vineyard Greens Unit 1 application. The North Vineyard Greens Unit 1 site is comprised of ten contiguous parcels. The project site parcels, existing zoning, acreage, and existing/prior uses are listed in Table 3-1.

**Table 2-1. North Vineyard Greens Unit 1 Existing Property Information**

| <b>APN</b>   | <b>Zone</b>     | <b>Size<br/>(net Ac.)</b> | <b>Existing/Prior Use</b> |
|--------------|-----------------|---------------------------|---------------------------|
| 065-0080-029 | AG-20, AG-20(F) | 10.0                      | agricultural, residential |
| 066-0070-020 | AR-10           | 2.6                       | agricultural/pasture      |
| 066-0070-043 | AR-10, AR-10(F) | 19.0                      | agricultural, greenhouses |
| 066-0070-044 | AR-10, AR-10(F) | 19.4                      | agricultural/pasture      |
| 066-0070-045 | AR-10           | 10.1                      | agricultural/pasture      |
| 066-0070-046 | AR-10           | 9.9                       | nursery, greenhouses      |
| 066-0080-001 | AG-20, AG-20(F) | 35.5                      | agricultural, residential |
| 066-0080-002 | AG-20           | 0.1                       | agricultural/pasture      |
| 066-0080-003 | AG-20           | 10.2                      | agricultural/pasture      |
| 066-0080-016 | AG-20, AG-20(F) | 19.6                      | agricultural/pasture      |

The 146.7 gross acre North Vineyard Greens Unit 1 site has only two existing residences. Other development on the site includes accessory structures associated with existing residences and greenhouses. Gerber Creek runs through the site on parcels 065-0080-029, 066-0080-001, and 066-0080-016. The topography of the site is generally flat with slight undulations in slope. Site elevations range from approximately 46 to 54 feet above mean sea level (msl).

Currently, the site is predominantly vegetated with non-native annual grasses and weeds and a few trees, mostly along Gerber Creek and around the residential development at the south end of the site. Project site trees include non-native ornamentals and a few native oak and northern California black walnut trees. Gerber Creek on the project site has been mapped as a 1.189-acre seasonal creek and is largely unvegetated due to its depth and the scouring effects of flowing water. Other jurisdictional wetlands on the project site include 0.147 acre of vernal pools, 0.974 acre of seasonal marsh, and 1.862 acres of seasonal wetlands. Non-jurisdictional wetlands include a stock pond and irrigation canals.

## NORTH VINEYARD GREENS UNIT 3

The North Vineyard Greens Unit 3 site consists of approximately 49.4± gross acres of land located in the Vineyard community on the north side of Gerber Road (refer to Plate PD-2). The project site extends from Gerber Road to beyond Gerber Creek. The North Vineyard Greens Unit 3 site is comprised of seven contiguous parcels. The project site parcels, existing zoning, acreage, and existing/prior uses are listed in Table 3-2.

**Table 2-2. North Vineyard Greens Unit 3 Existing Property Information**

| <b>APN</b>   | <b>Zone</b>     | <b>Size<br/>(net Ac.)</b> | <b>Existing/Prior Use</b>            |
|--------------|-----------------|---------------------------|--------------------------------------|
| 065-0080-064 | AG-20, AG-20(F) | 4.8                       | agricultural/pasture, residential    |
| 065-0080-092 | AR-10, AR-10(F) | 2.0                       | residential (existing lot to remain) |
| 065-0080-093 | AR-10, AR-10(F) | 18.1                      | agricultural/pasture                 |
| 065-0080-094 | AG-20, AG-20(F) | 0.1                       | small/irregular lot, no use          |
| 065-0080-095 | AG-20, AG-20(F) | 17.4                      | agricultural/pasture, residential    |
| 065-0080-096 | AR-10           | 5.2                       | agricultural/pasture                 |
| 065-0080-097 | AR-10           | 1.5                       | residential (existing lot to remain) |

Two of the parcels in the North Vineyard Greens Unit 3 project area will not be changed by the proposed development. Parcels 065-0080-092 and 065-0080-097 will remain as is, with the existing residences. The existing residence on parcel 065-0080-064 will also remain post-development, but the lot will be reduced to 1.2± acres around the home. There is one other existing residence on the North Vineyard Greens Unit 3 site on parcel 065-0080-095. This home will be removed as part of the project. Outside of the existing residences, the majority of the project site is undeveloped. Gerber Creek runs through the central portion of the site on parcels 065-0080-064, 092, 093 and 095. The topography of the site is generally flat with slight undulations in slope. Site elevations range from approximately 46 to 52 feet msl.

Currently, the site is predominantly vegetated with non-native annual grasses and weeds and a few trees, mostly around the existing residential development and near Gerber Creek. Gerber Creek on the project site has been mapped as a 1.006-acre seasonal creek and is largely unvegetated due to its depth and the scouring effects of flowing water. Other wetlands on the project site include scattered seasonal wetlands totaling 0.440 acre. Project site trees include non-native ornamentals and a few native oak and northern California black walnut trees.

## GOSAL ESTATES

The Gosal Estates site is a 10.2 gross acres parcel (APN: 065-0080-057) located in the Vineyard community on the north side of Gerber Road between Elk Grove-Florin Road to the west and the Central California Traction Railroad to the east (refer to Plate PD-2).

The Gosal Estates parcel is isolated from the North Vineyard Greens Units 1 and 3 parcels. A single building is located on the site, believed to be a garage for a residence which has been removed from the site. A gravel driveway runs along the west side of the parcel providing access to this parcel and the two parcels to the north with existing residences. The topography of the site is flat.

Currently, the site is vegetated primarily with non-native annual grasses and weeds. Trees are located on the south side of the project site along Gerber Road, on the west side of the site, and around the existing garage. Project site trees include native northern California black walnut trees and non-native ornamentals.

## SURROUNDING LAND USES

Land use surrounding the eighteen Project site parcels is primarily agricultural and agricultural-residential in all directions, with the exception of the “Champions Golf Links” golf course adjacent to the west side of the Gosal Estates site. The Central California Traction Railroad (CCTR) traverses the Project site in a northwest-southeast direction and the northern and southern extents of the Project site are adjacent to Florin Road and Gerber Road, respectively. Existing land use zones surrounding the Project site include agricultural and agricultural-residential zones (AR-2, AR-5, AR-10, and AG-20) and industrial zones (M-1, M-2 and IR-Industrial Reserve) (Plate PD-3, Project Area Existing Zoning). The nearest schools to the Project site are Fite Elementary School (1.1 miles southeast) and Merryhill Country Elementary School (1.6 miles northwest). Nearby parks include Churchill Downs Community Park (1 mile south), Southwoods Park (1 mile southwest), Sunrise Florin Park (1.1 miles northwest), and Olde Florintown Park (1.8 miles northwest). In addition to the Champions Golf Links, the Bradshaw Ranch Golf Course is located 0.5 mile east of the Project on Bradshaw Road, and the Wildhawk Golf Club is located 1.8 miles east on Gerber Road at Vineyard Road.

The Project site is part of the North Vineyard Station Specific Plan (NVSSP) area. The future land use of the surrounding area, including the Project site and according to the NVSSP, includes 6,000± dwelling unit residential land use with supporting commercial, business professional, park, school, and open space uses in the specific plan area. The NVSSP land use plan (Plate PD-4, North Vineyard Station Land Use Diagram) includes ten parks totaling 66.8 acres, a 19.8-acre golf course, and two school sites totaling 21.9 acres.

Plate PD-3. Existing Project Area Zoning

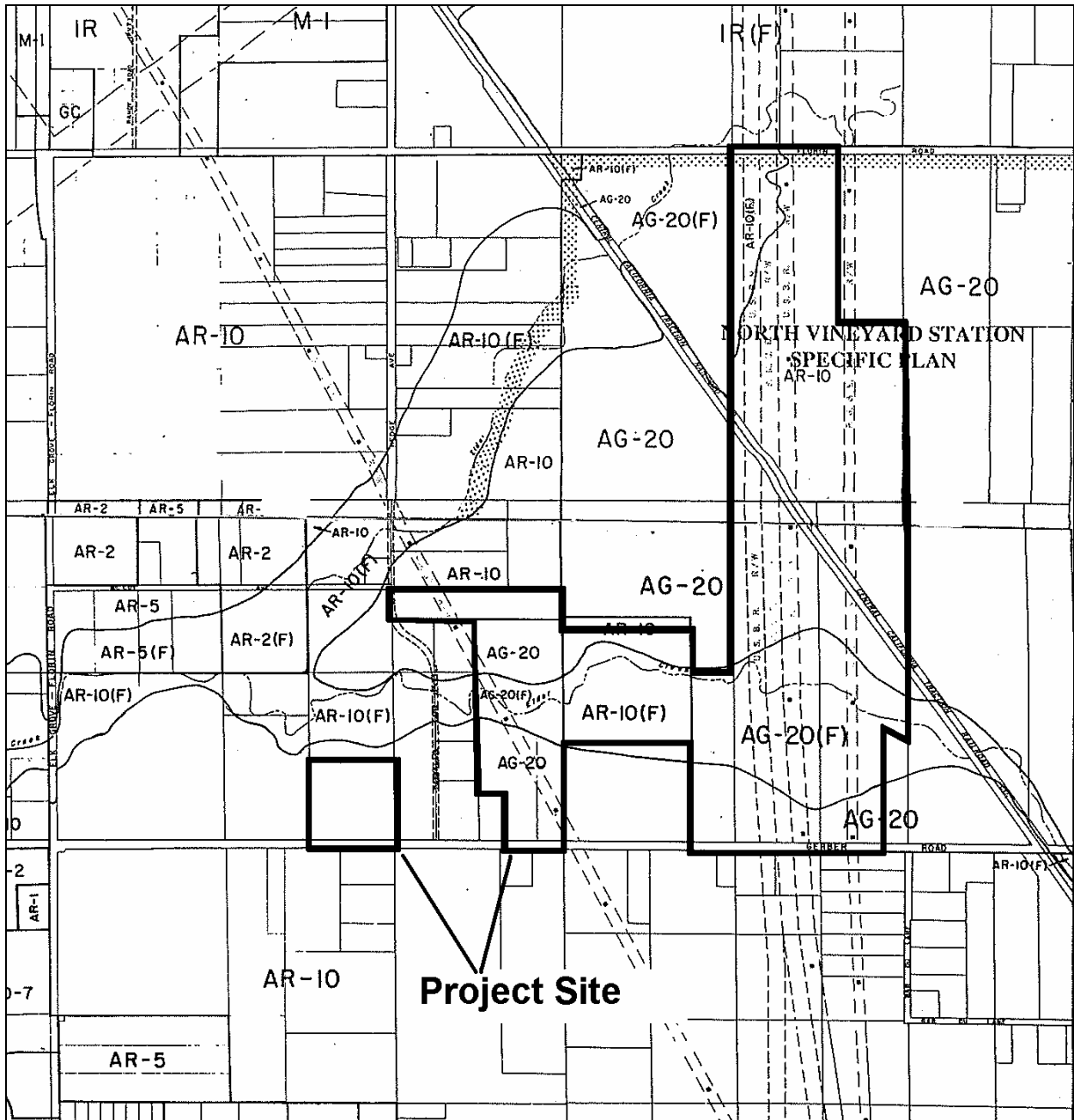
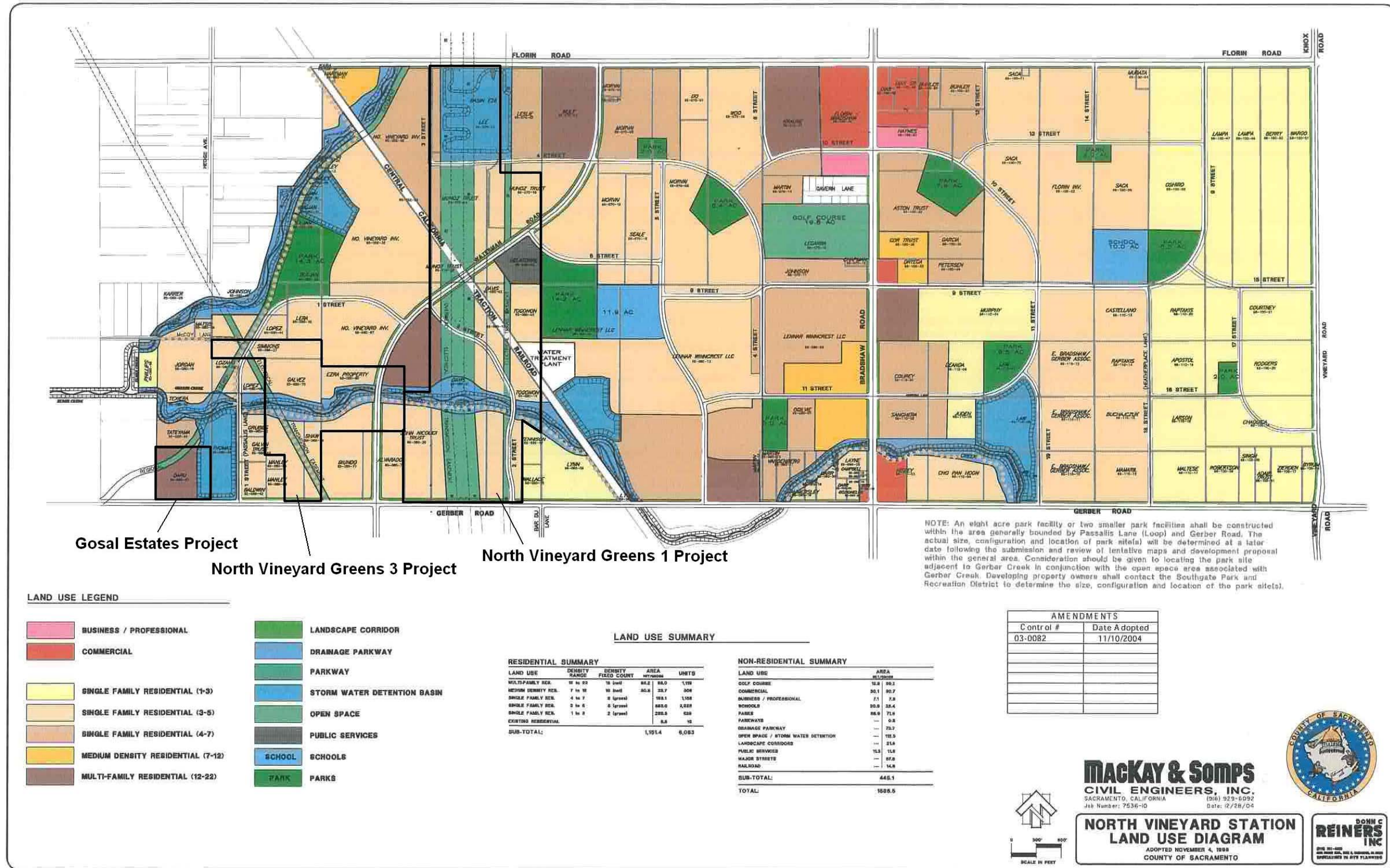


Plate PD-4. North Vineyard Station Specific Plan



## PROJECT PROPOSAL

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### REQUESTED ENTITLEMENTS

#### **NORTH VINEYARD GREENS UNIT 1 (03-CZB-SVB-SPP-AHS-0099)**

1. An **Amendment to the North Vineyard Specific Plan** for approximately five (5) acres from Public Services to Single-Family Residential Three (3) to Five (5) units per acre (SFR 3-5); and to amend approximately 0.8 acres from Stormwater Detention (SWD) to SFR 3-5.
2. A **Rezone** of approximately 146.7 acres from AR-10 agricultural-residential (53.9 acres), AR-10(F) agricultural-residential flood combining (10.9 acres), AG-20 permanent agricultural intensive (62.8 acres), and AG-20 (F) permanent agricultural-residential intensive flood combining (19.1 acres) to RD-5 (76.9 acres), RD-7 (5.4 acres), RD-20 residential (3.0 acres), and O recreation (61.4 acres).
3. A **Vesting Tentative Subdivision Map** to divide approximately 146.7 acres into 15 parcels.
4. A **Vesting Tentative Subdivision Map** to divide the same approximately 146.7 acres into 376 single-family residential lots, one future residential lot, two future multiple-family residential lots, and several miscellaneous public/quasi-public parcels.
5. A **Special Development Permit** to reduce the minimum 20-foot front yard setback for single-family residences to approximately 15 feet (note: garages will remain at 20 feet), and to allow porches to be as close as 12.5 feet from street.
6. An **Affordable Housing Plan** consisting of on-site dedication and payment of a fee.

#### **NORTH VINEYARD GREENS UNIT 3 (03-RZB-SVB-SPP-AHS-0141)**

1. A **Rezone** of 49.4 acres from AR-10 (9.3 acres), AR-10(F) (9.8 acres), AG-20 (25.2 acres), and AG-20(F) (5.1 acres) to RD-5 residential (37.3 acres), RD-20 residential (2.1 acres), and O recreational (10.0 acres).
2. A **Vesting Tentative Subdivision Map** to divide said 49.4 acres into 138 single-family residential lots, one multiple-family residential lot, and 16 miscellaneous public and quasi-public parcels.
3. A **Vesting Tentative Subdivision Map** to divide said 49.4 acres into 11 large parcels.

4. A **Special Development Permit** to allow habitable portions of homes and front porches to be closer than 20 feet from the public street right-of-way.
5. An **Affordable Housing Plan** consisting of on-site dedication and payment of fees.

#### **GOSAL ESTATES (02-RZB-UPP-PMR-AHS-0660)**

1. A **Rezone** of approximately 10.2 acres from AR-10 agricultural-residential to RD-20 multiple-family residential (7.6 acres) and O recreation (2.6 acres).
2. A **Use Permit** to allow a condominium complex.
3. A **Tentative Parcel Map** to divide the property into 2 lots.
4. An **Affordable Housing Plan** consisting of on-site dedication and payment of fees.
5. An **Abandonment** of a 30-foot wide Irrevocable Offer of Dedication (IOD) along the west side of the property.

#### **DAVIS PROPERTY PARCEL MAP (03-PMR-0214)**

A **Tentative Parcel Map** to create two lots for future residential subdivision development.

### PROJECT FEATURES

The Project includes the North Vineyard Greens Unit 1 subdivision, the North Vineyard Greens Unit 3 subdivision, and the Gosal Estates subdivision. In all, the proposed Project will provide up to 527 single-family residential lots and up to 222 multiple-family dwelling units. Table 3-3 lists the proposed number of lots, density, and maximum number of dwelling units for each subdivision.

In addition to the residential lots listed in Table 3-3, the proposed Project includes 46 public streets, 21 landscaped corridors/lots, 11 open space lots, and 5 public service/utility lots. The proposed streets provide access within the site and to the site from existing and proposed off-site roads. Waterman Road is a major arterial road proposed through both the North Vineyard Greens Unit 1 and Unit 3 subdivisions, from Gerber Road to Florin Road. Landscaped corridors are proposed throughout the subdivisions at locations between residential lots and major street or railroad rights-of-way. The majority of the proposed open space lots are located around Gerber Creek and under the overhead electric transmission lines that traverse the North Vineyard Greens Unit 1 site from Florin Road to Gerber Road. One open space lot at the north end of the North Vineyard Greens Unit 1 site is designated for a County storm water detention basin. Another storm water detention basin will occupy the eastern 2.6± acres of the Gosal Estates site and extend onto adjacent properties to the north and



east. The five public service/utility lots are dedicated for PG&E (3 lots), a sewer line easement, and a water quality basin.

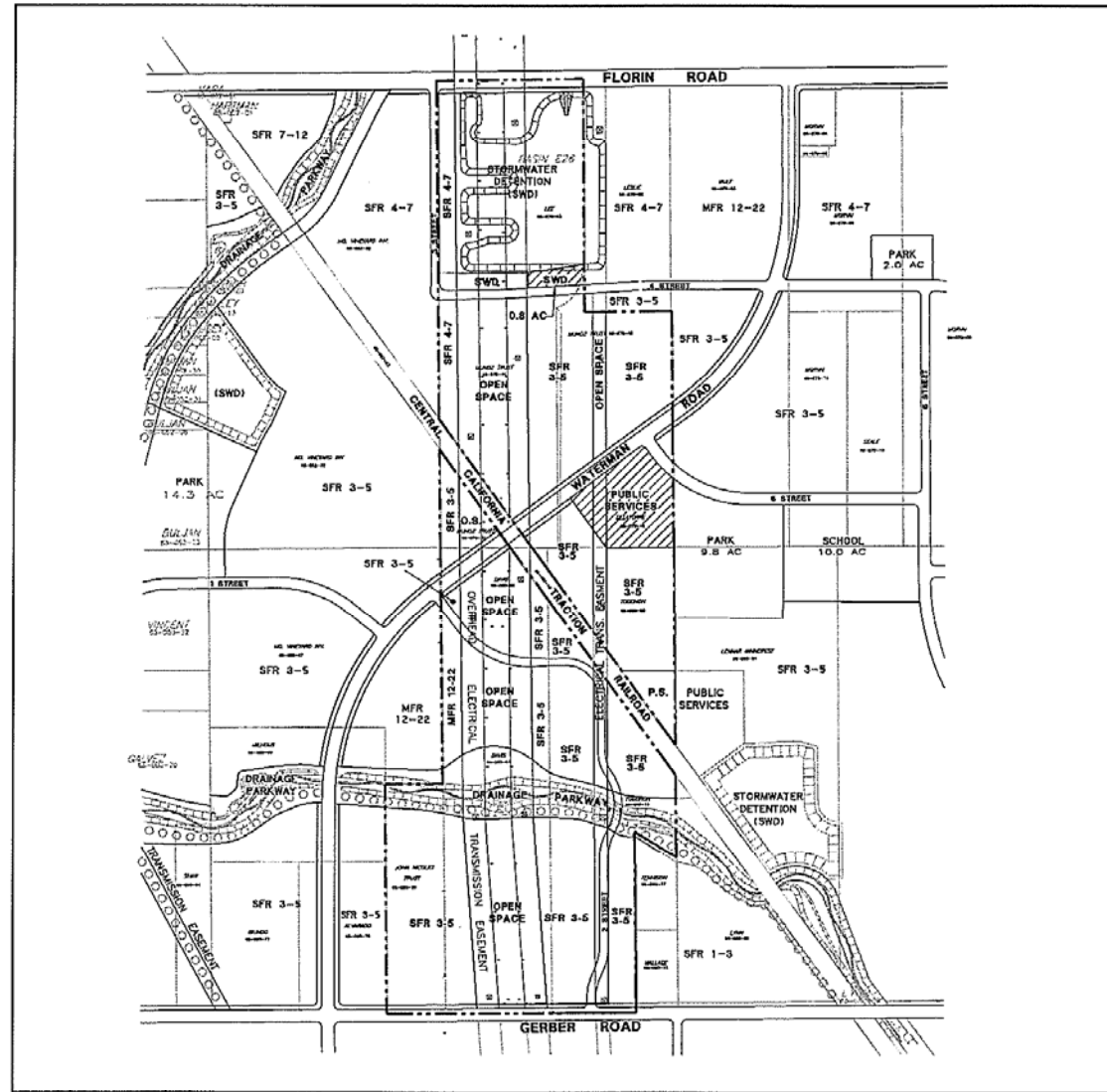
**Table 2-3. Proposed Number of Residential Lots and Dwelling Units**

| <b>Subdivision</b>           | <b>Proposed Lot Numbers</b> | <b>Description</b>                          | <b>Density</b> | <b># Dwelling Units</b> |
|------------------------------|-----------------------------|---|----------------|-------------------------|
| North Vineyard Greens Unit 1 | 1-377                       | single-family                               | RD-5, RD-7     | 377                     |
|                              | 378-379                     | future residential lots (1.5± ac., 0.3 ac.) | RD-5           | 8 <sup>1</sup>          |
|                              | 380                         | future multi-family lot (2.2 ac.)           | RD-20          | 44 <sup>1</sup>         |
| North Vineyard Greens Unit 3 | 1-138                       | single-family                               | RD-5           | 138                     |
|                              | 139, 141, 143               | existing single-family                      | RD-5           | 3                       |
|                              | 140                         | future residential lot (0.3± ac.)           | RD-5           | 1                       |
|                              | 142                         | multi-family (2.0± ac.)                     | RD-20          | 40 <sup>1</sup>         |
| Gosal Estates                | A                           | multi-family (6.9± ac.)                     | RD-20          | 138 <sup>1</sup>        |
|                              |                             |   | <b>Total</b>   | <b>749<sup>1</sup></b>  |

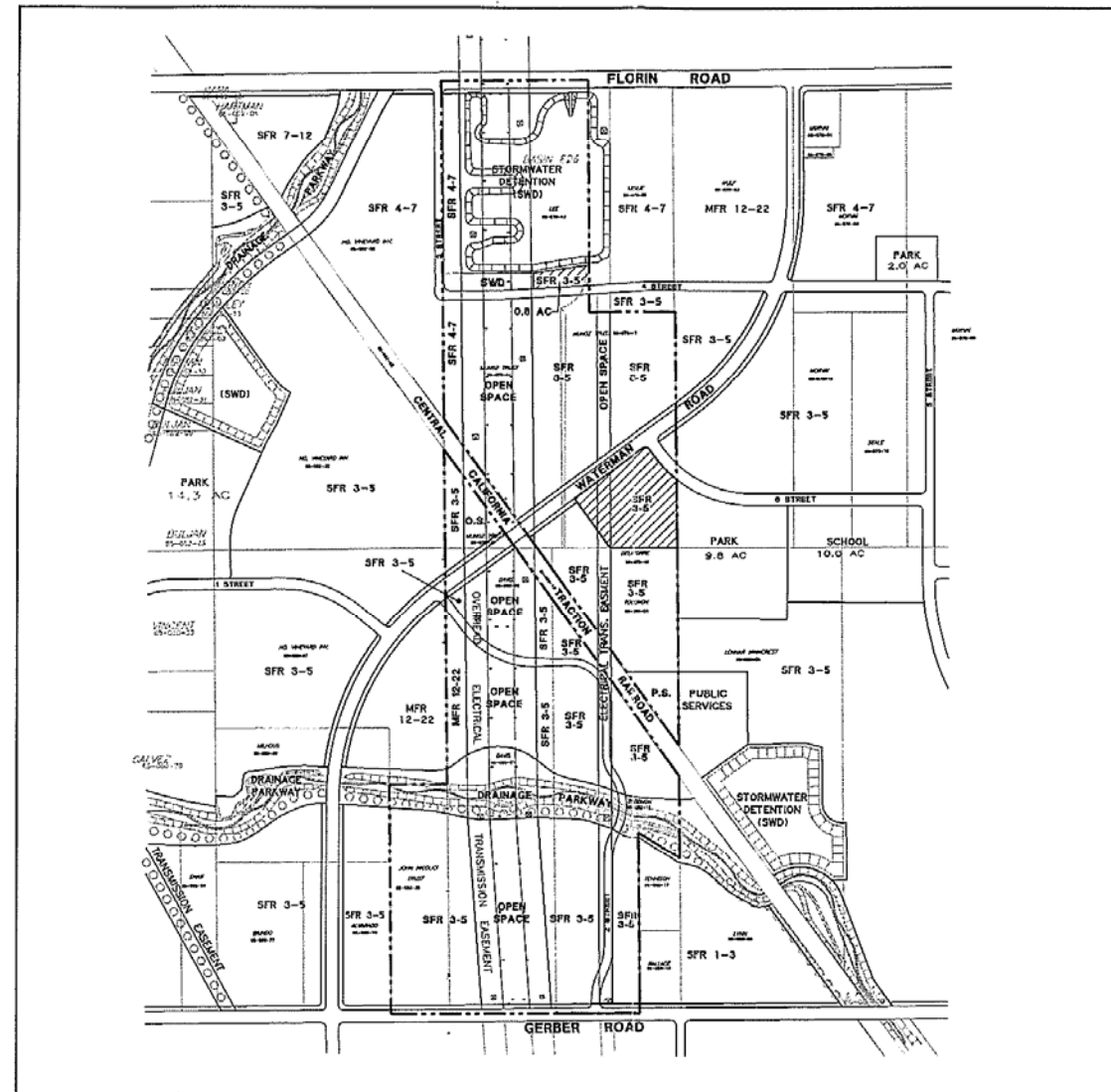
<sup>1</sup> Maximum number of dwelling units for proposed lot size and density.

The North Vineyard Greens Unit 1 proposal includes two amendments to the NVSSP (Plate PD-5). One request is to change the designation of 5.5± acres on the western site boundary, south of the proposed Waterman Road, from Public Services to Single Family Residential 3-5. The second request is change the designation of 0.8 acre of land, adjacent to the south side of the proposed detention basin, from Storm Water Detention to Single Family Residential 3-5. The Unit 1 proposal also requests a Special Development Permit to deviate from the standard front yard setback for single family residential lots. The request is to reduce the setback from the 20-foot standard to 15

Plate PD-5. North Vineyard Greens Unit 1 Specific Plan Amendment Exhibit



Existing Specific Plan



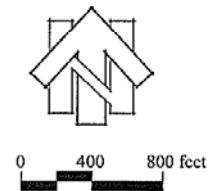
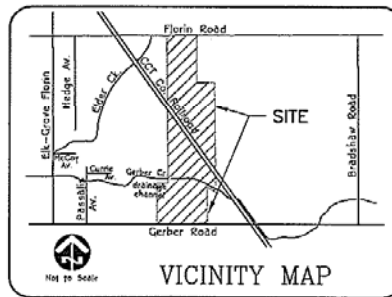
Proposed Specific Plan  
Specific Plan Amendment  
**NORTH VINEYARD  
GREENS - UNIT #1**  
Sacramento County,  
California

January 30, 2003  
Revised: March 12, 2003  
Revised: May 5, 2003  
Revised: January 5, 2004  
Revised: February 29, 2004  
Revised: July 6, 2004

Revised: August 24, 2004

**Mackay & Somps**  
CIVIL ENGINEERS, INC.  
SACRAMENTO, CALIFORNIA (916) 923-6092

7737-00



- KEY**
- SFR 1-3 = Single Family Residential  
1-3 dwelling units per acre
  - SFR 3-5 = Single Family Residential  
3-5 dwelling units per acre
  - SFR 4-7 = Single Family Residential  
4-7 dwelling units per acre
  - MFR 12-22 = Multi-Family Residential  
12-22 dwelling units per acre
  - O.S. = Open Space
  - [Hatched Box] = Specific Plan Amendment

feet. Garages would be setback at least 20 feet and front porches would be as close as 12.5 feet from the public street rights-of-way. An exhibit displaying the proposed rezone of the North Vineyard Greens Unit 1 site is included as Plate PD-6.

The North Vineyard Greens Unit 3 proposal also requests a Special Development Permit to reduce the front yard setback and allow habitable portions of homes and front porches within 20 feet of public street rights-of-way. The North Vineyard Greens Unit 3 rezone exhibit is included as Plate PD-7.

The Gosal Estates proposal requests a Use Permit to allow condominium development. This proposal also requests an Abandonment of the existing 30-foot Irrevocable Offer of Dedication along the west side of the project site that provides access to two residential lots north of the property. Access to these neighboring lots would be provided through the Gosal Estates property via proposed internal driveways within the condominium development. The proposed rezone of the Gosal Estates project site is shown in Plate PD-8.

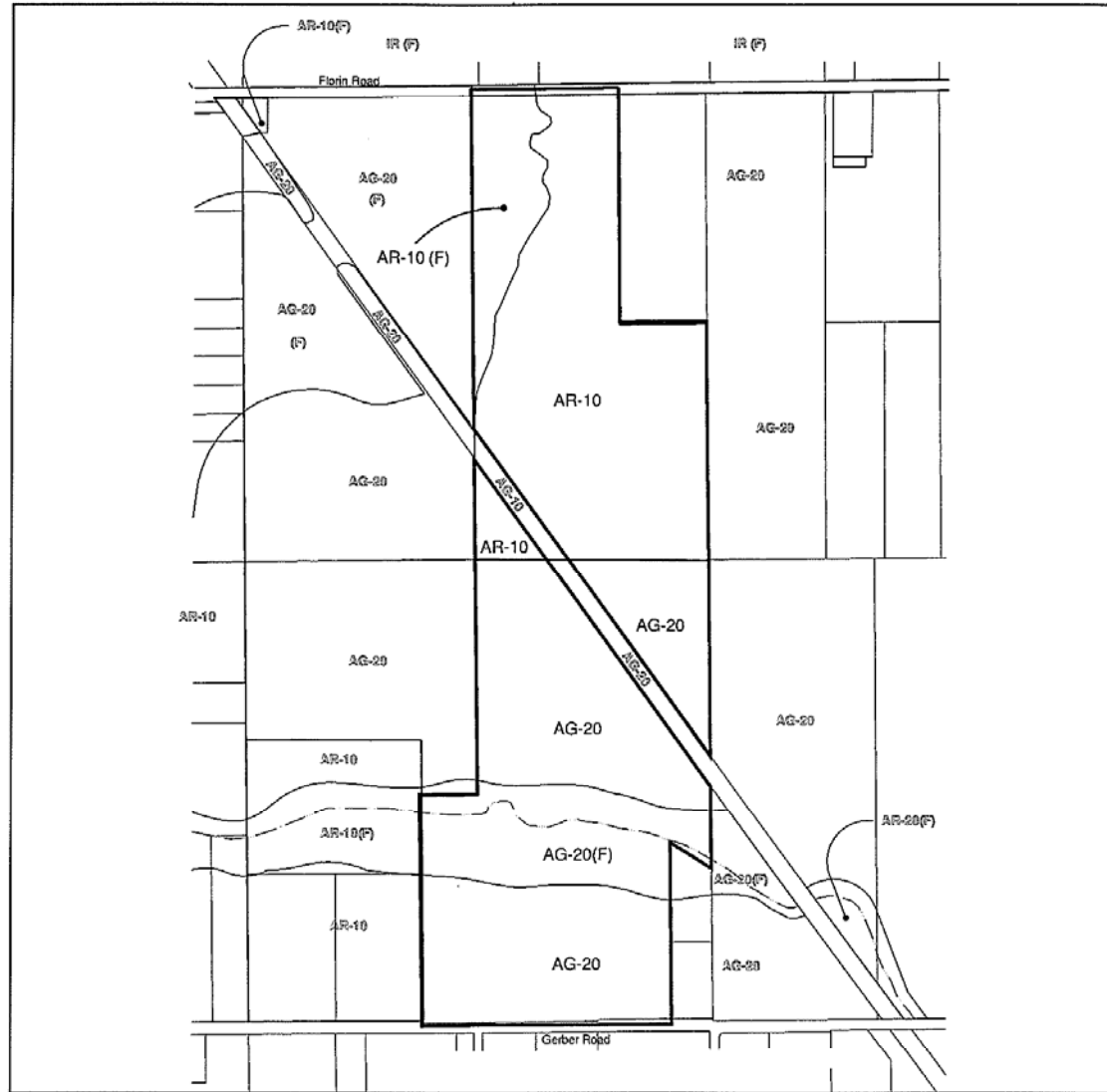
#### PROJECT OBJECTIVE

The Project objective is to develop the subject properties for residential and open space uses, consistent with the North Vineyard Station Specific Plan.

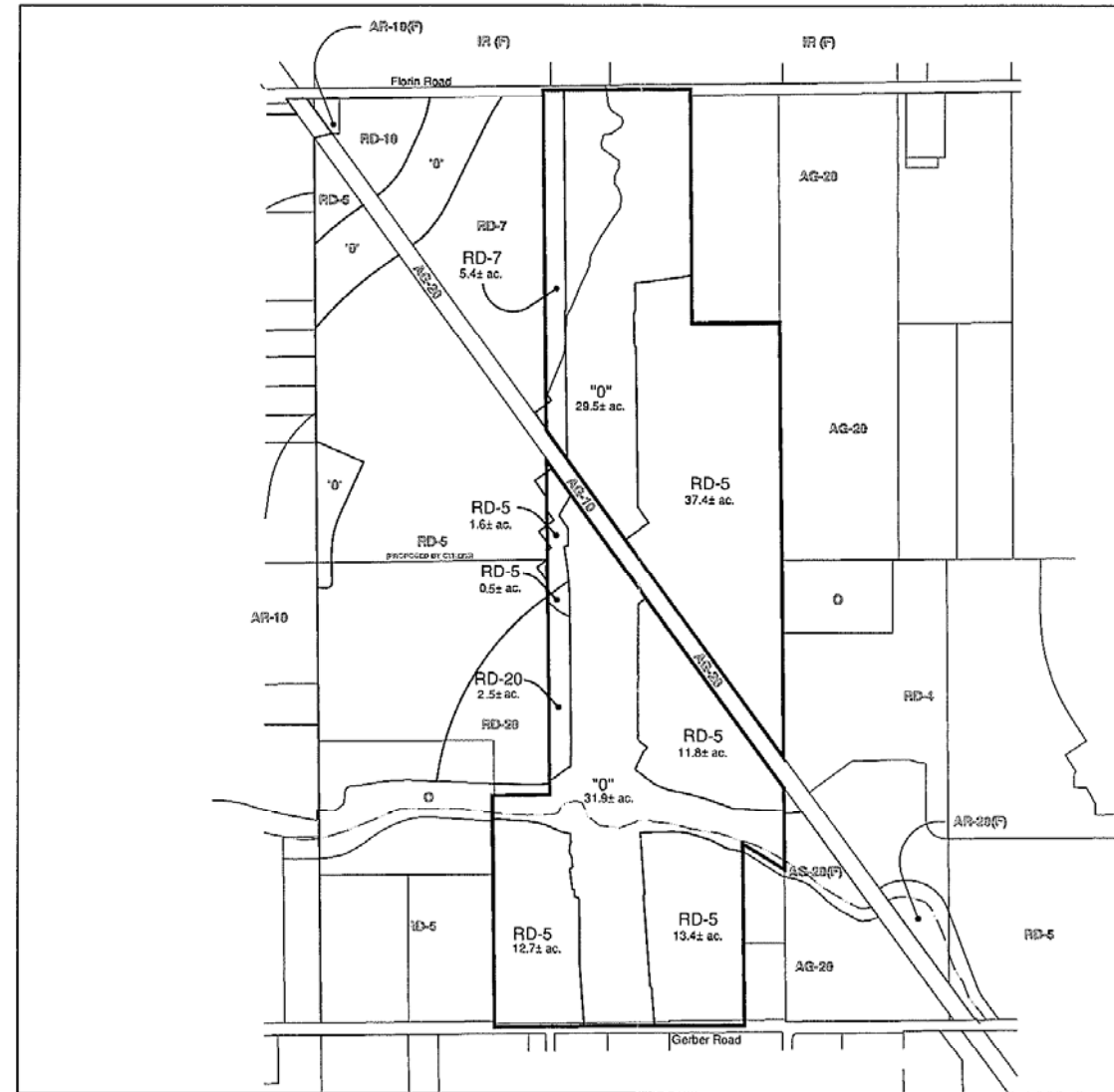
#### INTENDED USE OF THE EIR

The County of Sacramento Policy Planning Commission, Subdivision Review Committee, and Board of Supervisors will use the information contained in the EIR in evaluating the proposed project and rendering a decision to approve or deny the requested entitlements. The EIR will serve as an information document for the general public as well. Responsible agencies may also use the EIR as needed for subsequent discretionary actions.

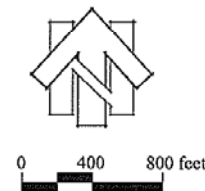
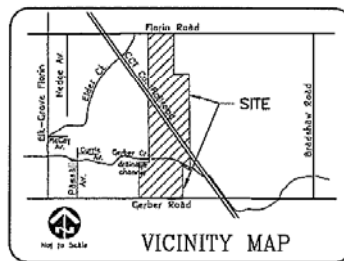
Plate PD-6. North Vineyard Greens Unit 1 Rezone Exhibit



Existing Zoning



Proposed Zoning  
Rezone Exhibit



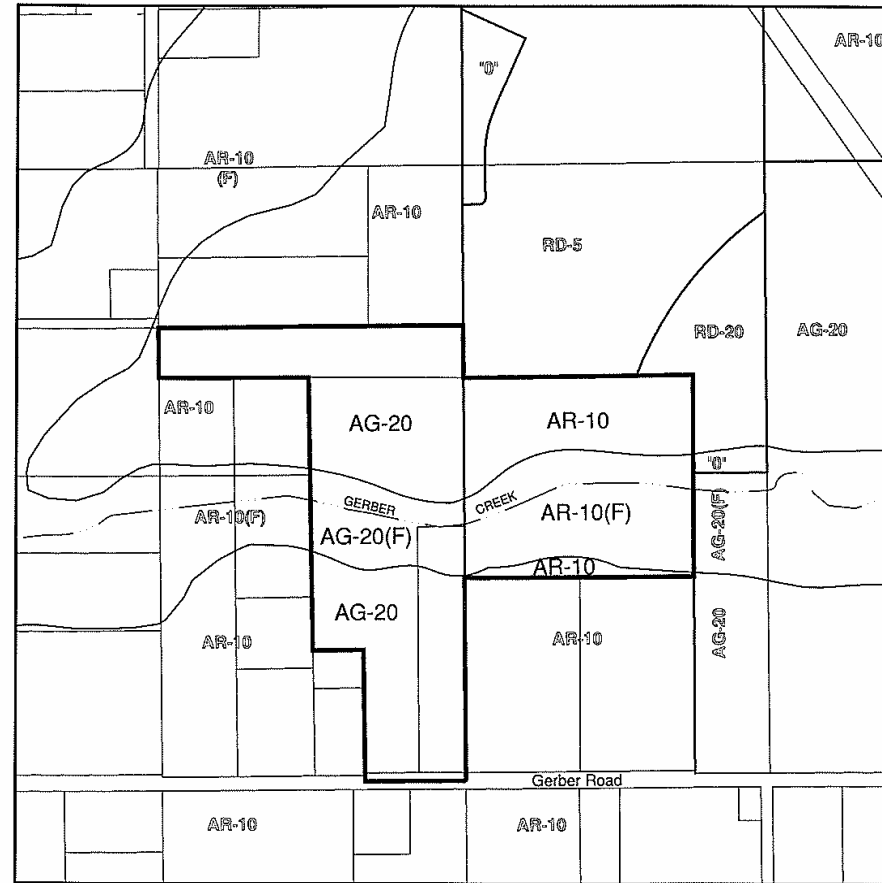
- KEY**
- IR = Industrial Reserve
  - AG-20 = Agricultural
  - "O" = Open Space
  - AR-10 = Agricultural/Residential
  - RD-5 = Single Family Residential  
5 dwelling units per acre
  - RD-7 = Single Family Residential  
7 dwelling units per acre
  - RD-20 = Multi-Family Residential  
20 dwelling units per acre
  - (F) = Flood Overlay Zone

**NORTH VINEYARD  
GREENS - UNIT #1**  
Sacramento County, California

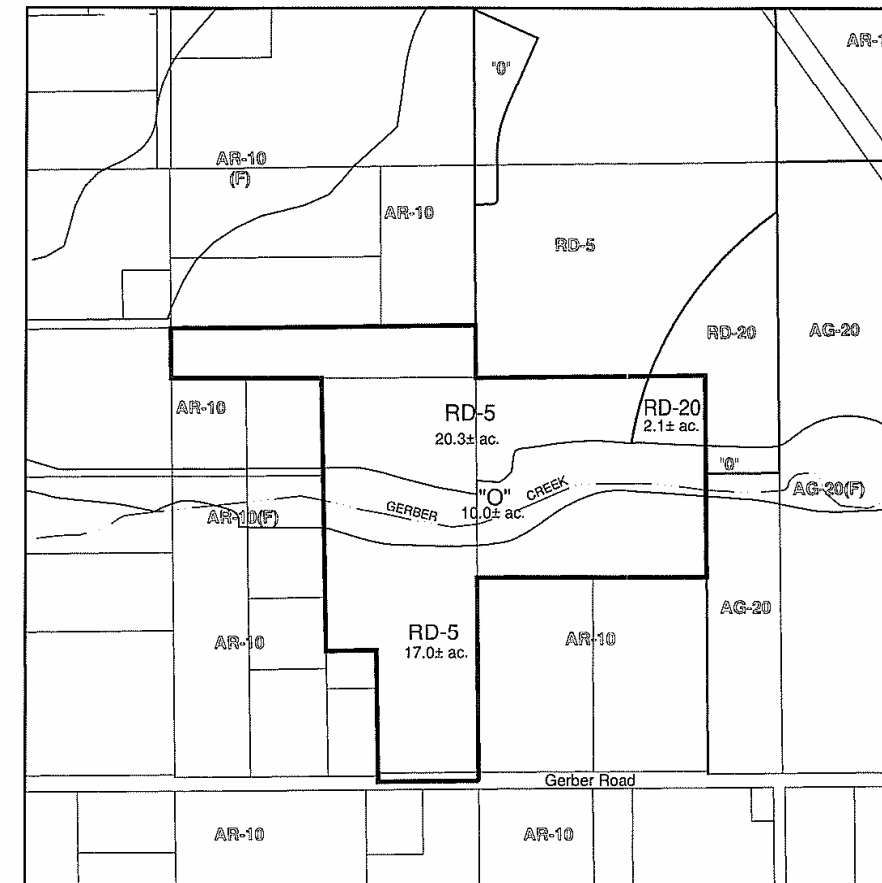
**Mackay & Somps**  
CIVIL ENGINEERS, INC.  
SACRAMENTO, CALIFORNIA (916) 223-6052

January 30, 2003  
Revised: March 12, 2003  
Revised: May 5, 2003  
Revised: January 7, 2004  
Revised: February 29, 2004  
Revised: August 24, 2004  
7737-00

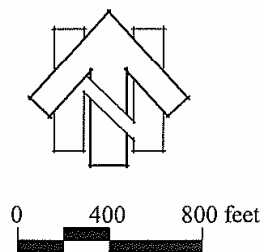
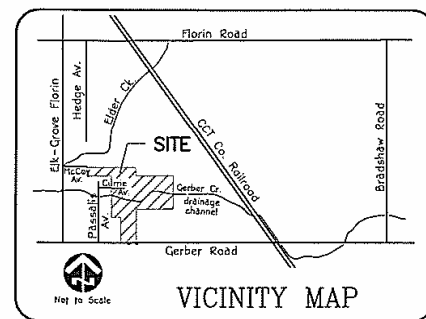
Plate PD-7. North Vineyard Greens Unit 3 Rezone Exhibit



Existing Zoning



Proposed Zoning  
Rezone Exhibit



KEY

- AG-20 = Agricultural
- "O" = Open Space
- AR-10 = Agricultural/Residential
- RD-5 = Single Family Residential  
5 dwelling units per acre
- RD-20 = Multi-Family Residential  
20 dwelling units per acre

**NORTH VINEYARD  
GREENS - UNIT #3**

Sacramento County,

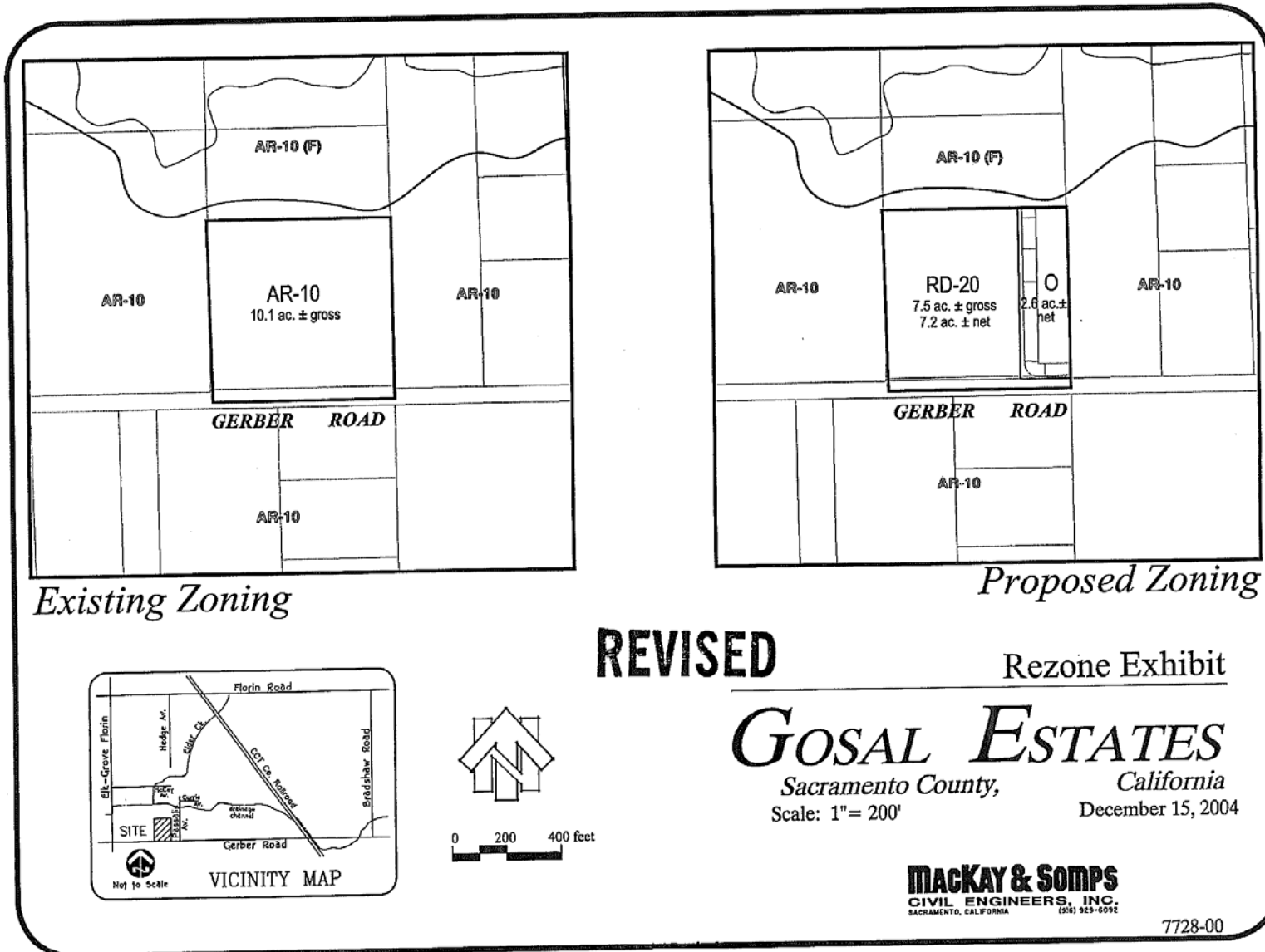
California

March 5, 2003  
Revised May 15, 2003  
Revised October 24, 2003  
Revised: February 2, 2004  
Revised: March 26, 2004

**Mackay & Soms**  
CIVIL ENGINEERS, INC.  
SACRAMENTO, CALIFORNIA (916) 929-6092

7761-00

Plate PD-8. Gosal Estates Rezone Exhibit



## 3 LAND USE

### INTRODUCTION

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The Land Use chapter of this Draft Supplemental EIR focuses on land use impacts associated with the proposed amendments to the Specific Plan and the development of the North Vineyard Greens Unit 1, Unit 3, and Gosal Estates properties within the Specific Plan Area.

### BACKGROUND

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The NVSSP area consists of approximately 1,596± acres. The Specific Plan provides a comprehensive plan for development of an area that was designated for Urban Growth by the Sacramento County General Plan. It refines the policy direction provided by the General Plan and replaces or supplements the Zoning Map and regulations. The Plan includes development standards and zoning to address the unique situations within the Plan area, sets forth a Land Use Diagram for future development, and contains programs for the provision of public facilities. As such, the Plan serves as a policy and regulatory document, with policy direction and project development concepts consistent with the County's General Plan. The current project includes an amendment to the previously approved 1998 North Vineyard Station Specific Plan.

The prior Final EIR for the North Vineyard Station Specific Plan (certified on August 12, 1998; County Control Number: 93-SFB-0238) summarized impacts to land use in the following manner:

“The County General Plan Land Use Element recognizes that the demand for land has created a number of problems in Sacramento County. These problems include an increased consumption of open space, deteriorating air quality, decrease in housing affordability, degradation of public facilities, and increase in traffic congestion. The General Plan also notes that efficient land and resource use in Sacramento County can best be achieved by being committed to a mitigating pattern of land use that concentrates development in configurations designed to protect valuable agricultural lands, conserve natural resource areas, reduce automobile travel distances and related air pollution, as well as conserve energy, and enhance the efficient provision of infrastructure and services.

The Preferred Plan and Alternatives may not meet several General Plan goals, objectives and policies which are intended to maximize efficiency in land use and improve community identity as the projected growth needs of the County are accommodated during the 20-year planning horizon. The densities and land use patterns proposed are similar to the low density development typical of other

suburban communities. The Preferred Plan and Alternatives are land consumptive and auto-oriented, which tends to exacerbate traffic and air quality impacts; however, these impacts were acknowledged during the update of the County General Plan when the subject Specific Plan area was designated for growth. In order to minimize further environmental degradation, it is essential that the projected growth needs of the General Plan are met within approved urban growth areas. If the designated growth areas are not developed to their full potential, direct, adverse physical impacts to the environment could occur through the further loss of agricultural lands and open space/natural habitat areas.

In conclusion, potential land use compatibility impacts associated with holdover agricultural-residential or general agricultural uses located both within and just outside the Urban Development Area **can be mitigated to less than significant levels** through implementation of General Plan policies, proposed Specific Plan policies and established Zoning Code development standards.

Land use impacts resulting from non-compliance with General Plan goals, objectives and policies are considered **potentially significant and adverse**. Mitigation of potential land use impacts to a less than significant level would require redesign of the Plan area to be consistent with the intent of the General Plan for new growth areas.“

## ENVIRONMENTAL SETTING

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### NORTH VINEYARD GREENS UNIT 1

The North Vineyard Greens Unit 1 project site is designated for low density residential use on the Sacramento County General Plan land use map. The County Zoning Code land use designations are AR-10, AR-10(F) (flood combining zone), AG-20, and AG-20(F) (flood combining zone). The land use designations approved in the North Vineyard Station Specific Plan are Single Family Residential (3-5), Open Space, and Drainage Parkway. Land use surrounding the project site is agricultural and agricultural-residential in all directions. The Central California Traction Railroad (CCTR) crosses through the project site about half way between Florin Road and Gerber Road. Gerber Creek flows through the southern portion of the site from east to west.

The North Vineyard Greens Unit 1 project (Plate LU-1, North Vineyard Greens Unit 1 Site Plan) includes subdivision of the project site into 379 residential lots. One of these lots (#377) is a 1.5-acre residential lot proposed for “future” development. Lots #378 and 379 are multi-family lots located along the site’s western boundary. Lot #379 is expected to be developed with a contiguous multi-family lot on the adjacent Vineyard Creek subdivision. The other 376 residential lots are proposed for development at RD-5 and RD-7 zoning densities.





In addition to the residential lots, the project proposes an open space corridor under the electric transmission lines that span the project site from north to south. At the north end of the project site, adjacent to Florin Road, a storm water detention basin is proposed in this open space corridor. An open space corridor will also be preserved on either side of Gerber Creek through the project site. Residential streets will be located throughout the site and one major road, Waterman Road, will traverse the site and provide access across the CCTR.

### NORTH VINEYARD GREENS UNIT 3

The North Vineyard Greens Unit 3 project site is designated for low density residential use on the Sacramento County General Plan land use map. The County Zoning Code land use designations are AR-10, AR-10(F) (flood combining zone), and AG-20(F) (flood combining zone). The land use designations approved in the North Vineyard Station Specific Plan are Single Family Residential (3-5), Multi-Family Residential (12-22), and Drainage Parkway. Land use surrounding the project site is agricultural and agricultural-residential in all directions. The North Vineyard Greens Unit 3 project connects to the west side of the North Vineyard Greens Unit 1 project. Gerber Creek flows through the central portion of the site from east to west.

The North Vineyard Greens Unit 3 project (Plate LU-2, North Vineyard Greens Unit 3 Site Plan) includes subdivision of the project site into 143 residential lots. One of these lots (#142) is a 2-acre multi-family residential lot proposed for RD-20 density development. This lot is contiguous to the Vineyard Creek subdivision multi-family lot to the north that also connects with Lot #379 of the North Vineyard Greens Unit 1 tentative subdivision map. Three residential lots of the North Vineyard Greens Unit 3 subdivision will be created around existing residences that will remain on site. One lot (#140) is a 0.3-acre residential lot proposed for “future” development and RD-5 zoning. The remaining 138 residential lots are proposed for development at RD-5 zoning.

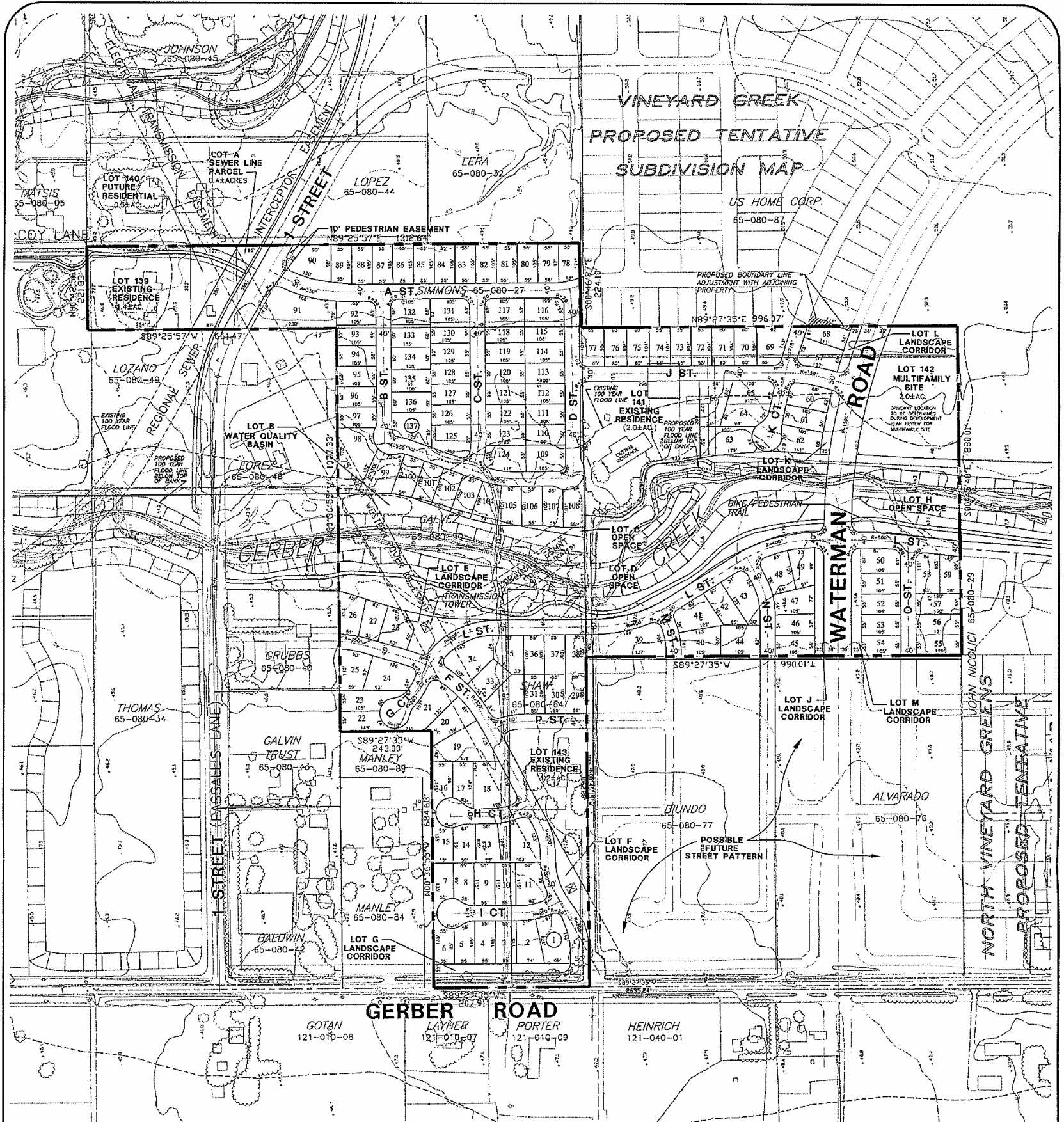
The North Vineyard Greens Unit 3 proposal includes an open space corridor on either side of Gerber Creek through the project site. Residential streets will be located throughout the site and one major road, Waterman Road, will traverse the site and provide access across Gerber Creek.

### GOSAL ESTATES

The Gosal Estates project site is designated for low density residential use on the Sacramento County General Plan land use map. The County Zoning Code land use designation is AR-10. The land use designations approved in the North Vineyard Station Specific Plan are Multi-Family Residential (12-22), and Storm Water Detention Basin. Land use surrounding the project site is agricultural and agricultural-residential to the north, east, and south and golf course to the west. The Gosal Estates site does not connect to the North Vineyard Greens Unit 1 or Unit 3 sites.

The Gosal Estates project includes 6.9± acres for multi-family residential development and 2.6± acres of a storm water detention basin that extends off-site to the north and

Plate LU-2. North Vineyard Greens Unit 3 Site Plan



**PROJECT INFORMATION**

**SITE DESCRIPTION:** Simons Property: Part of the West 1/2 of the Southeast 1/4, Section 6, T7N, R6E, M4M. Galvez Property: Part of Parcel 2, Book 12 of Parcel Map at Page 26. Era Property: Parcel "A" per Book 99 of Parcel Maps at Page 9 & Parcel "B" per B/LA Recorded in Book 00024 at Page 927. Saw Property: Parcel "1" per Book 12 of Parcel Maps at Page 25.

**ASSESSOR'S PARCEL NO.:** 065-080-027, 065-080-090, 065-080-080 and 065-080-064

**OWNERS:** Roger and Nadine Simons  
9100 McCloy Avenue  
Sacramento, CA 95829  
Charles and Linda Galvez  
9171 Gerber Road  
Sacramento, CA 95829  
Era Properties  
10787 Milson Drive  
Nevada City, CA 95959  
Terry D and Barbara A Shaw  
9191 Gerber Road  
Sacramento, CA 95829

**SUBDIVIDER:** North Vineyard Greens, GP  
729 Howe Avenue, Suite 103  
Sacramento, CA 95825

**ENGINEER:** Mackay & Somp  
1711 Tribune Road, Ste. E  
Sacramento, CA 95815  
(916) 929-6092

**EXISTING USE:** Agricultural Residential  
**PROPOSED USE:** Single Family Residential, Multi Family Residential & Open Space

**EXISTING ZONING:** AG-20, AG-20(F) & AR-10  
**PROPOSED ZONING:** RD-5, RD-20, & Open Space

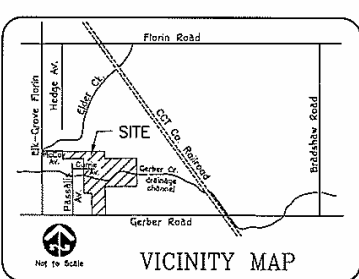
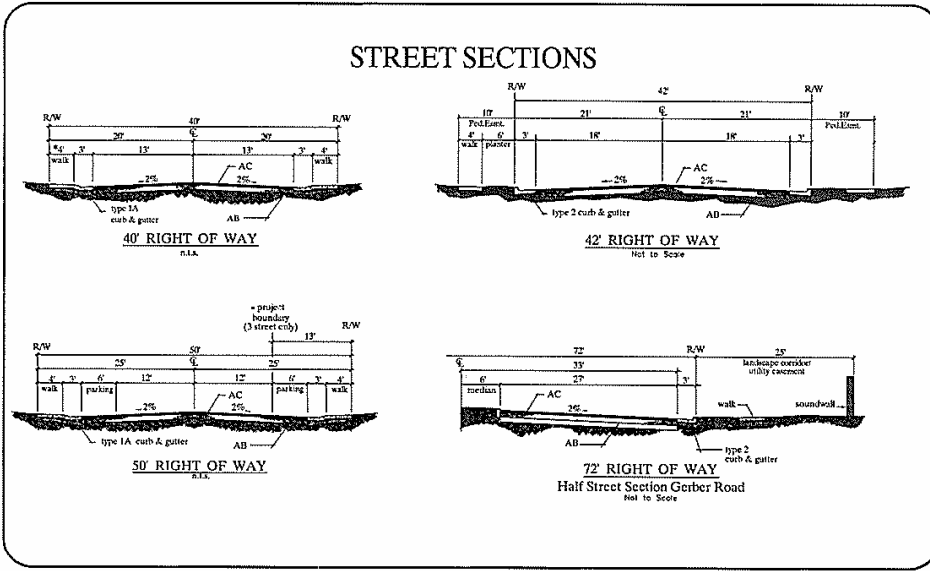
**SPECIAL DISTRICTS**  
**RECREATION:** Southgate Community Services District  
**WATER:** Sacramento County Water Agency, Zone 10  
**FIRE:** Florin Fire District  
**SCHOOL:** Elk Grove Unified School District

**SANITARY SEWER & STORM DRAINAGE:** Sacramento County

**NUMBER OF LOTS:**  
155: TOTAL LOTS  
137: Residential Lots  
2: Existing Residential: Lots 139, 141, & 143.  
1: Future Residential: Lot 140  
1: Multi-Family Site: Lot 142  
1: Open Space: Lots C, D & H  
7: Landscape: Lots E, F, G, J, K, L, & M  
1: Sewer Line Parcel: Lot A  
1: Water Quality Basin: Lot B

**ACRES:** 49.44 acres (gross)

\* Subdivider reserves the right to file multiple final maps.



Vesting Tentative Map  
**NORTH VINEYARD GREENS - UNIT #3**  
Sacramento County, California

March 5, 2003  
Revised: May 15, 2003  
Revised: October 24, 2003  
Revised: February 2, 2004  
Revised: March 26, 2004

**MACKAY & SOMPS**  
CIVIL ENGINEERS, INC.  
SACRAMENTO, CALIFORNIA (916) 929-6092

7761-00

east (Plate LU-3, Gosal Estates Tentative Parcel Map). The multi-family site plan includes 22 buildings with a total of 124 dwelling units. The 124 units include 22 two-bedroom units, 84 three-bedroom units, and 18 four-bedroom units. Eighteen of the buildings have 6 dwelling units each and four of the buildings have 4 dwelling units each. Each building has a tandem 2-car garage for each dwelling unit.

The site has a single access driveway off of Gerber Road. Internal private driveways lead through the site to each building and to parking areas. Two existing single-family residences located to the north of the site will be accessed through the multi-family site. Site development covers approximately half of the existing access road along the west edge of the property. With development, the neighbors in the two homes to the north will have to drive through the complex to access Gerber Road by the proposed private driveway (Plate LU-4, Gosal Estates Site Plan).

## IMPACTS AND ANALYSIS

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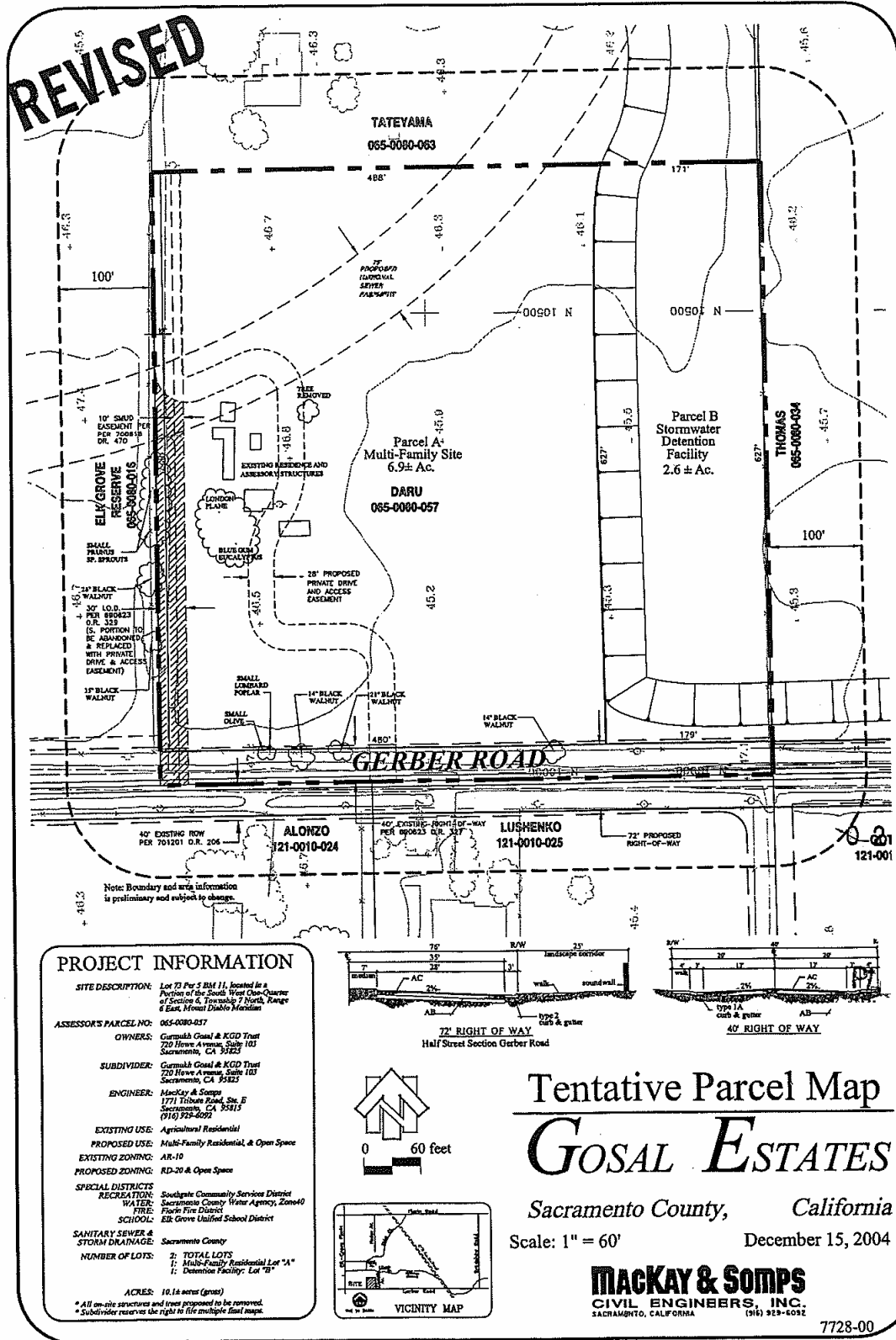
### NORTH VINEYARD GREENS UNIT 1

The North Vineyard Greens Unit 1 proposal includes two amendments to the NVSSP (refer to Plate PD-5 in the Project Description chapter). One request is to change the designation of 5.5± acres on the western site boundary, south of the proposed Waterman Road, from Public Services to Single Family Residential 3-5. The second request is change the designation of 0.8 acre of land, adjacent to the south side of the proposed detention basin, from Storm Water Detention to Single Family Residential 3-5.

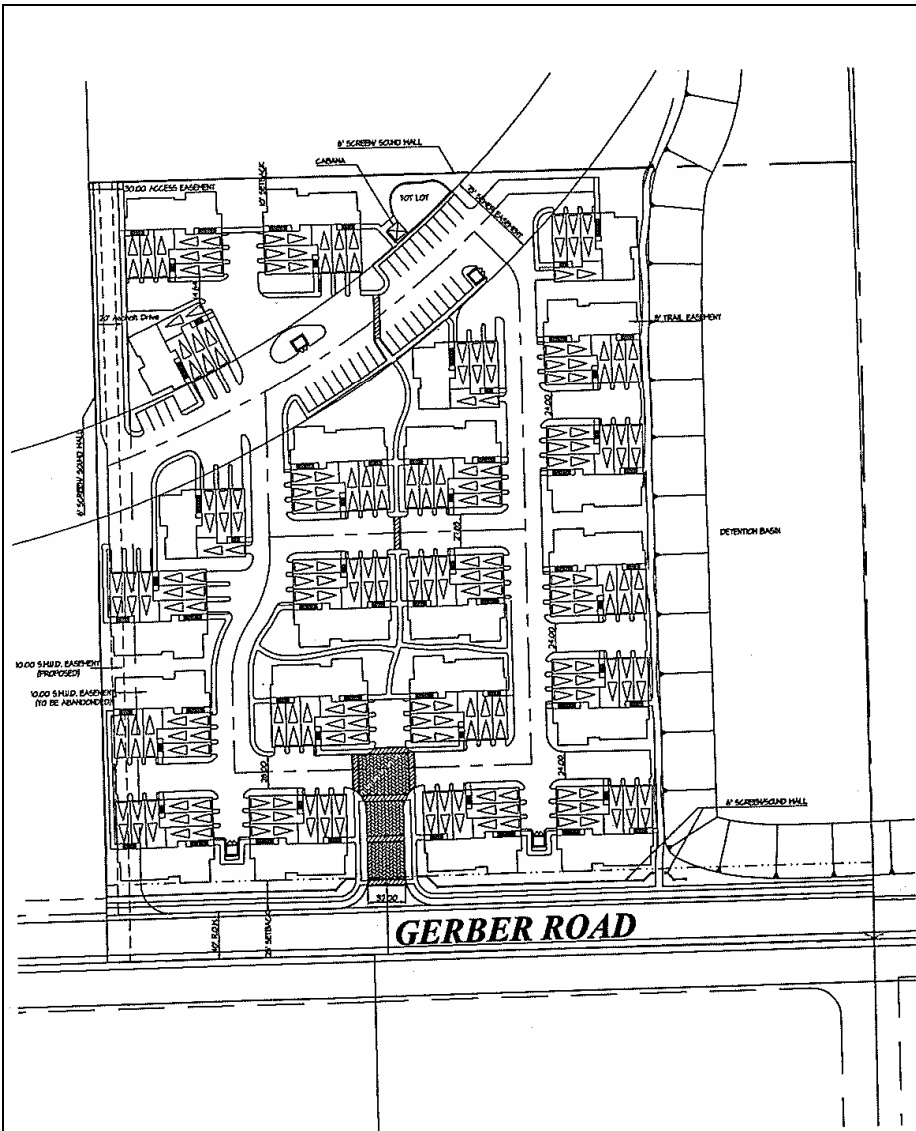
The Unit 1 proposal also requests a Special Development Permit to deviate from the standard front yard setback for single family residential lots. The request is to reduce the setback from the 20-foot standard to 15 feet. Garages would be setback at least 20 feet and front porches would be as close as 12.5 feet from the public street rights-of-way.

A rezone of the project site (refer to Plate PD-6 in the Project Description chapter) is requested to change the existing zoning to zoning compatible with the Specific Plan. The project proposes a rezone of the 146.7 gross acre site to RD-5 (77.4 acres), RD-7 (5.4 acres), RD-20 (2.5 acres), and O (61.4 acres). The site plan includes 341 single-family residential lots in the RD-5 zone (4.4 dwelling units/gross acre) and 37 single-family residential lots in the RD-7 zone (6.9 dwelling units/gross acre). One multi-family residential lot is proposed along the western edge of the project site. Lot #379 is a 2.2-acre multi-family lot that is contiguous with a larger multi-family site that is also part of the North Vineyard Greens Unit 3 and Vineyard Creek subdivisions. Two of the single family residential lots are proposed for future residential development at RD-5 zoning density. Lot #377 is a 1.5-acre single-family lot located on the east side of the project site, south of G Street, and between the CCTR and the Vineyard Point subdivision. Lot #378 is a 0.3-acre single-family lot that is surrounded by 2 Street, Waterman Road, and open space Lot J. In the RD-5 zone, Lot #377 could potentially be divided into 7 single-family lots and Lot #378 could be developed as a single residential lot.

Plate LU-3. Gosal Estates Tentative Parcel Map



**Plate LU-4. Gosal Estates Site Plan**



**PROJECT INFORMATION**

**SITE DESCRIPTION:** Lot 73 per 5 BM II, located in a portion of the South West One-Quarter of Section 6, Township 7 North, Range 6 East, Mount Diablo Meridian

**ACCESSOR'S PARCEL NO:** 065-0080-051

**OWNER:** Gurmkh Gosal & KGD Trust  
120 Home Avenue, Suite 103  
Sacramento, CA 95825

**EXISTING USE:** Agricultural Residential

**PROPOSED USE:** Multi-Family Residential

**EXISTING ZONING:** AR-10

**PROPOSED ZONING:** RD-20

**SITE DATA:** Gross Site Area: 10.2ac  
Gross Site Area Adj. (w/o detention): 7.45ac  
Net Site Area: 8.64ac  
Net Site Area Adj.: 5.89ac  
Total Dwelling Units: 124du  
Gross Density: 12.16du/ac  
Gross Density Adj.: 16.64du/ac  
Net Density: 14.35du/ac  
Net Density Adj.: 21.05du/ac

**Parking Required:**  
Residents: 2.0/du = 248 spaces  
Guest: 0.25/du = 31 spaces

**Parking Provided:**  
Garage: 248 spaces  
Driveway: 19 spaces  
Surface: 33 spaces  
Total: 300 spaces  
Average Parking Ratio: 2.4/du

02 0660

**RECEIVED**  
DEC 27 2004  
PLANNING DEPT.  
County of Sacramento

**Overall Site Plan**  
SCALE: 1/8" = 1'-0"



**Centex Homes**  
3700 Douglas Blvd., Ste. 150  
Roseville, CA 95661  
916-768-9900

**Gossal Estates**  
Sacramento County

**Blountgood Sharp Builder**

DATE: 12/23/04  
SHEET: 1 OF 1  
SCALE: LPI.0

DESIGN DEVELOPMENT  
NOT FOR CONSTRUCTION

The proposed RD-5 and RD-7 zones are consistent with the adopted NVSSP land use designations (except where amendments are requested, described above) of Single Family Residential (3-5) and Single Family Residential (4-7). The 2.2-acre proposed multi-family lot (#379) is consistent with the NVSSP Multi-Family Residential (12-22) land use designation for that property.

The development in the proposed zones will be subject to the following Sacramento County Zoning Code (SZC) requirements and development standards: RD-5 (SZC§215-50 thru 215-52); RD-7 (SZC§215-55 thru 215-57); RD-20 (SZC§215-70 thru 215-72); Single Family Residential Use Development Standards (SZC§305-01 thru 305-09.5); and Multiple Family Dwelling Residential Use Development Standards (SZC§305-10 thru 305-25). As described above, the applicant requests a Special Development Permit to deviate from the front yard setback requirements for single family residential development.

Cumulative land use impacts of the North Vineyard Station Specific Plan area resulting from non-compliance with General Plan goals, objectives, and policies were considered potentially significant and adverse in the NVSSP Final EIR. On a site-specific level, the land use impacts related to the North Vineyard Greens Unit 1 proposal are considered less than significant.

### NORTH VINEYARD GREENS UNIT 3

The North Vineyard Greens Unit 3 proposal also requests a Special Development Permit to reduce the front yard setback and allow habitable portions of homes and front porches within 20 feet of public street rights-of-way.

A rezone of the project site (refer to Plate PD-7 in the Project Description chapter) is requested to change the existing zoning to zoning compatible with the Specific Plan. The project proposes a rezone of the 49.4 gross acre site to RD-5 (37.3 acres), RD-20 (2.1 acres), and O (10.0 acres). The project proposal includes development of 138 new single-family residential lots (32.4± acres in the RD-5 zone), 3 existing residential lots (2.0±, 1.4±, 1.2± acres in the RD-5 zone), one future residential lot (0.3± acre in the RD-5 zone), and one multi-family residential lot (2.0± acres in the RD-20 zone). The housing density of the proposed 138 new single family lots is approximately 4.3 dwelling units per acre. The overall proposed RD-5 density is approximately 3.8 dwelling units per acre. The multi-family lot (Lot #142), located in the northeast corner of the North Vineyard Greens Unit 3 site, is contiguous with a larger multi-family site that is also part of the North Vineyard Greens Unit 1 and Vineyard Creek subdivisions.

The proposed RD-5 and RD-20 zones are consistent with the adopted NVSSP land use designations for Single Family Residential (3-5) and Multi-Family Residential (12-22) development. The proposed development will be subject to the following Sacramento County Zoning Code (SZC) requirements and development standards: RD-5 (SZC§215-50 thru 215-52); RD-20 (SZC§215-70 thru 215-72); Single Family Residential Use Development Standards (SZC§305-01 thru 305-09.5); and Multiple Family Dwelling Residential Use Development Standards (SZC§305-10 thru 305-25).

As described above, the applicant requests a Special Development Permit to deviate from the front yard setback requirements for single family residential development.

Cumulative land use impacts of the North Vineyard Station Specific Plan area resulting from non-compliance with General Plan goals, objectives, and policies were considered potentially significant and adverse in the NVSSP Final EIR. On a site-specific level, the land use impacts related to the North Vineyard Greens Unit 3 proposal are considered less than significant.

## GOSAL ESTATES

The Gosal Estates proposal requests a Use Permit to allow condominium development. This proposal also requests an Abandonment of the existing 30-foot Irrevocable Offer of Dedication along the west side of the project site that provides access to two residential lots north of the property. Access to these neighboring lots would be provided through the Gosal Estates property via proposed internal driveways within the condo development. This access arrangement is foreseen as a nuisance to the residents of the two adjacent lots, but is considered a less than significant effect of the project.

A rezone of the project site (refer to Plate PD-8 in the Project Description chapter) is requested to change the existing zoning to zoning compatible with the Specific Plan. The project proposes a rezone of the 10.2 gross acre site to RD-20 (7.6± acres gross, 7.2± net), and O (2.6± acres gross). The project proposal includes development of one multi-family residential lot in the RD-20 zone. The RD-20 zoning of the lot would allow up to 144 dwelling units on the 7.2± net acre site. The remainder of the Gosal Estates lot would be developed as a storm water detention facility that extends off-site to the north and east.

The proposed RD-20 and O zones are consistent with the adopted NVSSP land use designations for Multi-Family Residential (12-22) and Storm Water Detention Basin development of the Gosal Estates site. The proposed residential development will be subject to the Sacramento County Zoning Code (SZC) requirements for RD-20 (SZC§215-70 thru 215-72) and the Multiple Family Dwelling Residential Use Development Standards (SZC§305-10 thru 305-25).

Cumulative land use impacts of the North Vineyard Station Specific Plan area resulting from non-compliance with General Plan goals, objectives, and policies were considered potentially significant and adverse in the NVSSP Final EIR. On a site-specific level, the land use impacts related to the Gosal Estates proposal are considered less than significant.



## AFFORDABLE HOUSING PLAN

### *AFFORDABLE HOUSING ORDINANCE*

In July 2004 the County released the Housing Element, a component of the General Plan, and in December 2004 the Board of Supervisors adopted the Housing Element and the Affordable Housing Ordinance. The purpose of the two documents is generally to provide an economically diverse and balanced community with housing available for households of all income levels.

Over the last 10 years, and more dramatically over the last 5 years, housing in Sacramento County has substantially increased in value, much faster than personal incomes. This increase has reduced the number of working families who are able to afford market rate housing. The widening difference in housing costs compared to income has been especially difficult for households defined as low income, very low income or extremely low income. Low income is defined as those households making roughly 50 to 80 percent of the median income in Sacramento County; very low is defined as those households making 30 to 50 percent of the median; and extremely low is defined as those households making 30 percent or less of the median.

The current acceleration of housing values, the dwindling supply of land, and the increasing cost of development have further diminished housing stock for low income households. The consumption of the County's remaining developable land for residential development without providing housing affordable to persons of all income levels has functioned contrary to the County's housing policies. The County sees it as essential that new residential development contain housing opportunities for all economic segments. Further, to address this need the County adopted the Affordable Housing Ordinance that provides a regulatory framework for developing a supply and mix of new housing to meet the future housing needs of all income segments of the community.

A goal of the Housing Element is to ensure the availability of affordable housing for all households in Sacramento County. Housing Element Policy HE-45 directed the development of a Housing Ordinance, which requires 15 percent of all new residential housing be affordable to the three aforementioned income groups. The resulting Affordable Housing Ordinance is consistent with Policy HE-45. The adopted ordinance defines the numerous terms and conditions for building affordable housing units in Sacramento County. Affordability is defined to mean housing that is rented or sold at an affordable rate. Generally, the price paid for an affordable unit is based on a given household's ability to pay no more than 35 percent of their income towards housing expenses including mortgage principal and interest, taxes, insurance, assessments, and homeowner fees.

Since adoption of the ordinance, projects seeking approval of five (5) or more dwelling units are required to include or provide at least fifteen (15) percent of the a project's

dwelling units to be leased or sold at an affordable rent or housing price to low, very low and extremely low income households.

The 15 percent figure is divided into three categories:

- Six percent of the units must be affordable to low income households,
- Six percent must be affordable to very low income households, and
- Three percent must be affordable to extremely low income households.

Generally, housing units identified as low income will remain as a low income unit for 30 years if the property is purchased or for 55 years if it is built as rental property. The Sacramento Housing and Redevelopment Agency (SHRA) will enforce these requirements through a regulatory agreement that is recorded as a lien on the property. During the time these agreements are in effect SHRA will define the buying and selling price of affordable housing units.

The ordinance does provide for options instead of the standard on-site affordable housing building component as described above. These recommended options are deemed in compliance with the ordinance if the project meets a set of requirements defined by the ordinance. These options include constructing on or off-site affordable housing per the ordinance, dedicating on or off-site land and paying the affordability fee, obtaining land credits and paying the affordability fee, or paying in-lieu and affordability fees. The current amount of the affordability fee is \$3,000 per market rate unit. The fee is based on the local subsidy needed to construct a standard apartment unit affordable to low, very low, and extremely low income households according to the ordinance. The affordability fee will be adjusted annually based on the Construction Cost Index-All Cities. The current amount of the in-lieu fee is \$7,000 per market rate unit. The fee is based on the cost of unimproved land, adjustment factors to account for off-site improvements, and costs associated with managing the fund holding the in-lieu fees. This fee can be adjusted annually by SHRA based on residential land sales in Sacramento County for unimproved land.

#### *AFFORDABLE HOUSING PLAN*

The North Vineyard Greens Units 1, 3, and Gosal Estates project proposes to comply with the Affordable Housing Ordinance by dedicating land on the project site. The applicant proposes dedication of 10.56 acres of land. This is in excess of the land dedication requirement for the proposal. The required land obligation for the development project is 7.07 total net acres. The applicant wishes to donate land above the required amount for the purpose of retaining Acreage Credits. The total excess affordable housing acreage credits being requested for the development project is 3.49 net acres. The use of these acreage credits is subject to the approval of the Planning Director and the requirements listed in the Affordable Housing Ordinance. The proposed Affordable Housing Plan is included as Appendix A of this Draft EIR.

In addition to dedicating land, the applicant must pay an Affordability Fee for each market rate unit. Based on the proposed development of 515 market rate units and the current fee schedule of \$3,000 per market rate unit, the Affordability Fee for the project is \$1,545,000.

The first final map associated with the project will be conditions upon the recordation of a regulatory agreement between SHRA and the affordable developer on the dedicated/donated site indicating the number of affordable units required to be built on the site and income targeting for those affordable units. In accordance with the Ordinance, the number of units attributable to the dedicated/donated site for the project is 93 total units required for the development project and 59 total units required for the 3.49 acres of excess donated land.

SHRA must ensure that the units built on the dedicated/donated site are both sufficient in numbers to meet the obligation of the project and that they are provided in proportion to the obligation. For ELI competitive sites, at least 20% of the required affordable units must be affordable to Extremely Low Income (30% of adjusted median income) households, 40% of the required affordable units must be affordable to Very Low Income (50% of adjusted median income) households, and 40% of the required affordable units must be affordable to Low Income (80% of adjusted median income) households. Therefore, the project will require 61 units for low income, 61 units for very low income, and 30 units for extremely low income households.

The Sacramento Housing and Redevelopment Agency (Bobrowsky) reviewed the proposed Affordable Housing Plan and found it to be acceptable under the Ordinance subject to the conditions listed in Attachment I of the letter from SHRA to the Planning Department on August 29, 2005 (included in Appendix A of this DEIR).

**Impact: Compatibility with Affordable Housing Ordinance.**

The proposed dedication of on-site land for affordable housing units in compliance with the Affordable Housing Ordinance will not result in environmental impacts not already identified in this Draft Environmental Impact Report.

## 4 PUBLIC SERVICES

### INTRODUCTION

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A Public Facilities Financing Plan (Financing Plan) for the North Vineyard Station Specific Plan area was approved by the Board of Supervisors on November 10, 2004. The Financing Plan presents a strategy to finance the backbone infrastructure and other public facilities required to serve the proposed land uses in the NVSSP. The Financing Plan was designed with flexibility to accommodate the development plans of a diverse set of NVSSP property owners, while assuring that the required facilities will be constructed when necessary. The Financing Plan includes existing fee programs, the development of the North Vineyard Station Fee Program (NVSFP), the possible use of Mello-Roos bond financing, and other funding mechanisms. Total public facilities improvements for buildout of the NVSSP are estimated to be \$271.6 million. These improvements include roadway construction, frontage lane improvements, water, sewer, and drainage backbone infrastructure, right-of-way acquisition, and other public facility improvements.

The Public Services chapter of this DEIR discusses the proposed services and facilities relevant to development of the proposed project site within the NVSSP area. Included is an examination of water supply, sewer service, energy services, law enforcement, fire protection, schools, and parks. This analysis is based primarily on data collected and compiled from individual service providers. Comments received from service providers have been included in this chapter and/or appendices.

### SETTING

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The project site is located within the North Vineyard Station Specific Plan (NVSSP) Area. The NVSSP planning area is located in the south-central unincorporated area of Sacramento County, at the western edge of the Vineyard Community. The project site is located in the western half of the NVSSP area, north of Gerber Road, south of Florin Road, on each side of the Central California Traction Railroad, west of Bradshaw Road and east of Elk Grove-Florin Road. The project site is a rural-residential area with approximately 5 existing residences.

## IMPACTS AND ANALYSIS

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The project is located within the Urban Services Boundary (USB), as defined in the Land Use Element of the County of Sacramento General Plan. The USB indicates the boundary of the urban area in the unincorporated County and defines the area expected to receive urban levels of public infrastructure and services within the planning period.

The public services impacts of the proposed North Vineyard Station Specific Plan area development were analyzed as part of the NVSSP EIR. The EIR found that long-term impacts related to water supply could be mitigated to less than significant levels. The EIR also found that the potential impacts to sewer services and other public services were less than significant. The NVSSP included a Public Facilities Financing Plan which is a strategy to finance the major public facilities required to serve the proposed land uses of the NVSSP area. The purpose is to provide a detailed analysis of the costs to provide necessary infrastructure to serve new development, identify existing funding sources, and recommend funding for facilities not yet funded.

The Sacramento County Infrastructure Finance Section (Goetz) reviewed the proposed project and recommended three conditions of project approval. The first condition, listed below (indented), insures the full participation in the resulting financing mechanisms recommended in the North Vineyard Station Specific Plan Public Facilities Financing Plan. The second condition requires the property owner to participate in a County Service Area, or equivalent financing mechanism, to fund a variety of transportation demand management services. The third condition requires the property owner to participate in a funding mechanism for County General Fund (sheriff, etc.) services. The complete Infrastructure Finance Section comment letter is included as Appendix B.

No final map, with the exception of large lot final maps, shall be recorded until the financing mechanisms recommended in the North Vineyard Station Specific Plan Public Facilities Financing Plan have been implemented. The property owners shall comply with the implementation of financing mechanisms recommended in the Financing Plan.

The development of this site at RD-5 density is expected to increase the demands on public services over the existing use, but not beyond service capacity planned for in the NVSSP. Service providers that have reviewed the project and provided specific public service comments are noted in this section.

### *WATER SYSTEMS*

The project site is located within the service area of the Sacramento County Water Agency (SCWA), Zone 40. Zone 40 serves the urban and urbanizing areas of Laguna, Elk Grove, and Vineyard communities in the southern unincorporated area of the

County and the City of Elk Grove. Groundwater and surface water are the primary sources of supply to meet the area's demand.

Water Supply for the entire NVSSP area was analyzed in the NVSSP amendment FSEIR. The FSEIR analysis relied on the updated Master Water Supply and Water Distribution System Report (Master Water Supply Report), dated July 9, 2003, prepared by Mackay and Somps, civil engineers. The Master Water Supply Report identified water demands and associated infrastructure needs for the various NVSSP land uses. The report also included hydraulic analyses, including fire flow, for all major phases of development within the NVSSP area. The FSEIR concluded that the long-term needs for water supply are expected to be met through the conjunctive implementation of the NVSSP Water Master Plan, the Water Master Plan for Areas Adjacent to the Zone 40 study area, as well as fulfillment of the City of Sacramento American River Place of Use. Until all agreements are in place, the overall NVSSP project will contribute to the incremental decline in ground water levels. The NVSSP development would add to the significant adverse cumulative impacts that regional development has on ground water supplies, but through incorporation of requirements from the Water Agency, impacts are expected to be less than significant. No mitigation was required in the FSEIR.

The Sacramento County Department of Water Resources (DWR) Water Supply Section staff (Gardner) reviewed the North Vineyard Greens Unit 1, North Vineyard Greens Unit 3, and Gosal Estates project applications and submitted the following comments.

#### **COMMENTS RELATED TO ALL 3 MAPS**

- Destroy all abandoned wells on the proposed project site in accordance with the requirements of the Sacramento County Environmental Health Division. Clearly show all abandoned/destroyed wells on the improvement plans for the project. Prior to abandoning any existing agricultural wells, applicant shall use water from agricultural wells for grading and construction.
- Reserve a 40-foot wide permanent easement for the Freeport Regional Water project pipeline. Permanent exclusive easement shall have a contiguous border with the future back of curb of Gerber Road. In addition, provide a temporary 110-foot wide construction easement, with a contiguous border to the permanent exclusive easement. Permanent and temporary easements shall not be separated and shall extend the entire length of the developed frontage on Gerber Road. Prior to final map recordation, the property owner shall enter into a reservation agreement with the Freeport Regional Water Authority regarding the purchase of said easement.
- Prior to tentative subdivision map approval, the Sacramento County Water Agency requires either fee simple title or sale agreements or reservation agreements for a water treatment plant site as identified in the most current approved North Vineyard Station Specific Plan Water Supply Master Plan. In addition, prior to final map recordation, the affected property owner, future successors or interests shall enter into an agreement with SCWA consistent with Chapter 22.50 of the Sacramento County Code and Government Code Title 7, Division 2, Article 4.

- The Sacramento County Water Agency (SCWA) will not issue water connection permits or sign improvement plans until adequate water supplies have been secured. In addition, the final map shall not be recorded until the SCWA has secured fee simple title to the North Vineyard Station WTP.

The following DWR comments are required project conditions, not subject to tentative map approval:

- Prior to the issuance of any building permits for the project, the project developer/owner shall pay Zone 40 development fees applicable at the time of building permit issuance in accordance with Sacramento County Water Agency Ordinance No. 18.
- Prior to the issuance of any building permits for the project, the project shall conform to the specific provisions of the Sacramento County Landscape Water Conservation Ordinance (Chapter 14.10 of the Sacramento County Code) to the satisfaction of the County Landscape/Oak Tree Coordinator.

#### **NORTH VINEYARD GREENS UNIT 1 SPECIFIC COMMENTS**

DWR staff (Gardner) submitted the following comment related to the proposed North Vineyard Greens Unit 1 project design:

Please change the designation of Lot #232 from “Future Residential” to “Water Treatment Site/Future Residential” prior to tentative subdivision map approval.

This comment was in response to the originally proposed tentative subdivision map which labeled the portion of the water treatment site that extends into the North Vineyard Greens Unit 1 project as a “Future Residential” lot. On the currently proposed map, the lot in question is #378 and the label of “Water Treatment Site/Future Residential” has been added to the satisfaction of DWR.

DWR (Gardner) indicated that this label is adequate. DWR also submitted the following recommended conditions of project approval:

Prior to tentative subdivision map approval, prepare a Water Supply Master Plan, to the satisfaction of the Sacramento County Water Agency.

Project proponents, future successors or interests shall reserve a minimum 100-foot by 100-foot water well site and necessary easements to the satisfaction of the Sacramento County Water Agency (SCWA). [The well site shall be located on lots #123 & 124.] Acceptance and approval of the site shall be subject to meeting Department of Health Services (DHS) setback requirements and obtaining acceptable results from hydrogeologic evaluations (exploratory drilling).

If these conditions cannot be satisfied, then an alternate site on the North Vineyard Greens Unit #1 Subdivision shall be selected and similarly evaluated. Prior to final map approval, the project proponent shall grant right-of-entry to

SCWA to conduct hydrogeologic evaluations. In addition, prior to final map recordation, the property owner shall enter into an agreement with SCWA consistent with Chapter 22.50 of the Sacramento County and Government Code Title 7, Division 2, Article 4.

Project proponents, future successors or interests shall reserve Lot #232 for use as a water treatment expansion site as identified in the most current approved North Vineyard Station Specific Plan Water Supply Master Plan. In addition, prior to final map recordation, the property owner shall enter into an agreement with SCWA consistent with Chapter 22.50 of the Sacramento County Code and Government Code Title 7, Division 2, Article 4.

**NORTH VINEYARD GREENS UNIT 3 SPECIFIC COMMENTS**

Prior to tentative subdivision map approval, prepare a Water Supply Master Plan, to the satisfaction of the Sacramento County Water Agency.

**GOSAL ESTATES SPECIFIC COMMENTS**

Water supply will be provided by the Sacramento County Water Agency.

Provide separate public water service with separate water meters to individual condominium units.

Dedicate maintenance easements in all public and private streets over all water lines to the satisfaction of the Sacramento County Water Agency prior to Final Map approval.

Given that connection to the water system is done in accordance with the applicable County standards, impacts associated with water systems are expected to be less than significant.

*SEWER SYSTEMS*

The County Sanitation District 1 (CSD-1) will provide sewer service to the project site. The proposed parcels created by the project will be required to connect to the public sewer system to the satisfaction of CSD-1 standards. CSD-1 staff (Haggard) provided the following comments related to the North Vineyard Greens Units 1 and 3 and Gosal Estates subdivision maps:

The subject properties are within the boundaries of CSD-1, SRCSD, and the Urban Service Boundaries (USB as defined by the CSD-1 Master Plan. The ultimate plan for conveyance and treatment of the subject property shall be by the Districts as specified in their General Plans.

The District has an approved sewer study in our office entitled "Sanitary Sewer Study for the North Vineyard Station Specific Plan" that evaluates the general



sewer needs for the North Vineyard Station area, of which the applicant's properties are a part. This study will be refined by supplemental studies to be performed as projects in the area are further clarified and defined. For example, both Vineyard Greens Units 1 & 3 have been conditioned to perform a more detailed sewer study for their respective areas prior to submittal of improvement plans.

We expect that if the project is subject to currently established policies, ordinances, fees, and to conditions of approval, then mitigation measures within the EIR will adequately address the sewage aspects of the project. We anticipate a less than significant impact to the sewage facilities due to mitigation.

The following project-specific comments were submitted by CSD-1 and SRCSD:

### **COMMENTS RELATED TO ALL 3 MAPS**

Connection to the public sewer system shall be required to the satisfaction of CSD-1. Sacramento County Improvement Standards apply to sewer construction.

Each lot shall have a separate connection to the CSD-1 sewer system.

In order to obtain sewer service, construction of public sewer is expected to be required. Sewer easements may be required. Trunk sewer design and construction may be reimbursed by CSD-1 under the terms of a Reimbursement Agreement. Collector sewer design and construction may qualify for reimbursement under the terms of a Participation Agreement. Prior to initiating design of any sewer facility, contact CSD-1 for details. It will be necessary to schedule a meeting to discuss reimbursement requirements with appropriate CSD-1 staff prior to any design. Failure to strictly comply with the provisions of the CSD-1 Ordinances may jeopardize all sewer reimbursement.

Sewer easements may be required. All sewer easements shall be dedicated to CSD-1 in a form approved by the District Engineer. All sewer easements shall be 20 feet in width and ensure continuous access for installation and maintenance.

The trunk and collector sewer system for the project will not be accepted for maintenance and building occupancy will not be granted until the downstream sewer system serving the project is also accepted for maintenance.

**NORTH VINEYARD GREENS UNIT 1 SPECIFIC COMMENTS**

CSD-1 shall require an approved sewer study prior to the submittal of improvement plans for plan check to CSD-1. Portions of the subject project shall flow into the BR Florin Road Trunk Shed and other portions shall flow into the BR Gerber Road Trunk Shed in accordance with the Sanitary Sewer Study for the North Vineyard Station Specific Plan prepared by MacKay & Soms Civil Engineers, Inc. and approved by CSD-1 on July 22, 2002. If the Final Map is filed before improvement plans are submitted for approval, then an approved sewer study shall be required prior to the filing and recording of the Final Map.

Impact fees for CSD-1 shall be paid prior to filing and recording the Final Map or issuance of Building Permits, which ever is first.

**NORTH VINEYARD GREENS UNIT 3 SPECIFIC COMMENTS**

CSD-1 shall require an approved sewer study prior to the approval of Final Map or submittal of improvement plans for plan check to CSD-1, which ever comes first.

Prior to the recordation of the Final Map, the applicant will enter into and record an agreement, in a for approved by the District Engineer and District Counsel of Sacramento Regional County Sanitation District (SRCSD), to require the property owner(s) to reserve lands for acquisition by the District to install District pipelines and facilities for public health purposes and in conformance with the District Master Plan. The District shall exercise the agreement and acquire the reserved lands within two years of the completion and acceptance of required public improvements.

A Temporary Construction Easement (TCE) will be required along both sides of the Bradshaw Interceptor, which is currently under design. The width of the required TCE shall be determined by SRCSD prior to recording the agreement for the interceptor land reservation. The Final Map shall clearly show the TCE unless released by SRCSD.

Impact fees for CSD-1 shall be paid prior to filing and recording the Final Map or issuance of Building Permits, which ever is first.

**GOSAL ESTATES SPECIFIC COMMENTS**

CSD-1 requires their sewers to be located 10 feet from other parallel utilities (water, drain, electrical, etc.). Prior to recording of the Final Map, the applicant shall prepare a utility plan that will demonstrate that this condition is met.

All structures along private drives shall have a minimum 10-foot setback so that CSD-1 can properly maintain sewer services.

Private drives shall have structural street sections that meet County of Sacramento Improvement Standards. This will prevent pavement damage by CSD-1 maintenance and repair operations.

The Homeowners Association By-Laws of the subject project will be required to include a provision to repair and/or replace all non-asphalt and/or enhanced surface treatments of streets and driveways damaged by CSD-1 maintenance and repair operations.

Prior to the recordation of the Final Map, the applicant will enter into and record an agreement, in a for approved by the District Engineer and District Counsel of Sacramento Regional County Sanitation District (SRCSD), to require the property owner(s) to reserve lands for acquisition by the District to install District pipelines and facilities for public health purposes and in conformance with the District Master Plan. The District shall exercise the agreement and acquire the reserved lands within two years of the completion and acceptance of required public improvements.

The area of land will be 75 feet wide, near the northwest corner of the project. Additionally, Temporary Construction Easements (TCE) will be necessary along both sides of the future interceptor. The required TCE shall be 42.5 feet wide on each side of the permanent 75-foot wide interceptor easement. The Final Maps shall clearly show the TCE, and the applicant shall coordinate the areas required with SRCSD and clearly show the areas by metes and bounds on the Final Maps. The TCE shall be in effect until January 30, 2007, or completion of construction, which ever comes first.

Construction of any and all improvements, including but not limited to grading, streets, utilities, houses and other structures, within the TCE shall be prohibited until such time the TCE is released by SRCSD, unless approved by the District Engineer.

Walls, footings for walls, underground utilities and other above and below ground structures shall not be permitted within the lands to be reserved for the SRCSD interceptor unless approved by the District Engineer.

The following project-specific advisories were submitted by CSD-1 and SRCSD:

**NORTH VINEYARD GREENS UNIT 1 SPECIFIC ADVISORIES**

Construction of the Bradshaw 6A Interceptor is expected to start in September 2004. Service to this interceptor may begin when it connects to the Central Interceptor. This connection is expected to occur early in 2006. If the interceptor is not completed prior to the development of North Vineyard Greens Unit 1, then provisions for, and demonstration of, an alternative service will be required.

Developing this property may require the payment of additional sewer impact fees. Applicant should contact the Fee Quote Desk at 876-6100 for sewer impact fee information.

**NORTH VINEYARD GREENS UNIT 3 SPECIFIC ADVISORIES**

Sewer Service to this project will ultimately connect to the proposed Bradshaw 6 Interceptor, currently scheduled for completion in 2005. If the interceptor is not completed prior to the development of the subject property, then provision for, and demonstration of, an alternative service will be required.

Developing this property may require the payment of additional sewer impact fees. Applicant should contact the Fee Quote Desk at 876-6100 for sewer impact fee information.

**GOSAL ESTATES SPECIFIC ADVISORIES**

The BRE-010 trunk sewer facility is proposed in the CSD-1 Master Plan for construction in Gerber Road along the property frontage. This trunk diameter will be 33 inches along the subject property frontage and is planned for construction after the year 2010.

Developing this property will require the payment of sewer impact fees. Impact fees for CSD-1 shall be paid prior to the filing and recording of the Final Map or issuance of the Building Permits, whichever is first. Applicant should contact the Fee Quote Desk at 876-6100 for sewer impact fee information.

Given that sewer systems are constructed in accordance with the applicable County, CSD-1, and SRCSD standards, impacts associated with sewer systems are expected to be less than significant.

*ELECTRIC SERVICE*

The proposed projects were reviewed by the Sacramento Municipal Utility District (SMUD). SMUD staff (Toyama) provided the following comments regarding provision of electric service to the project sites:

**COMMENTS RELATED TO ALL 3 MAPS**

Dedicate the Landscape Corridors as a public utility easement for overhead and underground facilities and appurtenances.

The owner/developer must disclose to future/potential buyer the following existing and potential 69 kV electrical facilities.

There is a proposed overhead electrical 69 kV line located along the north side of Gerber Road.

There is an existing overhead electrical 69 kV line located along Gerber Road.

**NORTH VINEYARD GREENS UNIT 1 AND DAVIS PROPERTY SPECIFIC COMMENTS**

Dedicate a 12.5-foot public utility easement for overhead and underground facilities and appurtenances adjacent to all public street rights-of-way.

Dedicate any private drive, ingress and egress easement, or Irrevocable Offer of Dedication and 12.5 feet adjacent thereto as a public utility easement for underground facilities and appurtenances.

Label SMUD’s transmission line easement as a “Restricted Building and Use Area.”

Prior to construction, submit grading, landscape, or any other drawings that show changes to the areas within the transmission line easement to SMUD for review.

Prior to the issuance of any grading or building permits, the developer shall obtain a joint-use agreement from SMUD consenting to the proposed development within SMUD’s transmission line easement.

The owner/developer must disclose to future/potential buyer the following existing and potential 230 kV electrical facilities.

There is an existing overhead electrical 230 kV line located through this subdivision map.

**NORTH VINEYARD GREENS UNIT 3 SPECIFIC COMMENTS**

Dedicate a 12.5-foot public utility easement for underground facilities and appurtenances adjacent to all public street rights-of-way.

Dedicate any ingress and egress easement, or Irrevocable Offer of Dedication and 12.5 feet adjacent thereto as a public utility easement for underground facilities and appurtenances.

**GOSAL ESTATES SPECIFIC COMMENTS**

Dedicate any private drive, ingress and egress easement, or Irrevocable Offer of Dedication and 12.5 feet adjacent thereto as a public utility easement for underground facilities and appurtenances.

Dedicate the common area as a public utility easement for underground facilities and appurtenances except for those areas where structures or pool are located.

SMUD occupies a transmission line easement within the boundaries of the North Vineyard Greens Unit 1 subdivision map and certain uses are not permitted or

compatible with the safety, operation, maintenance, and construction of SMUD transmission line facilities. The following was submitted by SMUD (Toyama) as a partial list of restrictions affecting the transmission line easement:

All cut, fill, and grading within SMUD's easement must be conducted in a manner so that minimum horizontal and vertical clearances are maintained in accordance with the California Public Utilities Commission General Order No. 95. Any violations shall be corrected at the owner's expense.

Vehicular access must be provided to the steel towers at all times.

All metal fixtures placed within the easement area must be properly grounded. A grounding plan shall be submitted to SMUD's Property Administrator for review and approval.

Tree, landscaping, light standards and equipment shall not exceed 15 feet in height within the easement area.

No structures or buildings are permitted within the easement area including swimming pools, spas, gazebos, wells and man-made reservoirs, lakes, or similar bodies of water.

The above list is not all-inclusive and does not constitute SMUD's consent to use its transmission line easement. Such consent may be issued upon receipt, evaluation, and approval of final plans and becomes effective when signed by the owner/developer.

The proposed site plan appears to comply with the SMUD restrictions for the existing electrical transmission line easement area. Proposed development within the easement is consistent with the NVSSP Land Use Diagram and includes roads, a detention basin, and open space.

The SMUD conditions are also listed in the "Requests/Requirements of Various Agencies" section of this report. The proposed North Vineyard Greens Units 1 and 3 projects were also reviewed by Pacific Gas and Electric Company (PG&E) staff (Jones and Steigmeyer). PG&E submitted the following comments on the proposed projects:

#### **NORTH VINEYARD GREENS UNIT 1 AND 3 COMMENTS**

PG&E operates and maintains a tower line in a 75-foot easement crossing the site. Land use is restricted within the easement. One of PG&E's concerns is for continued access to the structures with heavy equipment for maintenance and repair of the towers, insulators, and wires. Another is for adequate ground clearance from the wires as set forth in California Public Utilities Commission General Order No. 95 for the proposed streets and levees as shown on the plan.

Should an infraction occur, the developer will be responsible for costs in raising the lines.

A thorough review of proposed construction and uses within PG&E's easement must be made prior to any construction.

Dedicate a standard 12.5-foot Public Utility Easement for underground facilities and appurtenances adjacent to all public ways, private drives and/or Irrevocable Offer of Dedication.

### **NORTH VINEYARD GREENS UNIT 3 SPECIFIC COMMENTS**

The project should provide all weather access to the existing tower located within Lot E. PG&E may need to access this location with heavy equipment during the winter months. In order to avoid damage to landscape areas and tracking debris onto adjacent roadways, a paved or graveled access road to and around the tower will be required.

The project should avoid placing any new trees or site lighting incidents within the easement strip. In the event such incident must occur, a 10-foot offset from the drop line of the wires must be observed. In addition to the 10-foot offset, the incidents must not exceed a maximum height of 15 feet.

The project must control its excavations and digging, including spoils, in such a manner as to not decrease the ground-to-conductor clearance below pre-existing conditions. Any requirements that would diminish this vertical clearance should be reviewed and approved by PG&E.

PG&E owns and operates the Rio Oso-Lockford 230 kV steel tower line within the project boundary. The associated easement is structure restricted (swimming pools are not allowed), allows for cut-down and removal or trimming of vegetation, and general ingress/egress across the subject land. Additionally, PG&E commented that the project has done a responsible job of engineering around the requirements of this existing utility feature. PG&E agrees with the use of this easement area for the development of road and open space areas. Comments related to the electrical transmission line easement and project design are listed above and in the "Requests/Requirements of Various Agencies" section of this report.

PG&E also notes in their comments that gas service may be available to this project if desired. No significant impacts have been identified related to the provision of electric or natural gas service to the project site.

### *LAW ENFORCEMENT*

The NVSSP FSEIR evaluated the project impacts to law enforcement service in the project area. The FSEIR indicates that Sheriff's Department staffing in the project area and County-wide does not meet service standard levels. The NVSSP increased demand on law enforcement services is not considered a significant environmental effect.

The Sacramento County Sheriff's Department (Rodrigues) reviewed the proposed North Vineyard Greens Units 1 and 3 and Gosal Estates projects and provided a comment related to the provision of law enforcement services to the proposed residential lots. The Sheriff's Department stated that:

Based on ... residency estimates of 2.7 people per home, the Sheriff's Department will require an additional 1.0 officers to maintain the 1 to 1000 officer/population staffing level.

As mentioned above, the NVSSP FSEIR evaluation of the effects of Specific Plan area development on law enforcement services is considered less than significant.

The Sheriff's Department submitted several other comments related to residential design and development recommendations that are intended to improve public safety in the proposed residential developments. Two comment letters from the Sheriff's Department (dated March 21, 2005 and February 1, 2005) are included as Appendix C of this report. The March letter has general comments applicable to all three of the Supplemental EIR proposals and the February letter includes some specific comments related to the proposed Gosal Estates multi-family development.

#### *FIRE PROTECTION*

The proposed North Vineyard Greens Units 1 and 3 and Gosal Estates projects were reviewed by Sacramento Metropolitan Fire District Fire Inspectors (Sigl, McDonald, and Hambrick). Fire District comments include requirements for site access and fire safety. The project does not result in significant environmental impacts related to the provision of fire protection services. The complete comment letters from the Fire District are included as Appendix D of this report.

#### *SCHOOLS*

The Elk Grove Unified School District reviewed the proposed North Vineyard Greens Unit 1 project and submitted the following comments:

The District is currently impacted, overcrowded and experiencing a high rate of growth. This and other development projects will have a negative impact upon the District's existing school facilities. The District does not have the financial capability to purchase school sites nor construct and furnish needed school facilities with local funds alone. Developer fees and Mello-Roos taxes collected by the District are not sufficient or timely to satisfy the need. The District relies on statewide school bonds to provide funding necessary to construct new school facilities.

Without continued state funding, the District is in a school housing crisis. The District will continue to seek additional state funds to construct needed school facilities. Until such time as adequate facilities are available for current and



projected students, students may be housed on campuses that have exceeded their intended capacity.

Included with the District's comment letter are estimates of student generation and financial impacts resulting from the construction of the proposed project. The complete comment letter with the estimation sheet is included as Appendix E of this report. Note that the number of lots used in the estimation sheet (363 single-family) is not accurate to the most recent site plan (376 new single-family lots). According to the information submitted by the District, an estimated total of 305 kindergarten through 12<sup>th</sup> grade students would be added to the District by the North Vineyard Greens Unit 1 project. These additional students will incrementally add to an existing overcrowding problem. Current enrollment (October 2004) exceeds the determined capacity of District schools serving the project area by 8.3% (434 students).

As mentioned above, the number of dwelling units used in the District calculations is not accurate for the North Vineyard Greens Unit 1 project and does not consider the other proposed projects. The three proposed subdivision maps include approximately 735 dwelling units. This is approximately twice as many dwelling units as estimated for the North Vineyard Greens Unit 1 project. The estimated impact described in the District comments would be about double for the three proposed projects combined.

Established case law, *Goleta Union School District vs. The Regents of the University of California* (36 Cal-App. 4<sup>th</sup> 1121, 1995), indicates that school overcrowding, standing alone, is not a change in the physical conditions, and cannot be treated as an impact on the environment. Furthermore, 2 new school sites are proposed as part of the NVSSP, 2 new school sites are proposed in the Vineyard Springs Comprehensive Plan area to the south, and 3 new school sites are proposed in the Florin-Vineyard Community Plan area to the west and south.

The Project will be subject to a residential development fee in accordance with Senate Bill 50, collected by the school district to obtain revenue for capital facilities. The current residential development fee is \$3.95 per square foot and became effective on July 7, 2004. The District must update the School Facilities Needs Analysis annually; therefore the residential development fee is subject to change annually. At the time a building permit is applied for, the development will be subject to the residential fee in place. This fee description is included in the "Requests/Requirements of Various Agencies" section of this report.

The project is not considered to have a significant environmental impact related to school services.

#### *PARKS*

The project site is located within the Southgate Recreation and Park District. The District reviewed the proposed project and submitted comments regarding parkland and open space dedication. The comments from the District are included as Appendix F of this report.

The Sacramento County Land Division and Site Improvement Review (LDSIR) staff (Parker) reviewed the proposed project and provided the following comment regarding park land dedication:

Prior to recordation of a final map or certificate of compliance, dedicate land or pay in lieu fees, or both, for park purposes, as required by and in accordance with the procedures and standards set forth in Chapter 22.40, Title 22 of the Sacramento County Code.

Several park and open space sites are dedicated in the NVSSP area. Open space is proposed under the electrical transmission line corridor and around Gerber Creek as described in the Project Description chapter of this report. None of the NVSSP park sites are located in the Project area. Impacts of the NVSSP on parks and recreation were analyzed in the FEIR. The FEIR concluded that no environmentally significant impacts to recreational opportunities for existing and future residents are expected. The proposed project is not expected to result in significant environmental impacts related to park facilities or the provision of park services.

## CONCLUSION

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The public services impacts of the proposed North Vineyard Station Specific Plan area development were analyzed as part of the NVSSP EIR. The development of the proposed North Vineyard Greens Unit 1, 3, and Gosal Estates project is expected to increase the demands on public services over the existing use, but not beyond service capacity planned for in the NVSSP. Service providers have reviewed the project and provided specific comments and requirements as noted in this section. Given that the project is developed in accordance with the applicable County standards and service provider requirements, impacts associated with public services are expected to be less than significant.

## MITIGATION MEASURES

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None recommended.

# 5 TRAFFIC AND CIRCULATION

## INTRODUCTION

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This chapter describes the potential project impacts related to site access, circulation, and traffic on existing and proposed driveways, roads and intersections.

## SETTING

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The Project site is located in the western half of the NVSSP area, north of Gerber Road, south of Florin Road, on each side of the Central California Traction Railroad (CCTR), approximately 4,000 feet west of Bradshaw Road and approximately 2,000 feet east of Elk Grove-Florin Road. The Project includes the North Vineyard Greens Unit 1, Unit 3, and Gosal Estates subdivision sites. The North Vineyard Greens Unit 1 site extends from Gerber Road to Florin Road and is bisected by the CCTR. The North Vineyard Greens Unit 3 site extends from Gerber Road to beyond Gerber Creek and connects to the Unit 1 site to the east. The Gosal Estates site is located on the north side of Gerber Road between Elk Grove-Florin Road to the west and the Central California Traction Railroad to the east. A gravel driveway runs along the west side of the Gosal Estates site providing access to this parcel and the two parcels to the north with existing residences. All three subdivision project sites are bordered on the south by Gerber Road and the North Vineyard Greens Unit 1 site is bordered on the north by Florin Road.

The adopted North Vineyard Station Land Use Diagram includes a planned network of major roads through the Specific Plan area. Several of these roads are located within the proposed Project subdivisions. The proposed Project does not include any changes to the Specific Plan road configuration. Each of the three subdivision maps also includes the network of minor streets to access the proposed lots. The North Vineyard Greens Unit 1 subdivision includes 30 new public streets and courts. The North Vineyard Greens Unit 3 subdivision includes 16 new public streets and courts. Many of these proposed roads connect to off-site proposed developments within the Specific Plan area. The Gosal Estates project is a proposed condominium development with internal private access drives. Access to the two residential properties north of Gosal Estates will be maintained by use of the new private drives.

## IMPACTS AND ANALYSIS

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### ACCESS

The Sacramento County Land Division and Site Improvement Review (LDSIR) staff (Parker) reviewed the proposed North Vineyard Greens Unit 1, North Vineyard Greens Unit 3, and Gosal Estates projects and provided the following recommended conditions of approval:

#### *NORTH VINEYARD GREENS UNIT 1*

Grant the County right-of-way for Gerber Road and Waterman Road, based upon a ~~84-foot standard~~ 72-foot modified arterial (the six-foot meandering sidewalk shall be installed in an adjacent pedestrian/landscape/public utility easement)<sup>1</sup> and agree to pay for installation of public street improvements pursuant to the Sacramento County Improvement Standards on a prorated basis according to street frontage.

Dedicate right-of-way for the indicated streets, and install public street improvements pursuant to the Sacramento County Improvement Standards.

Portions of this tentative map north of Gerber Creek are dependent on adjacent development for access. Off-site road easements may be necessary to develop these portions of this map.

Dedicate a standard 12.5-foot Public Utility Easement for underground facilities and appurtenances adjacent to all public ways, private drives and/or Irrevocable Offer of Dedication (IOD).

The applicant shall annex the subject properties to the County of Sacramento, Community Facilities District 2004-5 to support the maintenance of the landscaped frontage. The applicant shall dedicate the landscaped lots with landscape improvements to the County of Sacramento. In the event the project is not able to annex, the applicant shall provide a maintenance entity with a funding source in perpetuity acceptable to the County of Sacramento.

Prior to recordation of a final map or certificate of compliance, dedicate land or pay in lieu fees, or both, for park purposes, as required by and in accordance with the procedures and standards set forth in Chapter 22.40, Title 22 of the Sacramento County Code.

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<sup>1</sup> Condition revised per County DOT condition to include 6-foot sidewalks within easements adjacent to roadways.

If phasing of this project is proposed, with units being divided along major streets designated Waterman Road within this tentative map, the first unit constructed will be required to build all class A improvements within it's boundary plus the landscape median and 17 feet of pavement for the lanes outside the unit.

Grant the County right-of-way for Florin Road, based on a 108-foot standard and install public street improvements pursuant to the Sacramento County Improvement Standards.

Provide off-site right-of-way for "L" Street and install partial improvements per 4-8 of the Improvement Standards for a 50-foot total width, and for "7" Court to a 40-foot width.

Construct taper for off-site portion of "L" Street and Florin Road per 4-12 drawing in the Improvement Standards.

*NORTH VINEYARD GREENS UNIT 3*

**LARGE LOT TENTATIVE MAP RECOMMENDED CONDITIONS:**

Prior to recordation of a final map or certificate of compliance, dedicate land or pay in lieu fees, or both, for park purposes, as required by and in accordance with the procedures and standards set forth in Chapter 22.40, Title 22 of the Sacramento County Code.

The final map shall show an Irrevocable Offer of Dedication (IOD).

Dedicate a standard 12.5-foot Public Utility Easement for underground facilities and appurtenances adjacent to all public ways, private drives and/or Irrevocable Offer of Dedication (IOD).

Obtain off-site private road easements to serve parcels 1 and 2; or, obtain off-site road right-of-way over "1" Street to Waterman Road or Gerber Road. Either option must be complete prior to recordation.

If private road option is used, record a private road maintenance agreement for all affected parcels.

Construction of the private street(s) shall be a standard of 2 inches of asphaltic concrete over a minimum of 6 inches aggregate base to a 20-foot section width, including adequate turnaround facilities at the end of the road. Secure approval of a civil engineered site improvement plan from the LD&SIR Section of the Public Works Agency for construction of the private road.

**REZONE AND TENTATIVE SUBDIVISION MAP RECOMMENDED CONDITIONS:**

Grant the County right-of-way for Gerber Road, based on a ~~84-foot standard~~ 72-foot modified arterial (the six-foot meandering sidewalk shall be installed in an adjacent pedestrian/landscape/public utility easement)<sup>2</sup> and install public street improvements pursuant to the Sacramento County Improvement Standards.

Dedicate right-of-way for the indicated streets, and install public street improvements pursuant to the Sacramento County Improvement Standards.

Dedicate a standard 12.5-foot Public Utility Easement for underground facilities and appurtenances adjacent to all public ways, private drives and/or Irrevocable Offer of Dedication (IOD).

Prior to recordation of a final map or certificate of compliance, dedicate land or pay in lieu fees, or both, for park purposes, as required by and in accordance with the procedures and standards set forth in Chapter 22.40, Title 22 of the Sacramento County Code.

Obtain off-site road right-of-way for “1” Street from lots 68 and 69 to either Waterman Road or Gerber Road prior to recording of final map for area north of Gerber Creek.

The applicant shall annex the subject properties to the County of Sacramento, Community Facilities District 2004-5 to support the maintenance of the landscaped frontage. The applicant shall dedicate the landscaped lots with landscape improvements to the County of Sacramento. In the event the project is not able to annex, the applicant shall provide a maintenance entity with a funding source in perpetuity acceptable to the County of Sacramento.

*GOSAL ESTATES*

Grant the County right-of-way for Gerber Road, based on a ~~84-foot standard~~ 72-foot modified arterial (the six-foot meandering sidewalk shall be installed in an adjacent pedestrian/landscape/public utility easement)<sup>3</sup> and install public street improvements pursuant to the Sacramento County Improvement Standards.

Dedicate a standard 12.5-foot Public Utility Easement for underground facilities and appurtenances adjacent to all public ways, private drives and/or Irrevocable Offer of Dedication (IOD).

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<sup>2</sup> Condition revised per County DOT condition to include 6-foot sidewalks within easements adjacent to roadways.

<sup>3</sup> Condition revised per County DOT condition to include 6-foot sidewalks within easements adjacent to roadways.

Any security gates shall comply with 16.70 of the Sacramento County Code which requires access for emergency service providers. Provide sufficient area at the entry gate to allow two cars. The geometrics of the entry design shall be approved by the Transportation Division of the Public Works Agency.

Park in lieu fees for multiple family lots shall be paid upon approval of final development plan as set forth in Section 201-04(1) of the Sacramento County Zoning Code for development plan review.

The Sacramento County Department of Transportation (DOT) staff (Urquhart) reviewed the proposed project and recommends the following conditions regarding right-of-way, access, and improvement requirements:

*RECOMMENDED CONDITIONS RELATED TO ALL THREE SUBDIVISION MAPS*

Grant the County right-of-way on Gerber Road, based on a 72-foot modified arterial (the six-foot meandering sidewalk shall be installed in an adjacent pedestrian/landscape/public utility easement) and install public street improvements pursuant to the North Vineyard Station Specific Plan, the Sacramento County Improvement Standards, and to the satisfaction of the Department of Transportation.

Dedicate the landscaped lots to the County of Sacramento and provide a maintenance entity with an ongoing funding source. The maintenance entity shall be approved and found acceptable by County representatives. Annexation to a current Lighting and Landscape District or a Mello Roos Community Finance District may be possible and is the preferred course of action.

Visibility easements shall be included where needed per the Sacramento County Improvement Standards and to the satisfaction of the Department of Transportation. Visibility easements will be determined at time of improvement plan submittal.

*NORTH VINEYARD GREENS UNIT 1 SPECIFIC CONDITIONS*

Grant the County right-of-way on Florin Road, based on a 96-foot modified thoroughfare (the six-foot meandering sidewalk shall be installed in an adjacent pedestrian/landscape/public utility easement) pursuant to the North Vineyard Station Specific Plan, the Sacramento County Improvement Standards, and to the satisfaction of the Department of Transportation.

Dedicate additional right-of-way on Florin Road and L Way for intersection widening per the Sacramento County Improvement Standard Drawing 4-5 and to the satisfaction of the Department of Transportation. Note: A bus turnout will be required on Florin Road.

Dedicate additional right-of-way on Gerber Road and 2 Street for intersection widening per the Sacramento County Improvement Standard Drawing 4-6B and to the satisfaction of the Department of Transportation. Note: A bus turnout will be required on Gerber Road.

Dedicate additional right-of-way on Waterman Road and 6 Street for intersection widening per the Sacramento County Improvement Standard Drawing 4-6B and to the satisfaction of the Department of Transportation. Note: A bus turnout will be required on Waterman Road.

Grant the right of direct vehicular access to the County of Sacramento along Florin Road, Gerber Road, and Waterman Road except for approved street and driveway locations to the satisfaction of the Department of Transportation.

The spacing between 2 Street and the nearest proposed street to the west must be a minimum of 420 feet apart in order to accommodate two left turn pockets on Waterman Road.

Show the required raised median on the Waterman Road street section.

No more than 100 units with access to L Way shall be constructed until there is a second point of access.

Grant the County right-of-way on Waterman Road, based on a 72-foot modified arterial (the six-foot meandering sidewalk shall be installed in an adjacent pedestrian/landscape/public utility easement) and install public street improvements pursuant to the North Vineyard Station Specific Plan, the Sacramento County Improvement Standards, and to the satisfaction of the Department of Transportation.

All pedestrian access ramps must be installed/upgraded pursuant to the State of California Title 24 Code of Regulations and to the satisfaction of the Department of Transportation.

Traffic control devices shall be installed where needed to the satisfaction of the Department of Transportation. Traffic control locations will be determined at time of improvement plan submittal.

*NORTH VINEYARD GREENS UNIT 3 SPECIFIC CONDITIONS*

Grant the County right-of-way on Waterman Road, based on a 72-foot modified arterial (the six-foot meandering sidewalk shall be installed in an adjacent pedestrian/landscape/public utility easement) and install public street improvements pursuant to the North Vineyard Station Specific Plan, the Sacramento County Improvement Standards, and to the satisfaction of the Department of Transportation.



Install Type 2 curb, gutter, and sidewalk along all open space and drainage easement areas pursuant to the County of Sacramento Improvement Standards and to the satisfaction of the Department of Transportation.

The proposed public street entrance from Gerber Road shall be a minimum of 50 feet in width for a distance of 100 feet pursuant to the County of Sacramento Improvement Standards and to the satisfaction of the Department of Transportation.

The "L" Street entrances (east and west) from Waterman Road shall be a minimum of 50 feet in width for a distance of 100 feet pursuant to the County of Sacramento Improvement Standards and to the satisfaction of the Department of Transportation.

Provide an adequate turnaround at the west end of the proposed residential street near lots 25 and 26 pursuant to the Sacramento County Improvement Standards and to the satisfaction of the Department of Transportation.

Traffic control devices shall be installed where needed to the satisfaction of the Department of Transportation. Traffic control locations will be determined at time of improvement plan submittal.

*GOSAL ESTATES SPECIFIC CONDITIONS*

The size, number, and location of driveways shall be to the satisfaction of the Department of Transportation. Note: Driveway widths of 45 feet shall be provided on Gerber Road.

Grant the right of direct vehicular access to the County of Sacramento along Gerber Road except for the approved driveway location to the satisfaction of the Department of Transportation.

Stop signs shall be installed where needed to the satisfaction of the Department of Transportation. Traffic control locations will be determined at time of improvement plan submittal.

The site design does not accommodate access control gates as shown. If access control gates are to be added at any time in the future, they must be designed to the satisfaction of the Department of Transportation, the Planning and Community Development Department, the county Sanitation District 1, the Sacramento County Sheriff's Department and the Fire Prevention Bureau of the fire district/department having jurisdiction.

Construction of street improvements to County standard should ensure that adequate access is maintained. Project impacts related to access of the project site are expected to be less than significant. No mitigation measures are recommended.

## TRAFFIC GENERATION

The NVSSP FEIR evaluated the traffic and circulation impacts associated with the development of the specific plan area. The FEIR identified a significant and unavoidable impact related to traffic and circulation resulting from the cumulative development of the area.

With minor exceptions, the North Vineyard Greens Unit 1, 3, and Gosal Estates project sites are consistent with the NVSSP land use plan. The North Vineyard Greens Unit 1 project proposes two amendments to the Specific Plan, totaling 5.8 acres, from non-residential designations (public facilities and stormwater detention) to Single Family Residential (3-5) designation. The Specific Plan also designates 1.7± acres of the site, in the area of proposed lots #377, 113, and 114 as a water treatment plant. In total, the site plan includes 7.5± acres of single-family residential development, zoned RD-5, that is designated for non-residential uses in the Specific Plan. Approximately 37 additional residential lots could result from these changes to the Specific Plan. Therefore, an increase in the planned traffic generation potential of the site would occur.

The Sacramento County Department of Transportation (Darrow) submitted the following comment related to the traffic/circulation impacts of the project:

The latest map of Unit 1 continues to propose that 1 Street and 2 Street no longer intersect at Waterman Road in one signalized location. Since this is a modification to the Specific Plan, the Department of Transportation recommends that a focused traffic/circulation analysis for the cumulative conditions be prepared and included in this Supplemental DEIR. This focused analysis should analyze the revised intersection volumes and recommend revised lane configurations and controls for the Waterman Road intersections with 1 Street and 2 Street as well as for the Gerber Road and 2 Street intersection. Please make sure that all recommendations are consistent with the County's Improvement Standards.

The North Vineyard Greens Unit 1 road configuration is consistent with the adopted North Vineyard Station Land Use Diagram (adopted November 4, 1998). Nevertheless, the recommended analysis was performed for the proposed road configuration. Fehr & Peers Transportation Consultants prepared the Waterman Road Collector Road Access Study, dated May 6, 2005 (Appendix G). The study concludes that the Waterman Road/Vineyard Creek North Access ("1" Street) intersection would operate at unacceptable LOS F under cumulative conditions. The Waterman Road/2 Street intersection would operate at acceptable LOS D or E under cumulative conditions. The study recommends traffic signal control to mitigate the unacceptable LOS traffic impact at the Waterman Road/Vineyard Creek North Access intersection. With mitigation, the intersection is expected to operate at LOS A.

The Waterman Road Collector Road Access Study was reviewed by the County Department of Transportation and found acceptable. Mitigation, as proposed in the

study, is included in this report to reduce expected traffic impacts to less than significant.

## CONCLUSION

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The proposed project contributes to the significant and unavoidable traffic impact associated with development of the North Vineyard Station Specific Plan area, as identified in the NVSSP FEIR. Mitigation measures were included in the NVSSP FEIR to improve operating conditions under existing and cumulative conditions.

The Sacramento County Department of Transportation and Land Division and Site Improvement Review recommended conditions of approval related to the on-site traffic and circulation issues of the project. The traffic study prepared for the Waterman Road intersections with 1 Street and 2 Street indicated that a traffic signal is necessary at the Waterman Road/1 Street intersection. Mitigation is included to install the required traffic signal. Impacts of the proposed project on traffic at the Waterman Road/1 Street intersection are considered less than significant with mitigation.

## MITIGATION MEASURES

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### **North Vineyard Greens Unit 1 (03-CZB-SVB-SPP-AHS-0099) and North Vineyard Greens Unit 3 (03-RZB-SVB-SPP-AHS-0141)**

TC-1. Traffic signal control shall be installed at the Waterman Road/1 Street (north access road to Vineyard Creek subdivision) intersection. The main access to the multi-family site shall be located across from 1 Street to create the fourth leg of the intersection.

# 6 AIR QUALITY

## INTRODUCTION

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An air quality analysis was prepared for the previous FEIR for the North Vineyard Station Specific Plan. The FEIR concluded that the Specific Plan project will increase regional concentrations of ozone and could further delay the eventual attainment of state and federal standards. Also, the Specific Plan project's carbon monoxide emissions would contribute to adverse localized air quality conditions at congested intersections. Any reduction in project vehicle trips and emissions would help reduce impacts on air quality; however, basin-wide emissions would increase with the Specific Plan development. Because these emissions would contribute to conditions that already violate air quality standards, effects upon air quality from Specific Plan development were considered significant and unavoidable. Nonetheless, the FEIR included mitigation to reduce regional operational emissions to the extent feasible.

The North Vineyard Greens Unit 1, 3, and Gosal Estates project proposes minor changes to the NVSSP land use plan. Approximately 6 acres of land identified in the NVSSP for public services and stormwater detention are proposed for single family residential. This results in an incremental increase to operational air quality effects of the proposed project. These changes are not expected to contribute to additional regional air quality impacts beyond those already analyzed in the FEIR.

The short-term construction impacts of the proposed project are analyzed in this chapter, as the project-level construction details were unknown at the time of the FEIR air quality analysis. Furthermore, significance thresholds and Air District standard construction mitigation measures have been updated since the time of the FEIR.

## IMPACTS AND ANALYSIS

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The project proposal was reviewed by the Sacramento Metropolitan Air Quality Management District (SMAQMD) (Stafford). The SMAQMD submitted the following comments related to the project:

We recommend that all required street trees be a minimum 24-inch box size. Larger trees provide shade that reduces heat, and are also more attractive to pedestrians for short trips to parks and neighborhood facilities.

If gas appliances are to be installed in the residential units, District staff recommends the use of low NOx (Nitrogen Oxides) furnaces, water heaters, and cooking facilities.

We recommend that the developer install “Energy-Star” labeled roofing materials.

We recommend that the project comply with SMUD Advantage (Tier II or III) energy standards.

The requirements of District Rule 403 – FUGITIVE DUST will apply to any grading/clearing operations for these developments. This Rule is available at the District web site at [www.airquality.org](http://www.airquality.org).

Any architectural coatings used must comply with District Rule 442 – Architectural Coatings. The developer/contractor is required to use coatings that comply with the volatile organic compound content limits specified in Rule 442.

In order to reduce emissions from construction equipment, the District staff is recommending the following measures:

*Category 1: Reducing NOx emissions from off-road diesel powered equipment*

The project shall provide a plan for approval by the County of Sacramento and SMAQMD demonstrating that the heavy-duty (>50 horsepower) off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project wide fleet average 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average; and

The project representative shall submit to the County of Sacramento and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine production year, and hours of use or fuel throughput for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. 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, and name and phone number of the project manager and on-site foreman.

*and*

*Category 2: Controlling visible emissions from off-road diesel powered equipment*

The project shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40

percent opacity shall be repaired immediately, and the County of Sacramento and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this section shall supersede other SMAQMD or state rules or regulations.

District Rule 403 imposes the following limitations:

A person shall take every reasonable precaution not to cause or allow the emissions of fugitive dust from being airborne beyond the property line from which the emission originates, from any construction, handling or storage activity, or any wrecking, excavation, grading, clearing of land or solid waste disposal operation. Reasonable precautions shall include, but are not limited to:

Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the construction of roadways or the clearing of land;

Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts; and

Other means approved by the Air Pollution Control Officer.

The Air District's comment letter and District Rule 403 are included as Appendix H of this ~~Draft~~ Environmental Impact Report.

## AIR QUALITY EMISSION MODEL

In order to determine if the project would singularly result in significant air quality impacts relative to project construction, an air quality emission model was used. The URBEMIS2002 emissions estimation model for land use development projects was developed by Jones & Stokes Associates based on guidance and funding from various California air districts. The model is designed to estimate air emissions from land use development projects, including motor vehicle emissions generated from the land use, construction emissions, and area source emissions. Default information supplied by the model is specific to the air district in which the project is located. The URBEMIS2002 user can enter specific land use information relevant to the project, construction information, operational assumptions, and mitigation measures, as applicable. The model is capable of generating unmitigated and mitigated construction and operational emission estimates.

A project may be deemed to have a significant effect on the environment if it will violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The significance thresholds contained in the SMAQMD *Guide to Air Quality Assessment in Sacramento County* (July 2004) were used in determining project-related air quality impacts. The short-term construction impact threshold is defined as 85 pounds per day (ppd) of NOx.

The URBEMIS2002 model indicated that the project would exceed the 85 ppd NOx threshold for construction emissions. The URBEMIS2002 results are summarized in Table 6-1. The detailed model inputs and results are included as Appendix I of this report. The greatest contributing factor in the model for the estimated construction NOx emissions is the use of off-road diesel trucks for site grading and building construction.

**Table 6-1. Air Quality Emission Model Results**

| Emissions                       | NOx (ppd)       | ROG (ppd)    |
|---------------------------------|-----------------|--------------|
| Construction Emission Estimates |                 |              |
| 2006                            | 134 <u>190*</u> | 22 <u>30</u> |
| 2007                            | 106 <u>163*</u> | 18 <u>26</u> |
| 2008                            | 102 <u>157*</u> | 17 <u>26</u> |
| 2009                            | 98 <u>151*</u>  | 17 <u>26</u> |

\* = exceeds emission threshold

The results of the URBEMIS2002 air quality modeling for the proposed project indicates that the project is expected to exceed the short-term air quality impact threshold established by SMAQMD. Compliance with the Air District standard construction mitigation measures, District Rule 403, and other District recommendations listed above is recommended to ensure the best control of and maximum reduction of project-related air quality impacts.

Since the North Vineyard Station Specific Plan FEIR was published, the standard for particulate matter measuring 10 microns or less (PM<sub>10</sub>) has been revised. The SMAQMD's threshold of significance for dust/PM<sub>10</sub> is now 50 micrograms per cubic meter; it was 275 pounds per day for projects undergoing CEQA review prior to May 2002. The URBEMIS model estimates PM<sub>10</sub> emissions in pounds per day. Calculation of PM<sub>10</sub> emissions under the new standard of 50 micrograms per cubic meter would require use of another computer model. The SMAQMD indicates that construction projects which disturb less than fifteen acres per day, which employ standard dust control measures like those required by the Fugitive Dust Rule, as well as SMAQMD recommended construction vehicle and equipment mitigation are generally not expected

to exceed the CAAQS for PM<sub>10</sub>. The Urbemis model assumed that the project would disturb a total of no more than 45 ~~33~~ acres per day during the site preparation and building construction phases of the project to reduce air quality impacts. Mitigation was included in the Draft Supplemental EIR to limit the total acreage disturbed to 15 acres on any given day. Projects with 15 acres or less of site disturbance daily are generally considered to create a less than significant impact related to fugitive dust PM<sub>10</sub>. The project applicant commented that the mitigation in the DSEIR was infeasible, and the Air District agreed. The Air District does not recommended mitigation to limit the number of disturbed acres per day during construction, but does recommend construction-related mitigation measures is expected to reduce the singular project PM<sub>10</sub> impact to less than significant the extent feasible. However, the project is expected to disturb more than 15 acres per day during development, therefore, the singular project PM<sub>10</sub> impact is considered significant and unavoidable. Also, given the widespread development in the NVSSP area, there is a potential for multiple projects to be developing simultaneously. Even with controls on ~~disturbed acreage as individual projects through recommended mitigation for this project,~~ the cumulative emissions of potentially concurrent development projects would likely result in exceedance of the PM<sub>10</sub> significance threshold. Therefore, dust generation during construction activities is expected to exceed the PM<sub>10</sub> threshold and constitutes a significant impact.

Even with the twenty percent reduction provided by the mitigation recommended by SMAQMD, emissions of NO<sub>x</sub> still exceed the threshold of 85 lbs/day during ~~the first each~~ year of building construction (~~estimated as September to December 2006~~). NO<sub>x</sub> emissions during this construction period are, therefore, considered significant. ~~The remaining air quality impacts of the project are expected to be reduced to less than significant with proposed mitigation.~~

The SMAQMD has established an off-site mitigation fee for projects that exceed the NO<sub>x</sub> threshold for construction. Unlike carbon monoxide, NO<sub>x</sub> is a precursor to regional ozone formation. High ozone levels can occur at great distances from where NO<sub>x</sub> 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 the fees collected 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.

A fee calculation worksheet was used to calculate the fee due for the 2006 building construction NO<sub>x</sub> exceedance. The total off-site mitigation fee due for the North Vineyard Greens Unit 1, Unit 3, and Gosal Estates projects is ~~\$11,968~~ \$261,139. The fee worksheet is included as Appendix J of this report. Mitigation is included to ensure payment of fees. Based on percentage of development area, the fee responsibility for each of the three development projects is as follows: 66% (~~\$7,899~~ \$172,351) for North Vineyard Greens Unit 1; 27% (~~\$3,234~~ \$70,508) for North Vineyard Greens Unit 3; and 7% (~~\$838~~ \$18,280) for Gosal Estates. The NO<sub>x</sub> emissions related to ~~2006~~ construction



activities are considered less than significant with the recommended standard and off-site fee mitigation measures. However, overall construction-related air quality impacts are considered cumulatively significant due to the potential for many other projects in the vicinity undergoing simultaneous construction.

## MITIGATION MEASURES

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### **North Vineyard Greens Unit 1 (03-CZB-SVB-SPP-AHS-0099), North Vineyard Greens Unit 3 (03-RZB-SVB-SPP-AHS-0141), and Gosal Estates (03-RZB-UPP-PMR-AHS-0660)**

- AQ-1. The project shall provide a plan for approval by the County of Sacramento and SMAQMD demonstrating that the heavy-duty (>50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average.
- AQ-2. The project representative shall submit to the County of Sacramento and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine production year, and hours of use or fuel throughput for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. 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, and name and phone number of the project manager and on-site foreman.
- AQ-3. The project shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity shall be repaired immediately, and the County of Sacramento and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance.

Nothing in this section shall supersede other SMAQMD or state rules or regulations.

AQ-4. The following construction-related measures apply to construction activities within the Specific Plan area:

- Water exposed, graded surfaces at least two times per day and if possible, keep soil moist at all times.
- Properly maintain diesel and/or gas fueled construction equipment.
- Water haul roads at least two times per day
- Use low VOC architectural coatings

~~AQ-5. The following mitigation measures will be applied during the grading, earthmoving, and building construction phases of development to reduce PM<sub>10</sub> emissions:~~

- ~~• The maximum actively disturbed area shall not exceed 15 acres on any given day,~~
- ~~• all exposed soil shall be watered at a frequency that keeps soil moist at all times,~~
- ~~• all haul roads shall be watered twice daily,~~
- ~~• at least two feet of freeboard shall be maintained for all trucks hauling soil, and~~
- ~~• Use emulsified diesel or diesel catalysts on applicable heavy duty diesel construction equipment.~~

AQ-5. Comply with the adopted AQ-15 Plan.

AQ-6. No wood burning appliances shall be permitted in new construction within the Specific Plan area. Fireplaces and similar "wood stoves" shall be fueled by natural gas or propane.

~~AQ-4~~ AQ-7. Prior to the approval of improvement plans or the issuance of grading permits, the proponent will submit proof that the off-site air quality mitigation fee of ~~\$11,968~~ \$261,139 has been paid to SMAQMD, and that the construction air quality mitigation plan has been approved by SMAQMD and the lead agency. Based on percentage of development area, the fee responsibility for each of the three development projects is as follows: 66% (~~\$7,899~~ \$172,351) for North Vineyard Greens Unit 1; 27% (~~\$3,234~~ \$70,508) for North Vineyard Greens Unit 3; and 7% (~~\$838~~ \$18,280) for Gosal Estates.

# 7 NOISE

## INTRODUCTION

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Project related noise impacts on existing and future sensitive receptors were evaluated in the NVSSP FEIR. The analysis concluded that residential uses within the Specific Plan area could be adversely affected by noise generated by traffic, railroad operations and new commercial, business/professional, and school uses. The extent to which existing or future residential developments would be affected by these noise sources would depend on the proximity of the developments to the various noise sources. Residential developments close to major roadways were expected to be significantly impacted by traffic noise. Some residential uses located near the railroad track could also be adversely impacted by train operation noise. Future siting of commercial, business/professional, and school uses in proximity to residential uses could also cause noise-related land use compatibility impacts.

This section evaluates transportation-related noise impacts on the proposed project. Noise issues related to development and roadway and railroad traffic are presented and mitigation measures are suggested to minimize or eliminate the potential noise impacts.

## SETTING

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The Project site is located in the western half of the NVSSP area, north of Gerber Road, south of Florin Road, on each side of the Central California Traction Railroad (CCTR), approximately 4,000 feet west of Bradshaw Road and approximately 2,000 feet east of Elk Grove-Florin Road. The Project includes the North Vineyard Greens Unit 1, Unit 3, and Gosal Estates subdivision sites. The North Vineyard Greens Unit 1 site extends from Gerber Road to Florin Road and is bisected by the CCTR. The North Vineyard Greens Unit 3 site extends from Gerber Road to beyond Gerber Creek and connects to the Unit 1 site to the east. The Gosal Estates site is located on the north side of Gerber Road between Elk Grove-Florin Road to the west and the Central California Traction Railroad to the east.

All three subdivision project sites are bordered on the south by Gerber Road and the North Vineyard Greens Unit 1 site is bordered on the north by Florin Road. Most of the Florin Road frontage on the North Vineyard Greens Unit 1 site is proposed as a storm water detention basin. There is one residential lot proposed adjacent to the proposed landscape corridor along Florin Road. The project also proposes a landscape corridor along the Gerber Road frontage of all three subdivision sites. There are 19 proposed single-family residential lots and four proposed multi-family buildings bordering Gerber Road, adjacent to the landscape corridor. The North Vineyard Greens Units 1 and 3

sites include 30 single-family residential lots and 2 multi-family sites adjacent to Waterman Road. A landscape corridor is proposed along both sides of Waterman Road. The North Vineyard Greens Unit 1 subdivision proposes 23 single-family residential lots adjacent to the CCTR right-of-way.

## REGULATORY SETTING

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In order to limit population exposure to physically and/or psychologically damaging noise levels, Sacramento County has established standards and ordinances to control noise.

### GENERAL PLAN NOISE ELEMENT

In accordance with State noise regulations, the Sacramento County General Plan Noise Element sets forth land use compatibility criteria for various community noise levels. For noise generated by transportation noise sources (roads and railroads), the Noise Element specifies that residential land uses are unconditionally compatible with exterior noise levels of up to 60 dB  $L_{dn}$  (day-night average level). The 60 dB  $L_{dn}$  noise level is considered an acceptable noise environment for residential outdoor activities. Where the exterior noise level from transportation sources is between 60 and 75 dB  $L_{dn}$ , the Noise Element specifies that residential uses should be permitted only after careful study and inclusion of noise reduction, or attenuation measures as needed.

An interior noise level criterion of 45 dB  $L_{dn}$  is specified in the Noise Element for residential land uses exposed to transportation noise sources. The intent of this interior noise standard is to provide a suitable environment for indoor communication and sleep.

The following Noise Element policy associated with transportation noise sources is applicable to the current project:

- NO-7. Proposed development of residential land uses should not be permitted: 1) in areas exposed to existing or projected levels of noise from transportation noise which exceed 60 dB to 65 dB  $L_{dn}$  unless the project designs include effective mitigation measures to reduce noise to 60 dB to 65 dB  $L_{dn}$  or less in outdoor activity areas, and 45 dB  $L_{dn}$  or less in indoor areas, and 2) For 5 and 10 acre Agricultural-Residential land use the standard for exterior noise is also 60 dB to 65 dB  $L_{dn}$ . The standard remains at 45 dB  $L_{dn}$  for interior noise levels.

## COUNTY NOISE CONTROL ORDINANCE

The temporary noise resulting from project construction is not subject to Noise Element standards. The County Noise Control Ordinance (Sacramento County Code Chapter 6.68) exempts noise sources associated with construction, demolition, paving, and grading. These activities are not to take place after 8 p.m. or before 6 a.m. on weekdays and 7 a.m. on weekends.

## IMPACTS AND ANALYSIS

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The NVSSP FEIR included the following mitigation measure as a development guideline for future development in the Plan area to ensure that noise impacts are minimized and addressed at the earliest stages of proposed development:

Future noise sensitive residential land uses proposed for development within the future 60 dB  $L_{dn}$  traffic or railroad operation noise contours shall be required to prepare an acoustical analysis and to implement identified noise attenuation measures necessary to ensure compliance with the noise standards of the County General Plan Noise Element.

Acoustical analyses for traffic noise and railroad noise for the North Vineyard Greens Unit 1, Unit 3, and Gosal Estates proposals are described below.

### *TRAFFIC NOISE*

#### **GERBER ROAD**

Gerber Road is currently a two-lane road. The NVSSP EIR includes mitigation to widen Gerber Road from 2 to 4 lanes, with 12-foot travel lanes and 6-foot shoulders (Mitigation Measures TR-4 and TR-9). The expected future traffic volume on Gerber Road is a potential source of traffic noise for the proposed project sites.

The project proposes a 25-foot landscape corridor adjacent to the 72-foot Gerber Road right-of-way required in the North Vineyard Station Specific Plan transportation element. Thirteen residential lots along the south side of the North Vineyard Greens Unit 1 site will be adjacent to Gerber Road. Six residential lots along the south side of the North Vineyard Greens Unit 3 site will be adjacent to Gerber Road. "2" Street, "A" Street, and "F" Street will provide access to these subdivisions from Gerber Road. Four multi-family residential buildings will be located along the south side of the Gosal Estates property, adjacent to Gerber Road. Access to the site will be by a private driveway off of Gerber Road.

The Sacramento County General Plan Noise Element defines the limits of noise exposure for land uses, as described above. The Noise Element indicates that

residential uses are compatible with exterior noise levels of up to 60 dB L<sub>dn</sub> (day-night average level). Where exterior noise levels range between 60 and 75 dB L<sub>dn</sub>, the Noise Element indicates that residential uses should be permitted only after careful study and inclusion of protective measures as needed to satisfy the policies of the Noise Element.

Those policies indicate that exterior noise levels in residential areas should be mitigated such that they do not exceed 60-65 dB L<sub>dn</sub> in outdoor activity areas (Policy NO-7). In addition, an interior noise level criterion of 45 dB L<sub>dn</sub> is applied to residential land uses to provide a suitable environment for indoor communication and sleep.

Noise analysis was conducted as part of the NVSSP FSEIR for the Vineyard Point subdivision, located along Gerber Road. Mitigation Measure NO-2 of the FSEIR requires an 8-foot tall noise barrier along Gerber Road. Mitigation measure NO-2 reads as follows:

A 9-foot tall property line barrier along Bradshaw Road and an 8-foot tall property line barrier along Gerber Road shall be constructed. Sufficient barrier wrap should be provided...

In order to determine if the 8-foot noise barrier along Gerber Road is adequate for the proposed North Vineyard Greens Unit 1, 3, and Gosal Estates project, a noise analysis was performed using the FHWA Traffic Noise Prediction Model (RD-77-108) to evaluate impacts to the project site (noise model results for Gerber Road are included as Appendix K). The Gerber Road predicted future (2015) average daily traffic (ADT) volume of 17,100 vehicles per day, day/night ratio of 83%/17%, 3.5% medium trucks, 2% heavy trucks, and 45 mph speed were input into the model based on the FSEIR. According to the proposed North Vineyard Greens Unit 1 and Unit 3 project tentative subdivision maps and DOT right-of-way requirements for the three proposed projects, the distance from the centerline to the barrier would be 61 feet (36-foot right-of-way half width plus 25-foot landscape corridor). The model was run with three barrier to receiver distances: 10 feet (to outdoor activity areas/back yards), 20 feet (to building exteriors where back yards are adjacent to Gerber Road), and 5 feet (to building exteriors of condos (Gosal Estates) or where side yards are adjacent to Gerber Road).

The predicted Gerber Road traffic noise levels without a noise barrier would be 68-69 dB L<sub>dn</sub> at the outdoor activity areas and building exteriors of lots adjacent to Gerber Road. The noise analysis indicated that an 8-foot barrier would reduce noise levels to 59 dB L<sub>dn</sub> at each receiver. Note that an exterior-to-interior noise level reduction of 20 to 25 dB is generally assumed for residential construction. Achievement of an exterior noise level of 65 dB L<sub>dn</sub> or less at the building exterior would ensure that the interior noise level standard of 45 dB L<sub>dn</sub> or less is achieved. With new construction to current standards, a 25 dB noise reduction is typically achieved. Therefore, exterior noise levels up to 70 dB L<sub>dn</sub> are expected to be adequately reduced by new construction materials.

The noise attenuation expected from an 8-foot sound wall applies only to single-story development on the project site. For any second-story development, the noise model estimates the traffic noise level to be 65-69 dB L<sub>dn</sub> at the 2<sup>nd</sup> story building exterior. As

noted above, General Plan Noise Element standards for interior noise levels are expected to be achieved by modern construction materials for noise levels up to 70 dB.

At the Gosal Estates development, the noise model estimates that the traffic noise level at the building exteriors along Gerber Road would be 69 dB  $L_{dn}$ . Since outdoor activity areas (private yards) along Gerber Road are not a component of the proposed housing, construction materials, as described above, are expected to sufficiently reduce traffic noise to within General Plan standards. According to the noise model, a noise level of 70 dB or less is expected at 56 feet or more from the centerline of Gerber Road. As long as the building exteriors are at least 56 feet from Gerber Road, General Plan standards should be achieved.

Mitigation (consistent with that contained in the NVSSP FSEIR) is recommended to include an 8-foot noise barrier along Gerber Road, except at multi-family residential sites, to comply with General Plan Noise Element standards. The noise barrier should wrap around the corners of streets and driveways accessing Gerber Road to provide sufficient noise attenuation at the outdoor activity areas and buildings on the proposed lots. Wrapping is sufficient where the noise barrier blocks the line of sight between the noise source and the receiver. Mitigation is included in the “Environmental Mitigation Measures” section of this report. Project impacts from traffic noise on Gerber Road are considered less than significant with mitigation.

### **FLORIN ROAD**

Florin Road is currently a two-lane road. The NVSSP EIR includes mitigation to widen Florin Road from 2 to 4 lanes, with 12-foot travel lanes and 6-foot shoulders (Mitigation Measures TR-3 and TR-8). The expected future traffic volume on Florin Road is a potential source of traffic noise for the proposed residential lots at the north end of the North Vineyard Greens Unit 1 site.

The project proposes a 25-foot landscape corridor adjacent to the 96-foot Florin Road modified thoroughfare right-of-way required in the North Vineyard Station Specific Plan transportation element. The proposed North Vineyard Greens Unit 1 subdivision map has only one single family residential lot adjacent to Florin Road. A single row of lots is proposed along “L” Way, extending south from Florin Road, on the west side of the proposed storm water detention basin.

Noise analysis was conducted as part of the NVSSP FSEIR for the Vineyard Creek subdivision, located along Florin Road. Mitigation Measure NO-1 of the FSEIR requires a 7-foot tall noise barrier along Florin Road. Mitigation measure NO-1 reads as follows:

A 7-foot tall property line barrier along Florin Road and a 6-foot tall property line barrier along Waterman Road shall be constructed. Sufficient barrier wrap should be provided...

In order to determine if the 7-foot noise barrier along Florin Road is adequate for the proposed North Vineyard Greens Unit 1 project, a noise analysis was performed using

the FHWA Traffic Noise Prediction Model (RD-77-108) to evaluate impacts to the project site (noise model results for Florin Road are included as Appendix L). The Florin Road predicted future (2015) average daily traffic (ADT) volume of 19,300 vehicles per day, day/night ratio of 83%/17%, 3.5% medium trucks, 2% heavy trucks, and 45 mph speed were input into the model based on the FSEIR. According to the proposed North Vineyard Greens Unit 1 project tentative subdivision map, the distance from the centerline to the barrier would be 73 feet (48-foot right-of-way half width plus 25-foot landscape corridor). The nearest proposed residential lot (#268) to Florin Road has its side yard facing north toward Florin Road. The model was run with two barrier to receiver distances: 12.5 feet (to the building exterior, based on the Zoning Code development standard for side street yards of corner lots), and 25 feet (to the back yard outdoor activity area, based on the proposed 50-foot lot width).

The predicted Florin Road traffic noise levels without a noise barrier would be 67 and 68 dB  $L_{dn}$  at the outdoor activity area and building exterior, respectively, of Lot #268 adjacent to Florin Road. The noise analysis indicated that an 8-foot barrier would reduce noise levels to 59 dB  $L_{dn}$  at each receiver. A 7-foot noise barrier, as indicated in the FSEIR mitigation NO-1, would reduce noise levels to 60 dB at the outdoor activity area and 61 dB at the building exterior. Note that an exterior-to-interior noise level reduction of 20 to 25 dB is generally assumed for residential construction. Achievement of an exterior noise level of 65 dB  $L_{dn}$  or less at the building exterior would ensure that the interior noise level standard of 45 dB  $L_{dn}$  or less is achieved. Exterior noise levels up to 70 dB  $L_{dn}$  may be adequately reduced by construction materials, if the 25 dB reduction is achieved. The 7-foot sound wall would result in traffic noise at residential receptors compatible with exterior noise levels of up to 60 dB and the interior noise level criterion of 45 dB.

The noise attenuation expected from a 7-foot sound wall applies only to single-story development on the project site. For any second-story development on Lot #268, the noise model estimates the traffic noise level to be 67 dB  $L_{dn}$  at the 2<sup>nd</sup> story building exterior with an 8-foot noise barrier. As noted above, General Plan Noise Element standards for interior noise levels are expected to be achieved by modern construction materials for noise levels up to 70 dB.

Mitigation is recommended to include a 7-foot noise barrier along Florin Road to comply with General Plan Noise Element standards. The noise barrier should wrap around the corners of the northernmost lot adjacent to Florin Road to provide sufficient noise attenuation at the outdoor activity area and building on the proposed lot. Wrapping is sufficient where the noise barrier blocks the line of sight between the noise source and the receiver. Mitigation is included in the "Environmental Mitigation Measures" section of this report. Project impacts from traffic noise on Florin Road are considered less than significant with mitigation.



## **WATERMAN ROAD**

Waterman Road is currently a two-lane road that ends approximately 0.5 mile south of Gerber Road. The NVSSP plans for Waterman Road to extend north to Gerber Road, and then through the NVSSP area to Florin Road. Waterman Road will enter the NVSSP area from Gerber Road at a location between the proposed North Vineyard Greens Unit 1 and Unit 3 subdivisions. Waterman Road will continue north through the North Vineyard Greens Unit 3 subdivision, then northeast through the Vineyard Creek and North Vineyard Greens Unit 1 subdivisions, then north again through adjacent properties to Florin Road. The North Vineyard Greens Unit 1 and Unit 3 projects propose a 72-foot wide modified arterial right-of-way with 25-foot landscape corridors and sound walls on both sides of Waterman Road.

The North Vineyard Greens Units 1 and 3 sites include 30 single-family residential lots and 2 multi-family sites adjacent to Waterman Road. The tentative subdivision maps include a sound wall between the residential lots and the landscape corridor along Waterman Road.

Noise analysis was conducted as part of the NVSSP FSEIR for the Vineyard Creek subdivision, located along Waterman Road. Mitigation Measure NO-1 of the FSEIR requires a 6-foot tall noise barrier along Waterman Road. Mitigation measure NO-1 reads as follows:

A 7-foot tall property line barrier along Florin Road and a 6-foot tall property line barrier along Waterman Road shall be constructed. Sufficient barrier wrap should be provided...

In order to determine if the 6-foot noise barrier along Waterman Road is adequate for the proposed North Vineyard Greens Unit 1 project, a noise analysis was performed using the FHWA Traffic Noise Prediction Model (RD-77-108) to evaluate impacts to the project site (noise model results for Waterman Road are included as Appendix M). The Waterman Road predicted future (2015) average daily traffic (ADT) volume of 8,700 vehicles per day, day/night ratio of 83%/17%, 3.5% medium trucks, 2% heavy trucks, and 45 mph speed were input into the model based on the FSEIR. According to the proposed North Vineyard Greens Units 1 and 3 tentative subdivision maps, the distance from the centerline to the barrier would be 61 feet (36-foot right-of-way half width plus 25-foot landscape corridor). The model was run with four barrier to receiver distances: 12.5 feet (to the building exterior, based on side yard width for corner lots), 5 feet (based on minimum side yard width), 10 feet (to the back yard outdoor activity area, based on the proposed 20-foot minimum rear yard setback), and 20 feet (to building exterior, based on 20-foot minimum rear yard setback).

The predicted Waterman Road traffic noise levels without a noise barrier would be 66 and 65 dB  $L_{dn}$  at the minimum (5-foot) setback building exterior and all other receivers, respectively, modeled for lots adjacent to Waterman Road. The noise analysis indicated that a 6-foot barrier would reduce noise levels to 59-60 dB  $L_{dn}$  at each receiver. Note that an exterior-to-interior noise level reduction of 20 to 25 dB is generally assumed for residential construction. Achievement of an exterior noise level

of 65 dB L<sub>dn</sub> or less at the building exterior would ensure that the interior noise level standard of 45 dB L<sub>dn</sub> or less is achieved. With new construction to current standards, a 25 dB noise reduction is typically achieved. Therefore, exterior noise levels up to 70 dB L<sub>dn</sub> are expected to be adequately reduced by new construction materials.

The noise attenuation expected from a 6-foot sound wall applies only to single-story development on lots adjacent to Waterman Road. For any two-story development, the noise model estimates the traffic noise level to be up to 66 dB L<sub>dn</sub> at the 2<sup>nd</sup> story building exterior with a 6-foot noise barrier and minimum (5-foot) setback. As noted above, General Plan Noise Element standards for interior noise levels are expected to be achieved by modern construction materials for noise levels up to 70 dB.

Along Waterman Road, the noise model estimates that the traffic noise level at the building exteriors of the multi-family sites (with minimum 5-foot setback) would be 66 dB L<sub>dn</sub>. Since outdoor activity areas (private yards) along Waterman Road are not expected as a component of the proposed multi-family housing, construction materials, as described above, are expected to sufficiently reduce traffic noise to within General Plan standards. According to the noise model, a noise level of 70 dB or less is expected at 35 feet or more from the centerline of Waterman Road. Given the required total right-of-way width of 72 feet for Waterman Road, the traffic noise level at the edge of the right-of-way is expected to be 70 dB or less.

Mitigation is recommended to include a 6-foot noise barrier along Waterman Road, except at multi-family residential sites, to comply with General Plan Noise Element standards. The noise barrier should wrap around the corners of streets and driveways accessing Waterman Road to provide sufficient noise attenuation at the outdoor activity areas and buildings on the proposed lots. Wrapping is sufficient where the noise barrier blocks the line of sight between the noise source and the receiver. Mitigation is included in the "Environmental Mitigation Measures" section of this report. Project impacts from traffic noise on Waterman Road are considered less than significant with mitigation.

#### *RAILROAD NOISE*

The Central California Traction Railroad (CCTR) does not currently use the railroad tracks that cross through the center of the North Vineyard Greens Unit 1 project site and intersect with Waterman Road. The NVSSP EIR (July, 1997) evaluated the noise impacts associated with use of this railroad. The EIR included analysis by Brown-Buntin & Associates (BBA) that determined the following railroad noise levels:

**Table 7-1. Central California Traction Railroad Noise Levels**

| Train Frequency | Distance to L <sub>dn</sub> Contours (feet) |                       |
|-----------------|---|-----------------------|
|                 | 60 dB L <sub>dn</sub>                       | 65 dB L <sub>dn</sub> |
| 4 per day       | 78  | 36                    |
| 8 per day       | 124   | 57                    |

Historically, up to eight train operations occurred in a 24-hour period. The more recent noise evaluation in the NVSSP Final Supplemental EIR (FSEIR) (October, 2004) assumed two train operations per day. For the railroad operating at two trains per day, the 60 dB L<sub>dn</sub> noise contour was estimated at 60 feet from the train track.

Although the CCTR has not been operated in recent years, this report assumes train operations of 4 trains per day as a conservative estimate between the prior evaluations' frequency of 2 to 8 trains per day. The CCTR right-of-way is 100 feet wide. Therefore, the residential property line is 50 feet from the center of the railroad tracks. At 4 trains per day, the noise at 78 feet from the tracks (28 feet into the residential lots) will be 60 dB L<sub>dn</sub> and the noise level at the property line will be less than 65 dB L<sub>dn</sub>. Therefore, outdoor activities are expected to occur within the 60-65 dB L<sub>dn</sub> noise level area. This is compatible with General Plan noise element standards. Each of the residential lots adjacent to the CCTR right-of-way is sufficiently larger than required for the RD-5 zone so that the buildings can be built outside the 60 dB noise contour. Mitigation is included to ensure that residential buildings are built 28 feet or more from the CCTR right-of-way. Project impacts related to railroad noise are considered less than significant with mitigation.

## MITIGATION MEASURES

### **North Vineyard Greens Unit 1 (03-CZB-SVB-SPP-AHS-0099) and North Vineyard Greens Unit 3 (03-RZB-SVB-SPP-AHS-0141)**

NO-1. Prior to the issuance of any building permits, construct a masonry or concrete noise barrier to a total height of 8-feet (consisting of a 6-foot masonry or concrete wall on top of a 2-foot berm) between the proposed single-family residential lots and the landscaped areas along Gerber Road; construct a masonry or concrete noise barrier to a total height of 7-feet (consisting of a 6-foot masonry or concrete wall on top of a 1-foot berm) between the proposed single-family residential lots and the landscaped areas along Florin Road; and construct a 6-foot masonry or concrete noise barrier between the proposed single-family residential lots and the landscaped areas along Waterman Road. Sound walls are not required adjacent to the multi-family residential sites along Gerber and Waterman Roads. The

Gerber Road and Waterman Road noise barriers should wrap around the corners of streets and driveways accessing Gerber and Waterman Roads to provide sufficient noise attenuation at the outdoor activity areas and buildings on the adjacent lots. The Florin Road noise barrier should wrap around the corners of the northernmost lot adjacent to Florin Road. Wrapping is sufficient where the noise barrier blocks the line of sight between the noise source and the receiver. Tapering of the wall height at intersections will be required for visibility purposes.

**North Vineyard Greens Unit 1 (03-CZB-SVB-SPP-AHS-0099)**

NO-2. Residential buildings built on lots adjacent to the CCTR right-of-way must be located 28 feet or more from the edge of the 100-foot CCTR right-of-way (at least 78 feet from the railroad tracks).

# 8 DRAINAGE AND HYDROLOGY

## INTRODUCTION

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The purpose of the Drainage and Hydrology chapter of the EIR is to assess the potential impacts to the Gerber Creek and Elder Creek watershed associated with construction and operation of the North Vineyard Greens Unit 1, Unit 3, and Gosal Estates project.

The NVSSP Final Master Drainage Plan (Drainage Plan) analyzed the drainage impacts of developing the specific plan area, and identified a series of drainage improvements that need to be completed to allow for plan area development while avoiding on-site flooding and mitigating upstream and downstream impacts.

## BACKGROUND

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As part of the NVSSP planning process, MacKay & Somps Civil Engineers, Inc. (MacKay & Somps), prepared a Drainage Master Plan (DMP), dated January 30, 1998. A preferred Drainage Plan was identified in the NVSSP DMP. A Capital Improvement Program (CIP) and Financing Strategy were also developed as part of the NVSSP. The CIP and Financing Strategy identified cost estimates for the infrastructure and potential funding sources to serve the NVSSP area. Costs associated with drainage were based upon the Preferred Drainage Plan formulated by MacKay & Somps.

The Sacramento County Department of Water Resources (SCDWR) provided guidance on the scope for an NVSSP Drainage Phasing Study. Subsequently, Borcalli & Associates, Inc. (B&A), on behalf of Lennar Communities, Inc., and U.S. Home Corporation, evaluated drainage facilities required to accommodate development of Phase 1A of the NVSSP consistent with the original objectives of the DMP and the SCDWR's criteria. The results of B&A's evaluation are presented in a report entitled, "Technical Memorandum No. 1, North Vineyard Specific Plan, Drainage Phasing Study." dated April 19, 2000. From the results of B&A's evaluation, it was determined by Lennar Communities and U.S. Home Corporation, in consultation with the SCDWR, that constructing features of the Preferred Drainage Plan to accommodate development of Phase 1A, was not financially feasible.

In the interest of developing a financially feasible plan for phasing development within the NVSSP area, B&A, on behalf of Lennar Communities and U.S. Home Corporation, evaluated phasing alternatives. The results of B&A's work are presented in the report entitled, "North Vineyard Station Specific Plan, Drainage Master Plan, Phasing Concept," dated April 10, 2001. The phasing concept developed by B&A, which included pumping from newly constructed detention basins into unimproved channels on

an interim basis, appeared to offer a feasible means of phasing development that would be financially feasible and provide the level of flood protection and mitigation of impacts consistent with Sacramento County's objectives, policies, and standards. The phasing concept outlined in the above-referenced report, would allow deferring the construction of improved drainage channels until sufficient development occurred to generate revenues required to fund the drainage facilities. Since interim pumping of storm drainage was not a component of the Preferred Drainage Plan for the NVSSP area, the concept of interim pumping of storm drainage to phase development was presented to the Sacramento County Board of Supervisors for consideration.

In July 2001, the Board of Supervisors advised SCDWR that interim pumping could be considered in phasing development within the NVSSP area, however, more detailed information was needed before a decision could be made to accept the proposed concept.

On January 15, 2003, Wood Rodgers, Inc. submitted the revised draft Drainage Master Plan Update and Phasing report (revised DMP) to the Sacramento County Department of Water Resources. The January 2003 revised DMP was reviewed as part of the NVSSP FSEIR. The revised DMP concluded that the entire NVSSP area could be developed by implementing the concept of interim storm drainage pumping. Development can be phased with interim pumping, and meet the drainage and flood control objectives, policies, and standards of Sacramento County. Impacts associated with drainage were considered less than significant in the NVSSP FSEIR.

## SETTING

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The North Vineyard Greens Unit 1, 3, and Gosal Estates project sites are located within the Gerber Creek and Elder Creek watershed and FEMA Flood Zone AE as indicated on FEMA Flood Zone Map Panel No. 060262-0330D (July 6, 1998). Gerber Creek crosses the southern portion of the North Vineyard Greens Unit 1 site, and crosses approximately through the center of the North Vineyard Greens Unit 3 site. Approximately 61.4 acres of the North Vineyard Greens Unit 1 site are proposed as open space, including a drainage corridor around Gerber Creek. Likewise, an open space corridor (approximately 10 acres) is proposed around Gerber Creek through the North Vineyard Greens Unit 3 site. Gerber Creek does not cross the Gosal Estates site.

Gerber Creek is a tributary to Elder Creek, and extends 3.5± miles east to a location near the intersection of Florin Road and Excelsior Road, where the creek forms from local drainage channels. Gerber creek is approximately 0.68 miles long through the project site. The confluence with Elder Creek is located 670± feet north of the Gosal Estates site.

## IMPACTS AND ANALYSIS

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Two stormwater detention basins are located on the North Vineyard Greens Unit 1, and Gosal Estates project sites (refer to the North Vineyard Station Specific Plan Land Use Diagram, Plate PD-4 in the Project Description chapter). An approximately 180-foot wide portion of the Gosal Estates site, along the eastern boundary of the property, will make up the southwest corner of a stormwater detention basin. On the North Vineyard Greens Unit 1 site, a stormwater detention basin is planned at the northern end of the site, between Florin Road and the proposed 4 Street. A small strip of buildable land is located on the project site between the detention basin and the proposed 3 Street. The basin will extend off-site onto the property located east of the project site.

The North Vineyard Greens Unit 1 project requests a Specific Plan amendment to change the designation of approximately 0.8 acres of the project site from Stormwater Detention to Single Family Residential 3-5 (refer to Plate PD-5 in the Project Description chapter). This request would not result in a reduction in size of the stormwater detention basin as indicated in the Specific Plan Land Use Diagram. The requested amendment would allow the applicant to develop 5 single-family lots (#236-240, refer to Plate LU-1 in the Land Use chapter) between 4 Street and the proposed detention basin. This request is not expected to impact the planned stormwater detention basin.

Each of the three projects was reviewed for drainage and flooding impacts by the County Department of Water Resources (DWR) staff (Forrest). DWR staff comments are as follows:

### North Vineyard Greens Unit 1, Unit 3, and Gosal Estates projects:

Provide drainage easements and install facilities pursuant to the Sacramento County Floodplain Management Ordinance, Sacramento County Water Agency Code, and Sacramento County Improvement Standards, including any fee required by the Sacramento County Water Agency Code.

Offsite drainage improvements and easements shall be provided pursuant to the Sacramento County Floodplain Management Ordinance, and the Sacramento County Improvement Standards.

Submit to FEMA for a Letter of Map Revision, prior to Building Permit issuance.

A Conditional Letter of Map Revision, pursuant to the Sacramento County Floodplain Management Ordinance, and the Sacramento County Improvement Standards, must be approved by FEMA prior to approval of improvements.

Provide a permanent concrete stamp, or other permanently applied message to the satisfaction of DWR not including paint, which reads "No Dumping-Flows to Creek" or other approved message at each storm drain inlet.

The Water Agency shall compensate developers for the acquisition of land for regionally beneficial off-line peak flow and storm water quality detention basins pursuant to an approved Drainage Master Plan and the Zone 11 Drainage Impact Fee Plan.

- The Agency shall pay fair market value, hereby reserved pursuant to the California Subdivision Map Act, appraised at the date of the filing of the tentative parcel or subdivision map or use permit plus associated carrying costs. The Agency may terminate the reservation due to revised drainage master plan or disagreement of price. In no case will the compensation exceed the per acre value used in the Zone 11 Drainage Impact Fee Plan worksheet [\$100,000 per acre plus ENR inflator since 8/16/04]
- Compensation shall be in the form of a fee credit agreement and reimbursements shall be made pursuant to the Sacramento County Water Agency Code, Section 2.60.
- The credit amount shall be adjusted by an appropriate percentage pursuant to Section 2.55.020 of the Sacramento County Water Agency Code to account for inefficiencies of the system.
- No payment shall be made for land acquisition for basins which only serve the needs of a single developer; such as but not limited to, a detention basin for a storm water pump plant, a basin that mitigates for floodplain reclamation.
- No compensation shall be allowed for interim facilities.
- No credit is allowed for basin land associated with in-fill projects where peak flow attenuation is required, in order to accommodate the limitations of the downstream conveyance, pursuant to Section 9-1 of the County Improvement Standards.

Development within the North Vineyard Station Specific Plan shall implement the improvements described in the NVSSP Final Master Drainage Plan (MackKay & Soms, January 30, 1998), as amended by the NVSSP Drainage Master Plan Update and Phasing, Revised Draft (Wood Rodgers, January 2003), or any subsequent amendment or revision thereof approved by the County Water Resources Department. Such improvements shall be designed and constructed to achieve the primary objectives of the Drainage Master Plan: to provide 10-yr design storm gravity drainage service to developing areas within the Specific Plan Area; to provide 100-yr flood protection to the Specific Plan Area consistent with Sacramento County's standards; to ensure that peak 100-yr flows are not being increased at the City limits; to limit 100-yr runoff peaks and volumes to the capacity of existing Elder Creek improvements downstream of Millbrook Circle; and to provide storm water quality management facilities in compliance with the County's 2003 discharge permit requirements and to the satisfaction of the



County DWR. Construction of the improvements may be phased as outlined in the approved drainage master plans and subject to the approval of the DWR, so long as the project proponent(s) provide hydrologic / hydraulic analyses which demonstrate that the phased improvements are consistent with the objectives of the overall drainage master plans to the satisfaction of the DWR.

Detailed plans for the design and construction of all proposed drainage, flood control and water quality improvements, consistent with the final master drainage plans referenced above shall be submitted to the County DWR for review and approval,

Plans for the design and construction of any joint-use park/detention facilities shall also be subject to the approval of the Southgate Park and Recreation District.

Development within the NVS Specific Plan area shall provide stormwater quality source and treatment measures consistent with the current edition of the City / County Guidance Manual for On-site Stormwater Quality Control Measures.

Implementation of the improvements, or any phase thereof, described in the NVSSP Final Master Drainage Plan (MacKay & Soms, January 30, 1998), as amended by the NVSSP Drainage Master Plan Update and Phasing, Revised Draft (Wood Rodgers, January 2003), or any subsequent amendment or revision thereof approved by the County Water Resources Department, shall comply with the wetland mitigation plan prepared by ECORP Consulting, dated December 31, 2002 and as approved by the US Army Corps of Engineers.

Implementation of the Final Master Drainage Plan and Amendment improvements, or any phase thereof, shall not occur until all necessary permits and / or agreements for the proposed improvements have been obtained from the US Army Corps of Engineers, US Fish and Wildlife Service and California Department of Fish and Game.

Dedicate rights-of-way required for implementation of drainage and parkway / channel corridor improvements, consistent with the requirements of the NVSSP and within the limits of the property being re-zoned.

Off-site rights-of-way necessary to construct required drainage and parkway / channel corridor improvements shall be acquired prior to recordation of any final subdivision map creating buildable lots. Sacramento County shall acquire any such right-of-way not previously acquired by Developer. Developer shall advance funding to the County for acquisition of such right-of-way, if necessary, subject to the receipt of credits and/or reimbursements as provided by the NVSSP PFFP.

Development within the NVSSP area shall construct gravity pipe drainage systems described in the NVSSP Final Master Drainage Plan (MacKay & Soms,

January 30, 1998), as amended by the NVSSP Drainage Master Plan Update and Phasing, Revised Draft (Wood Rodgers, January 2003), or any subsequent amendment or revision thereof approved by the County Water Resources Department, in accordance with the most current County design standards to the satisfaction of Water Resources.

Any fee required by the Sacramento County Water Agency Code shall be set at improvement plan approval, rather than any other time allowed under the vesting map provisions under the State Subdivision Map Act.

North Vineyard Greens Unit 1 specific comments:

Incorporate stormwater quality measures in conformance with applicable County ordinances & standards, and state and federal law and the North Vineyard Station Specific Plan. The area north of Gerber creek and south of the Central California Traction Railroad shall provide separate on-site stormwater quality treatment.

Phase A-2 and B development within the NVSSP area shall be responsible for construction of the following drainage facilities consistent with the NVSSP Drainage Master Plan Update and Phasing and to the satisfaction of the County DWR:

- Detention Pond E26 with connecting outlet pipe (a 22 acre flood control / water quality detention pond with a total volume of 117 acre-feet and outlet pipe to Elder Creek);
- Detention Pond E24A (a 12 acre flood control / water quality detention pond with a total volume of 101 acre-feet, all associated appurtenances - inlet and outlet structures, weirs, maintenance access, landscaping, etc.);
- An interim 10 cfs pump station at Detention Pond E24A;
- Gerber Creek Reach 2A(a) channel and parkway corridor construction from the upstream limits of the proposed Vineyard Creek subdivision downstream to Basin E24A.
- Elder Creek Reach 3 off-site channel improvements from the end of existing off-site channel improvements at Millbrook Circle to the western Specific Plan boundary.
- Elder Creek Reach 1A(a) channel and parkway corridor improvements from the western Specific Plan boundary upstream to the Community Park, connecting to Phase A-2 improvements;

- Gerber Creek Reach 2A(a) channel and parkway corridor improvements from the confluence with Elder Creek upstream to Basin E24A, connecting to Phase A-2 improvements;
- Gerber Creek Reach 2A(b) channel and parkway improvements from the limits of Phase A-2 improvements at Vineyard Creek subdivision boundary upstream to the CCTCRR;
- Gerber Creek crossings at Passalis Lane (east and west).
- It is important to note that the facilities listed above offer flood and water quality mitigation to all of the developing lands combined within Phase A-2 areas, subsequent to Phase A-1 facilities having been constructed. Should the various properties within Phases A-2 and B wish to develop independent from one another ("sub-phase), hydrologic and hydraulic studies will need to be submitted to the DWR by the subject project proponent which demonstrate the extent and scope of required drainage facilities necessary to mitigate said project's drainage impacts consistent with the objectives of the overall drainage master plans to the satisfaction of the DWR.
- Elder Creek Reach 1A(b) channel and parkway corridor from the Community Park boundary to Florin Road;
- Off-site Elder Creek Reach 1B upstream of Florin Road;
- An upgraded / improved CCTC RR crossing of Elder Creek;

North Vineyard Greens Unit 3 specific comments:

Incorporate stormwater quality measures in conformance with applicable County ordinances & standards, and state and federal law and the North Vineyard Station Specific Plan. The area north of Gerber creek shall provide separate on-site stormwater quality treatment.

Phases B and D development within the NVS SP area shall be responsible for construction of the following drainage facilities consistent with the NVSSP Drainage Master Plan Update and Phasing and to the satisfaction of the County DWR:

- Detention Pond E24A (a 12 acre flood control / water quality detention pond with a total volume of 101 acre-feet, all associated appurtenances - inlet and outlet structures, weirs, maintenance access, landscaping, etc.);
- An interim 10 cfs pump station at Detention Pond E24A;

- Gerber Creek Reach 2A(a) channel and parkway corridor construction from the upstream limits of the proposed Vineyard Creek subdivision downstream to Basin E24A.
- Elder Creek Reach 3 off-site channel improvements from the end of existing off-site channel improvements at Millbrook Circle to the western Specific Plan boundary.
- Elder Creek Reach 1A(a) channel and parkway corridor improvements from the western Specific Plan boundary upstream to the Community Park, connecting to Phase A-2 improvements;
- Gerber Creek Reach 2A(a) channel and parkway corridor improvements from the confluence with Elder Creek upstream to Basin E24A, connecting to Phase A-2 improvements;
- Gerber Creek Reach 2A(b) channel and parkway improvements from the limits of Phase A-2 improvements at Vineyard Creek subdivision boundary upstream to the CCTCRR;
- Gerber Creek crossings at Passalis Lane (east and west).
- It is important to note that the facilities listed above offer flood and water quality mitigation to all of the developing lands combined within Phase A-2 areas, subsequent to Phase A-1 facilities having been constructed. Should the various properties within Phases A-2 and B wish to develop independent from one another (“sub-phase), hydrologic and hydraulic studies will need to be submitted to the DWR by the subject project proponent which demonstrate the extent and scope of required drainage facilities necessary to mitigate said project’s drainage impacts consistent with the objectives of the overall drainage master plans to the satisfaction of the DWR.

Gosal Estates specific comments:

Incorporate stormwater quality measures in conformance with applicable County ordinances & standards, and state and federal law and the North Vineyard Station Specific Plan. The area north of Gerber Creek shall provide separate on-site stormwater quality treatment.

Phases B and D development within the NVSSP area shall be responsible for construction of the following drainage facilities consistent with the NVSSP Drainage Master Plan Update and Phasing and to the satisfaction of the County DWR:

- Detention Pond E24A (a 12 acre flood control / water quality detention pond with a total volume of 101 acre-feet, all associated appurtenances - inlet and outlet structures, weirs, maintenance access, landscaping, etc.);
- An interim 10 cfs pump station at Detention Pond E24A;
- Gerber Creek Reach 2A(a) channel and parkway corridor construction from the upstream limits of the proposed Vineyard Creek subdivision downstream to Basin E24A.
- Elder Creek Reach 3 off-site channel improvements from the end of existing off-site channel improvements at Millbrook Circle to the western Specific Plan boundary.
- Elder Creek Reach 1A(a) channel and parkway corridor improvements from the western Specific Plan boundary upstream to the Community Park, connecting to Phase A-2 improvements;
- Gerber Creek Reach 2A(a) channel and parkway corridor improvements from the confluence with Elder Creek upstream to Basin E24A, connecting to Phase A-2 improvements;
- Gerber Creek Reach 2A(b) channel and parkway improvements from the limits of Phase A-2 improvements at Vineyard Creek subdivision boundary upstream to the CCTCRR;
- Gerber Creek crossings at Passalis Lane (east and west).
- It is important to note that the facilities listed above offer flood and water quality mitigation to all of the developing lands combined within Phase A-2 areas, subsequent to Phase A-1 facilities having been constructed. Should the various properties within Phases A-2 and B wish to develop independent from one another ("sub-phase), hydrologic and hydraulic studies will need to be submitted to the DWR by the subject project proponent which demonstrate the extent and scope of required drainage facilities necessary to mitigate said project's drainage impacts consistent with the objectives of the overall drainage master plans to the satisfaction of the DWR.

DWR recommended several conditions of project approval to comply with the requirements of the Drainage Plan. Project development must be in compliance with the NVSSP Final Master Drainage Plan and any amendments to the plan pursuant to Board of Supervisors approval. Development that is consistent with DWR conditions and County standards will ensure that drainage impacts are less than significant.

## MITIGATION MEASURES

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None recommended.

## 9 GRADING AND EROSION

### INTRODUCTION

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This chapter describes the potential project impacts related to grading of the project site and subsequent erosion associated with site development.

### REGULATORY SETTING

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#### GENERAL PLAN CONSERVATION ELEMENT

The following Conservation Element policy associated with erosion control is applicable to the current project:

- CO-13. Roads and structures shall be designed, built, and landscaped so as to minimize erosion during and after construction.

#### EROSION CONTROL

The project will be required to comply with the Sacramento County Land Grading and Erosion Control Ordinance (County Code Ch. 16.44) as described in the Impacts and Analysis section, below.

### IMPACTS AND ANALYSIS

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Future development at the project site could require clearing, grubbing, grading, and excavation of land surfaces to accommodate development of building pads, paved surfaces, and permanent landscaping. Land grading activities associated with development have the potential to affect surrounding properties and cause adverse water quality and siltation impacts to existing drainage systems and watercourses, including Gerber Creek.

Sacramento County (County) enacted the Land Grading and Erosion Control Ordinance (Ordinance) for the expressed purpose of minimizing damage to surrounding properties and public rights-of-way; limiting degradation of the water quality of watercourses; and curbing the disruption of drainage system flow caused by the activities of clearing, grubbing, grading, filling, and excavating land (Sacramento County Code, Title 16, Chapter 16.44). The Ordinance established administrative procedures, minimum

standards of review, and implementation and enforcement procedures for the control of erosion and sedimentation that are directly related to land grading activities.

Sacramento County has obtained a National Pollutant Discharge Elimination System (NPDES) permit from the California Regional Water Quality Control Board (RWQCB). A provision of the NPDES permit is the requirement that Sacramento County develop a Construction Site Management Program (CSMP). The CSMP is intended to help protect the water quality of surface waters by minimizing the amount of sediment runoff from a construction site. This is being accomplished by strict enforcement of the existing County Land Grading and Erosion Control Ordinance.

The applicant may be required to secure permits in accordance with the provisions of the County Land Grading and Erosion Control Ordinance. Because the project is greater than one acre in size, a state permit is required. Therefore, a notice of intent must be filed to obtain coverage under the state General Construction Stormwater Permit. This must be done prior to starting construction. As a condition of the General Permit, a Stormwater Pollution Prevention Plan must also be developed for the project. This program is administered by the State Water Resources Control Board, which can provide all information necessary to complete and file the necessary documents.

The County requires a grading permit for projects that disturb one acre or more (or involve moving 350 cubic yards or more of earthen material). The Municipal Services Agency, Land Division and Site Improvement Review Section administers this permit. Any Preliminary Grading Plans, Improvement Plans, and Building Development Plans that are submitted to the Public Works Agency for this project will be subject to compliance with the standards of the Ordinance. If the project involves building construction then the Building Inspection Division of the Public Works Agency enforces the Ordinance during the construction phase.

The standards of the Ordinance include the appropriate design and placement of erosion and sediment control best management practices (BMPs), as specified in the Sacramento County Guidance Manual for Development of Erosion and Sediment Control Plans (1993). Erosion control BMPs include seeding, mulching, vegetative buffer strips, sod, plastic covering, burlap covering, water and other measures that control the movement of the ground surface or soil. Sediment control measures include dikes, sediment detention traps, sediment detention basins, filters, fences, barriers, swales, berms, drains, check dams, and other measures that control the deposit of soil or earth material.

## CONCLUSION

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The developer of the project site will be responsible for the design and implementation of appropriate erosion and sediment control BMPs in accordance with the Sacramento County Code, Land Grading and Erosion Control Ordinance. Project compliance with



these regulations, as administered by the County Public Works Agency, will ensure that project-related grading and erosion impacts are less than significant.

## MITIGATION MEASURES

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None recommended.

# 10 BIOLOGICAL RESOURCES

## INTRODUCTION

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The North Vineyard Station Specific Plan FEIR indicated that the Specific Plan area contained a variety of biological resources including wetlands, vernal pools, and a variety of plant and animal species. This chapter describes the potential impacts to wetlands, special-status species, and trees related to the development of the proposed North Vineyard Greens Unit 1, Unit 3, and Gosal Estates projects.

## BACKGROUND AND SETTING

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### WETLANDS

Seasonal wetland habitat is typically interspersed within annual grasslands as swales and shallow depressions underlain by slowly permeable soils. Vegetation in these areas is dominated by low-growing grasses and annual herbs including perennial ryegrass, Mediterranean barley, coyote thistle, cat's ear, and hyssop loosestrife. Habitat value to wildlife is only marginally different from the adjacent annual grassland throughout the majority of the year. However, during the wet season, amphibians and reptiles such as Pacific chorus frogs, western toads, and common garter snake are likely to use seasonal wetlands as breeding and/or foraging areas. In addition, birds such as common snipe, greater yellowlegs, and killdeer forage within seasonal wetlands. The undeveloped areas of the project site potentially support wetland habitat.

The following General Plan Conservation Element policy is relevant to the proposed project with respect to wetland resources:

Policy CO-96. Prior to adoption of the mitigation banking ordinance, utilize on a county-wide basis, the adopted interim wetland mitigation/compensation policy: All wetland acreage proposed to be disturbed by any project over which the Board of Supervisors has discretionary approval shall be mitigated/compensated for by either one or a combination of the following methods:

- 1) Preserve or create wetlands sufficient to result in no net loss of wetland acreage, and protect their required watersheds as is necessary for the continued function of wetlands on the project site. The appropriate hearing body shall determine that project design, configuration, and wetland management plan, provide

reasonable assurances that the wetlands will be protected and their long-term ecological health maintained.

- 2) Where a Section 404 Permit has been issued by the Corps of Engineers, or an application has been made to obtain a Section 404 Permit, the Mitigation and Management Plan required by that permit or proposed to satisfy the requirements of the Corps for granting a permit may be submitted for purposes of satisfying paragraph 1, provided a no net loss of wetlands is achieved and, provided, further, that such mitigation and management plan shall be subject to the independent, discretionary approval of the Board of Supervisors.
- 3) Pay to the County of Sacramento an amount based on a rate of \$35,000 per acre for the unmitigated/uncompensated wetlands, which shall constitute mitigation for the purposes of implementing adopted no net loss policies and CEQA required mitigation. The payment shall be collected by the Department of Planning and Community Development at the time of improvement plan or building permit approval, whichever occurs earlier, and deposited into the Wetlands Restoration Trust Fund.

## SPECIAL-STATUS SPECIES

The term “special status” is defined to include those species which are:

- listed (or formally proposed for, or candidates for listing) as “threatened” or “endangered” under the federal Endangered Species Act;
- listed (or candidates for listing) as “threatened” or “endangered” under the California Endangered Species Act;
- designated as “endangered” or “rare” pursuant to California Fish and Game Code Section 1901;
- designated as “fully-protected” pursuant to California Fish and Game Code Sections 3511, 4700, or 5050; or
- designated by the California Department of Fish and Game (CDFG) as a “species of special concern”.

Gerber Creek provides aquatic habitat that may support special-status species including the northwestern pond turtle and the giant garter snake. The undeveloped areas of the project site may also support terrestrial, avian, and wetland invertebrate special-status species.

## TREES

The project site is vegetated with scattered native and non-native trees. Several County policies recognize the value of preserving trees, especially oaks, and seek to protect all native and landmark trees through the development review process. A landmark tree is defined as an especially prominent or stately tree on any land in Sacramento County, including privately owned land.<sup>1</sup> Protected oaks are those living native oak trees (valley oak, *Quercus lobata*; interior live oak, *Quercus wislizenii*; blue oak, *Quercus douglasii*, or oracle oak, *Quercus morehus*) that measure 6 inches or greater in dbh, or multi-trunked trees totaling 10 inches or greater dbh<sup>2</sup>. Other native protected trees include the northern California black walnut (*Juglans californica* var. *hindsii*).

The County Tree Ordinance was established in 1982 to preserve and protect remaining oak trees as significant, integral and outstanding examples of the historical heritage of the County. Section 19.12.150 of the Ordinance grants the approving body the authority to adopt mitigation measures as conditions of approval for discretionary projects in order to protect other species of trees, in addition to the oaks.

The project is also subject to the 1993 County General Plan Conservation Element, Native and Landmark Tree Protection policies. The Native and Landmark Tree Protection section (p. 82) states that it is a County objective to protect and preserve native oaks and landmark tree resources for their historic, economic and environmental values. As noted in this section of the County General Plan, “preservation of native and landmark trees enhances the county’s landscape, increases property values, conserves energy, reduces soil erosion, provides natural wildlife habitat, and preserves natural heritage values.” Due to the on-site trees, the project is subject to the following County General Plan Conservation Element Policies:

- Policy CO-130. Make every effort to protect and preserve non-oak native, excluding cottonwoods, and landmark trees and protect and preserve native oak trees measuring 6 inches in diameter at 4.5 feet above ground in urban and rural areas, excluding parcels zoned exclusively for agriculture.
- Policy CO-134. Mitigate for loss of trees for road expansion and development consistent with County Tree Ordinance and General Plan policies.

The preservation of oak trees enhances natural scenic beauty, sustains the long term potential increase in property values which encourages quality development, maintains the original ecology, retains the original tempering effect of extreme temperatures, increase the attractiveness of the County to visitors, helps to reduce soil erosion,

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<sup>1</sup> County Code, Chapter 19.04, “Tree Ordinance”

<sup>2</sup> *Sacramento County General Plan*, “Conservation Element”; and County Code, Chapter 12.12, Tree Preservation and Protection Ordinance

increases the oxygen output of the area, and increases the overall aesthetic value and environmental quality of land for both humans and wildlife.

Native oaks, when young trees, are very tolerant of their environment and make excellent and adaptable landscape assets. The mature native oak is an invaluable part of our environment, but any substantial change in its environment will weaken a healthy specimen and may eventually kill it. Native oak trees have adapted to the long dry summers of the Sacramento Valley, primarily through the development of their root system. The initial root is a taproot extending deep for more dependable moisture. As the oak grows, the taproot is outgrown by an extensive lateral root system that spreads horizontally out from the trunk to, and well beyond, the dripline. For a mature oak, this horizontal root system is the primary supporter of the tree for the rest of its life. It includes the important feeder roots, which absorb moisture and nutrients. Nearly all of the lateral root system occurs within the top five feet of the soil surface. In shallower soils, the root system is concentrated in even a shallower zone, typically 1 to 2 feet below the surface. As oak trees mature, particularly in the summer-dry Sacramento Valley, deep growing vertical roots form off the laterals, usually within ten feet of the trunk. These are called “sinker” roots and they exploit deeper soil moisture and add stability to an increasingly massive tree. By the time the mature tree has established an elaborate root system designed for its environment and particular site conditions, it has lost the vigor of youth. It is less tolerant to change and/or damage and can less easily support its massive living structure. The activities that are likely to cause significant impacts to mature oak trees are discussed below.

The amount of soil that can be removed from beneath an oak before permanent root damage occurs varies depending on several factors including the individual tree size, species, location, and health. Although small amounts of soils may sometimes be removed without permanently damaging an oak, it is generally recommended that no soil be removed and the area beneath the tree remain undisturbed. The addition of fill and the operation of heavy equipment beneath an oak tree compacts the surface soils, prohibits the natural exchange of gases between the feeder roots and the atmosphere, and also restricts water percolation to the root zone. Excessive moisture may also be trapped by fill, which can cause root and crown rot. There is no guarantee that additional soil can be safely added around a mature oak tree. Arborists usually recommend not tampering with the natural grade within the root zone, using retaining walls where necessary. The major damage done to oaks in fill operations occurs because the soil is first excavated down to firmer and denser layers. Roots are damaged and removed. Then fill and native soil are knitted together in successive layers, each usually compacted to 90% to form a firm base for development.

Paving can cause the same problems associated with soil compaction. Impervious paving, such as asphalt and concrete, prevent water percolation and the exchange of gases between roots, soil and the atmosphere. In addition, paving usually requires excavation to create a stable base and to allow for depth of paving material. This process damages and removes roots, and compacts the soil. Regardless of the type of surface covering, particularly paving, the ideal condition would be for nothing to be placed within a 60-foot radius out from the base of an oak tree.

Mechanical damage to the trunk or limbs of oak trees is very detrimental, especially to older, less vigorous trees. Any wounds that remove bark and penetrate the cambium layer allow an opening for decay-causing organisms. This can weaken a tree to the point of structural failure. The best cure in this case is prevention.

Chemical spills can be directly toxic to the roots. The best way to avoid this type of damage is to prevent vehicles from being parked near a tree and not to store any materials under or near a tree.

Good drainage is very important because oaks need a proper balance of moisture, air, and nutrients to grow and survive. Too much moisture, particularly during the warm growing months when the oak in nature is normally dry, can smother the roots and/or encourage the proliferation of crown and root rot fungus.

Trenching is an often-overlooked cause of oak tree death. Trenching usually occurs when utilities are installed, and can result in severing a significant portion of the total root area from a tree. A single three-foot deep trench at the dripline along one edge of an oak tree will remove approximately 15% of the roots. A similar trench made midway between the dripline and the trunk will remove approximately 30% of the roots. Trenches made within ten (10) feet of a large oak are considered very damaging. Severing any horizontal roots means the loss of any sinker roots that are attached beyond the point of severance. A root loss of 50% or greater usually cause immediate water stress and reduces photosynthesis (food production). Growth is reduced and die back, or death, may result.

Young, healthy, vigorous trees can survive moderate root loss, while large, old, or declining trees may not. Recovery following the shock of severe root loss depends on rapid root replacement. Root growth requires adequate food resources, growth stimulating hormones, water and minerals. If these are available and there are no other restrictive influences or construction impacts, root growth and replacement will generally proceed rapidly. Low or depleted food reserves will delay root replacement. If the soil conditions have been altered by construction, root replacement will be slowed or stopped. A delay in recovery from root loss will result in growth loss, die back or death. The worst time to cut roots is just prior to bud break in the spring because growth hormones are not present in the roots to stimulate root growth. Also, cutting roots later in the spring should be avoided as food reserves have been nearly depleted by leaf growth. Root growth proceeds most rapidly in the summer and fall when top growth has slowed, food reserves are high and growth hormones are present in the roots.

Similarly, other native tree species have adapted to the local environment and are susceptible to damage by activities such as those listed above which impact oaks. The northern California black walnut (*Juglans californica* var. *hindsii*) tree is a rare California native and is listed by the Federal Government as a "Species of Concern." The California Native Plant Society has ranked it as extremely rare (List 1B). All CNPS List 1B plants meet the definition of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Sections. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code and are eligible for state listing. There are only

two existing naturally occurring stands of northern California black walnuts in the state of California (CNPS *Inventory of Rare and Endangered Vascular Plant of California*, p. 174). Mature northern California black walnuts are being lost to urbanization and clearing for agricultural uses.

## IMPACTS AND ANALYSIS

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### WETLANDS

#### **NORTH VINEYARD GREENS UNIT 1**

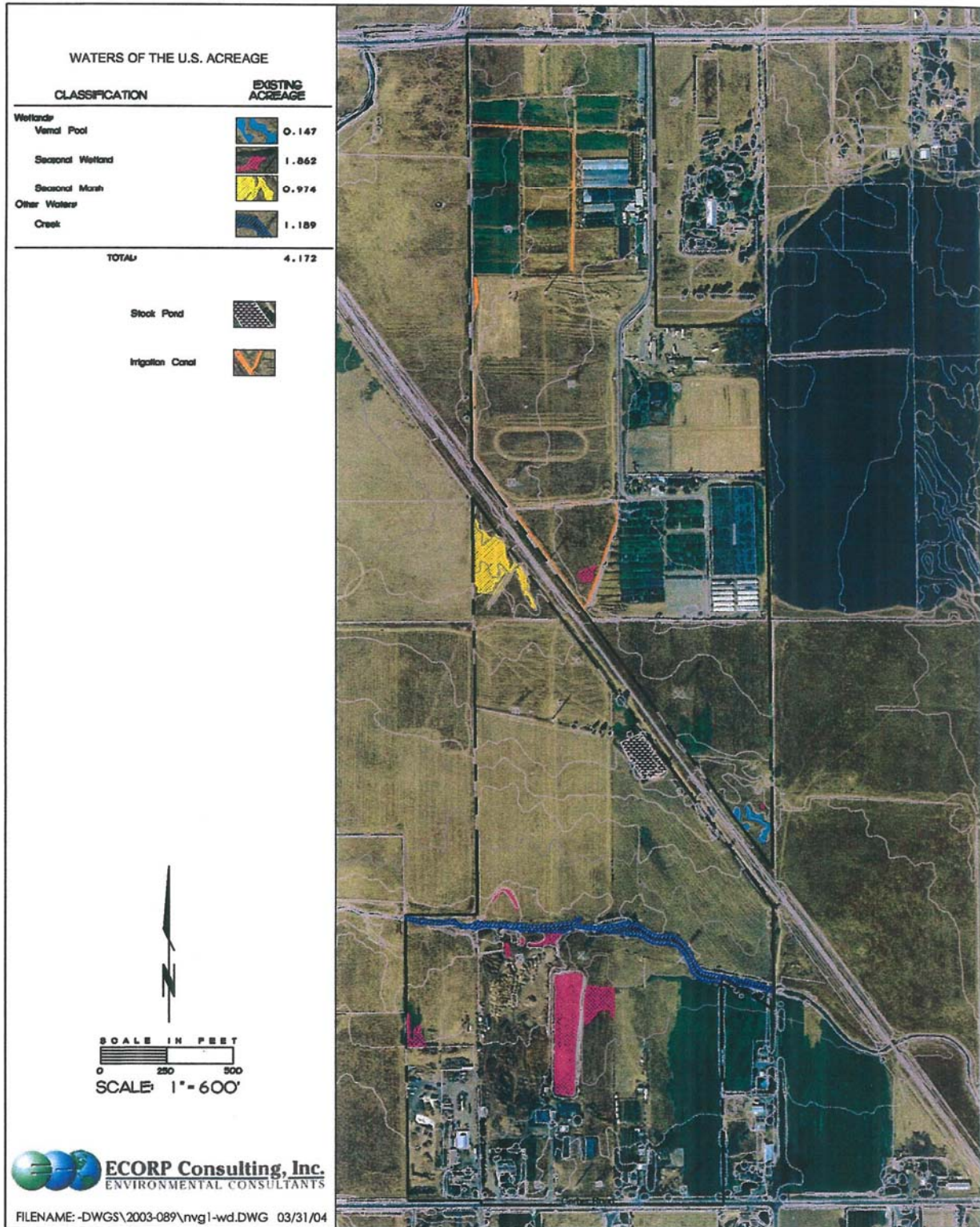
A *Wetland Delineation for North Vineyard Greens Unit #1 Sacramento County, California* was prepared by ECORP Consulting, Inc. in March 2004 and revised in November 2004. The report describes the boundaries of wetlands and “other waters of the United States” that occur within the project under jurisdiction of the U.S. Army Corps of Engineers (ACOE) under Section 4040 of the Clean Water Act. The ECORP report and revision are included as Appendix N of this report. A map of wetlands delineated on the project site is included as Plate BR-1, and in the appendix.

The delineation identified a total of 4.183 acres of jurisdictional wetlands in the 146.7± acre site. The jurisdictional wetlands include 0.150 acre of vernal pools, 1.862 acres of seasonal wetlands, an 0.974-acre seasonal marsh, 1.189 acres of creek classified as “other waters,” and an 0.008-acre seasonal wetland swale. Other non-jurisdictional wetland features identified on the project site include a stock pond and irrigation canals. A listing of the jurisdictional wetlands on the North Vineyard Greens Unit 1 site is included in Table 10-1.

The 1.189-acres of “other waters” consists of the bank to bank extent of the intermittent Gerber Creek. Other waters are non-tidal, perennial, and intermittent watercourses and tributaries to such watercourses. The limit of ACOE jurisdiction for non-tidal watercourses is defined as the ordinary high water mark, generally approximated as the bank to bank extent of the channel. The ECORP delineation makes the following statement regarding the connection of on-site wetlands to interstate or foreign commerce:

Gerber Creek flows westward into Elder Creek, which continues westward into Morrison Creek and ultimately to the Sacramento River, which is a documented navigable water of the U.S. Due to the topography of the site, rainwater collects within the vernal pool, seasonal wetland, and seasonal marsh features on-site and eventually flows into Gerber Creek, or northward into various irrigation canals that are tributary to Elder Creek. Consequently, Gerber Creek and the

**Plate BR-1. North Vineyard Greens Unit 1 Wetland Delineation**





wetlands mapped on-site should be considered connected with and/or adjacent to a Waters of the U.S. and would therefore be subject to interstate and/or foreign commerce.

**Table 10-1. North Vineyard Greens Unit 1 Site Jurisdictional Wetlands**

| <b>Wetland Type</b>                         | <b>Map ID</b>                 | <b>Size (Ac.)</b> |
|---|-------------------------------|-------------------|
| Vernal Pools                                | VP-1                          | 0.101             |
|   | VP-2                          | 0.046             |
|   | VP-3                          | 0.003             |
|   | <b>Vernal Pool Total</b>      | <b>0.150</b>      |
| Seasonal Wetlands                           | SW-1                          | 0.075             |
|   | SW-2                          | 0.004             |
|   | SW-3                          | 0.060             |
|   | SW-4                          | 0.017             |
|   | SW-5                          | 0.008             |
|   | SW-6                          | 0.084             |
|   | SW-7                          | 1.149             |
|   | SW-8                          | 0.631             |
|   | SW-9                          | 0.104             |
|   | <b>Seasonal Wetland Total</b> | <b>1.862</b>      |
| Seasonal Marsh                              | <b>SM-1</b>                   | <b>0.974</b>      |
| Creek                                       | <b>PC-1</b>                   | <b>1.189</b>      |
| Seasonal Wetland Swale                      | <b>SWS-1</b>                  | <b>0.008</b>      |
| <b>On-site jurisdictional wetland total</b> |                               | <b>4.183</b>      |

The ECORP report includes the following conclusion:

Potentially jurisdictional waters of the U.S. mapped include wetlands and other waters. Wetlands consist of vernal pools (0.147 acre), seasonal wetlands (1.862 acres), and seasonal marsh (0.974 acre). Gerber Creek, totaling 1.189 acres, is mapped as other waters. Upon verification by the Army Corps of Engineers, any impact to these features would likely require permitting pursuant to Section 404 and 401 of the federal Clean Water Act, and/or Section 1600-1603 of the California Fish and Game Code (Lake and Streambed Alteration Agreement).

The Wetland Delineation for North Vineyard Greens Unit #1 was verified by the U.S. Army Corps of Engineers in the field on August 12, 2004. The October 21, 2004 revised wetland delineation map reflects changes requested in the field by the Corps and accurately identifies on-site wetland resources (Will Ness, personal communication). The official verification letter from the Corps is pending.

The NVSSP Drainage Master Plan (DMP) emphasizes the enhancement and long-term preservation of the Gerber and Elder Creek corridors' functions and values throughout the Specific Plan area. The impacts of the DMP on Gerber and Elder Creek wetlands were evaluated in the NVSSP FSEIR. Although the creeks will generally remain in their current locations, 12.99 acres of the creeks will be directly or indirectly impacted by proposed deepening and widening. The reconstructed creeks will consist of a low-flow channel, associated channel bottom wetlands, wetland/riparian benches and nesting islands at locations within the NVSSP area.

The proposed DMP design replaces and enhances the acreage, functions, and values of the wetlands to be impacted during construction. The existing channelized creeks will be re-contoured, widened, and deepened to accommodate anticipated storm water flood flows and provide for public safety. The existing channel alignments will be maintained wherever practicable. In order to preserve as much of the existing riparian habitat as possible, portions of the creeks that have significant vegetation have been avoided and incorporated into the final overall channel design. The FSEIR concluded that creek impacts associated with the implementation of the NVSSP DMP are less than significant.

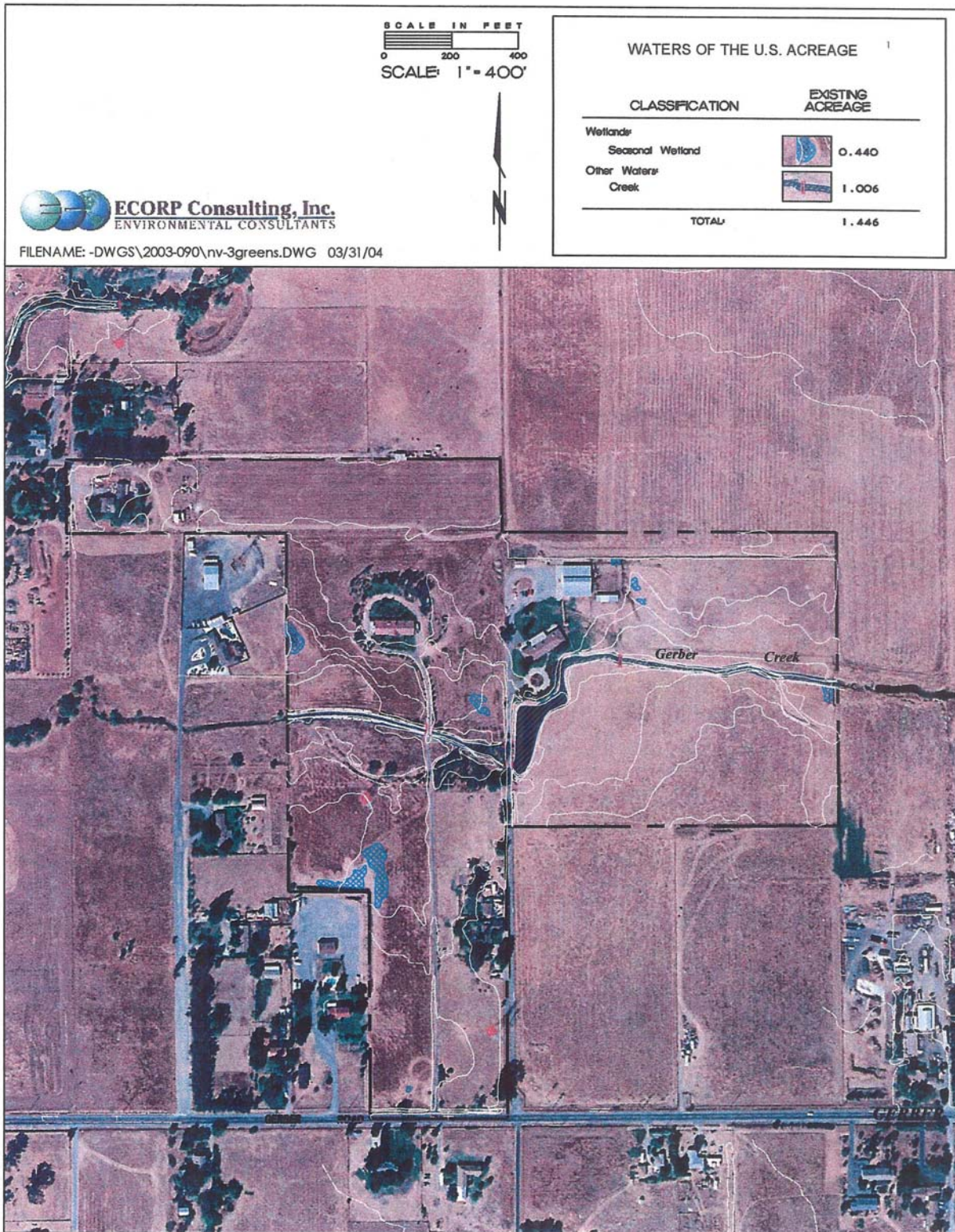
Approximately 1.209 acres of seasonal wetlands (SW-3 and SW-7) and 1.189-acre of Gerber Creek (PC-1) are located on proposed open space lots. Gerber Creek will be preserved and/or enhanced, as described above. The remaining jurisdictional wetlands identified on the North Vineyard Greens Unit 1 site are located in areas of proposed development. Therefore, the project is expected to result in the loss of 0.150 acre of vernal pools, 0.653 acre of seasonal wetlands, 0.974 acre of seasonal marsh, and 0.008 acre of seasonal wetland swale.

### **NORTH VINEYARD GREENS UNIT 3**

*A Wetland Delineation for North Vineyard Greens Unit #3 Sacramento County, California* was prepared by ECORP Consulting, Inc. in March 2004 and revised in November 2004. The report describes the boundaries of wetlands and "other waters of the United States" that occur within the project under jurisdiction of the U.S. Army Corps of Engineers (ACOE) under Section 4040 of the Clean Water Act. The ECORP report and revision are included as Appendix O of this report. A map of wetlands delineated on the project site is included as Plate BR-2, and in the appendix.

The delineation identified a total of 1.448 acres of jurisdictional wetlands in the 49.4± acre site. The jurisdictional wetlands include 0.489 acre of seasonal wetlands, 1.006 acres of creek classified as "other waters," and a 0.003-acre seasonal wetland swale.

**Plate BR-2. North Vineyard Greens Unit 3 Wetland Delineation**



A listing of the jurisdictional wetlands on the North Vineyard Greens Unit 3 site is included in Table 10-2.

**Table 10-2. North Vineyard Greens Unit 3 Site Jurisdictional Wetlands**

| <b>Wetland Type</b>                         | <b>Map ID</b> | <b>Size (Ac.)</b>             |
|---|---------------|-------------------------------|
| Seasonal Wetlands                           | SW-1          | 0.044                         |
|   | SW-2          | 0.095                         |
|   | SW-3          | 0.163                         |
|   | SW-4          | 0.005                         |
|   | SW-5          | 0.079                         |
|   | SW-6          | 0.008                         |
|   | SW-7          | 0.014                         |
|   | SW-8          | 0.006                         |
|   | SW-9          | 0.026                         |
|   | SW-10         | 0.049                         |
|   |               | <b>Seasonal Wetland Total</b> |
| Creek                                       | C-1           | 0.272                         |
|   | C-2           | 0.734                         |
|   |               | <b>Creek Total</b>            |
| Seasonal Wetland Swale                      | <b>SWS-1</b>  | <b>0.003</b>                  |
| <b>On-site jurisdictional wetland total</b> |               | <b>1.448</b>                  |

The 1.006-acres of “other waters” consist of the bank to bank extent of the intermittent Gerber Creek. Other waters are non-tidal, perennial, and intermittent watercourses and tributaries to such watercourses. The limit of ACOE jurisdiction for non-tidal watercourses is defined as the ordinary high water mark, generally approximated as the bank to bank extent of the channel. The ECORP delineation makes the following statement regarding the connection of on-site wetlands to interstate or foreign commerce:

Gerber Creek flows westward into Elder Creek, which continues westward into Morrison Creek and ultimately to the Sacramento River, which is a documented navigable water of the U.S. Due to the topography of the site, rainwater collects within the seasonal wetland, and eventually flows into Gerber Creek. However, SW-2, SW-3, and SW-4 may be considered isolated, as these wetland areas do not appear to be tributary to or adjacent to Gerber Creek. Consequently, Gerber Creek, SW-1, SW-5, SW-6, SW-7, SW-8, and SW-9 should be considered connected with and/or adjacent to a Waters of the U.S. and would therefore be

subject to interstate and/or foreign commerce. SW-2, SW-3, and SW-4 may be, at the discretion of the Corps of Engineers, considered isolated wetlands.

The ECORP report includes the following conclusion:

Potentially jurisdictional waters of the U.S. mapped include wetlands and other waters. Wetlands consist of seasonal wetlands, and other waters include Gerber Creek (1.006 acres). Gerber Creek, SW-1, SW-5, SW-6, SW-7, SW-8, and SW-9 should be considered tributary to and/or adjacent to a Waters of the U.S. and would therefore be subject to interstate and/or foreign commerce. Any impact to these features would require permitting pursuant to Section 404 and 401 of the federal Clean Water Act, and/or Section 1600-1603 of the California Fish and Game Code (Lake and Streambed Alteration Agreement). SW-2, SW-3, and SW-4 may be, at the discretion of the Corps of Engineers, considered isolated wetlands. If the Corps considers these features isolated wetlands, they would not be subject to regulation pursuant to Section 404 of the Clean Water Act.

The Wetland Delineation for North Vineyard Greens Unit #3 was verified by the U.S. Army Corps of Engineers in the field on August 12, 2004. The October 21, 2004 revised wetland delineation map reflects changes requested in the field by the Corps and accurately identifies on-site wetland resources (Will Ness, personal communication). The official verification letter from the Corps is pending.

The project proposes open space lots in the location of 1.006 acres of Gerber Creek (C-1 and C-2) and the 0.003-acre seasonal wetland swale. Gerber Creek will be preserved and/or enhanced, as described above in the "North Vineyard Greens Unit 1" section. The remaining jurisdictional wetlands identified on the North Vineyard Greens Unit 3 site are located in areas of proposed development. Therefore, the project is expected to result in the loss of 0.489 acre of seasonal wetlands from the project site.

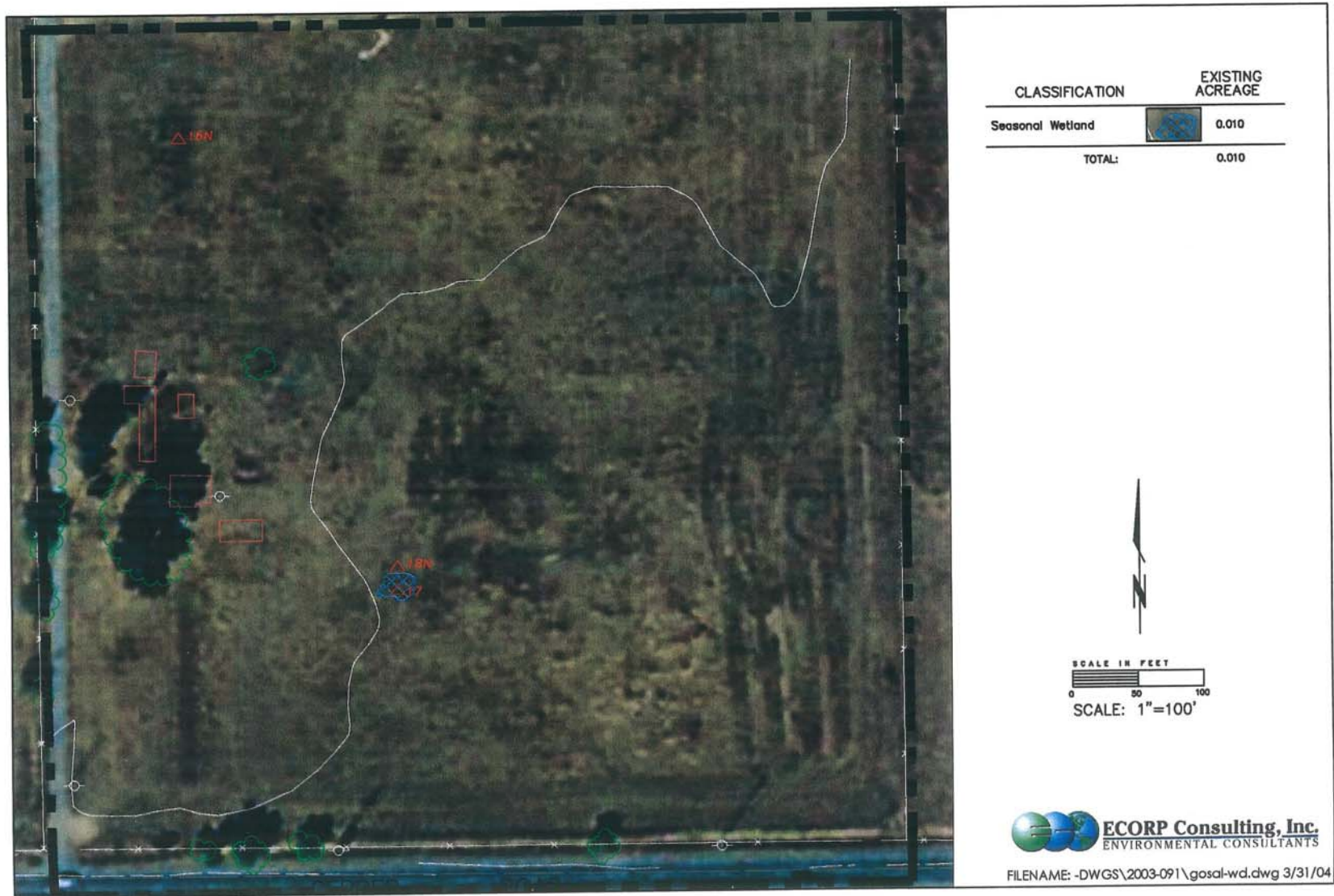
### **GOSAL ESTATES**

A *Wetland Delineation for Gosal Estates Sacramento County, California* was prepared by ECORP Consulting, Inc. in March 2004. The report describes the extent of wetlands that occur within the project under jurisdiction of the U.S. Army Corps of Engineers (ACOE) under Section 4040 of the Clean Water Act. The ECORP report is included as Appendix P of this report. A map of wetlands delineated on the project site is included as Plate BR-3, and in the appendix.

The delineation identified one seasonal wetland (0.01 acre) on the 10.2± acre site. The ECORP delineation makes the following statements regarding the connection of on-site wetlands to interstate or foreign commerce:

During the height of the wet season, accumulations in the wetland area are directed to Gerber Creek via overland sheet flow.

**Plate BR-3. Gosal Estates Wetland Delineation**



Thus, the seasonal wetland mapped on-site is considered connected with and/or adjacent to a water of the U.S. and would therefore be subject to interstate and/or foreign commerce.

The ECORP report includes the following conclusion:

Potentially jurisdictional waters of the U.S. mapped include one seasonal wetland (0.01 acre). Any impact to these features would likely require permitting pursuant to Section 404 and 401 of the federal Clean Water Act, and/or Section 1600-1603 of the California Fish and Game Code (Lake and Streambed Alteration Agreement).

The Wetland Delineation for Gosal Estates was verified by the U.S. Army Corps of Engineers in the field on August 12, 2004. An official verification letter from the Corps was issued on September 1, 2004.

The proposed residential development is expected to result in the loss of the 0.010-acre seasonal wetland from the Gosal Estates site.

#### **ONSITE CONSERVATION ALTERNATIVE**

The United States Environmental Protection Agency (EPA) has proposed an "Onsite Conservation Alternative" that landowners in the NVSSP could use toward achieving compliance with the Clean Water Act (CWA) Section 404(b)(1) Guidelines at 40 CFR 230 (Guidelines). The Onsite Conservation Alternative is based on the land use proposal and mitigation plan described in the NVSSP Drainage Master Plan. Implementation of the Onsite Conservation Alternative is expected to result in natural resource protection and to help ensure the long-term integrity of waters on and off the NVSSP area. The following are key elements of the Onsite Conservation Alternative:

Avoidance and preservation of jurisdictional waters with legally binding stewardship arrangements and land use restrictions established up front.

Preservation of depressional and slope wetlands as a natural open space amenity.

Establishment of appropriate buffer zones along Gerber and Elder Creeks and the depressional/slope wetland preservation area to minimize direct and indirect impacts associated with the proposed development.

Establishment of legally binding, enforceable land-use restrictions and a fully-funded endowment to ensure the perpetual protection and management of the preservation areas.

Onsite enhancement of degraded waters and offsite compensation for remaining unavoidable impacts to wetlands.

The establishment of appropriate buffers along Gerber Creek is the key element of the Onsite Conservation Alternative in relation to the North Vineyard Greens Unit 1 and 3 projects. The EPA comments state that to ensure the hydrologic and habitat functions of Gerber Creek are preserved, the existing preserve corridors should be augmented where necessary to ensure a minimum 100-foot buffer extending outward from the edge of each bank. A minimum buffer width of 100 feet from edge of bank is strongly supported by the scientific literature to maintain the functional integrity of aquatic ecosystems. The EPA adds that trails in the creek corridor should be constructed outside of the 100-foot buffer. The EPA comment letter with the Onsite Conservation Alternative is included as Appendix Q. The project, as proposed, includes an open space buffer around Gerber Creek.

The NVSSP EIR mitigation measures BR-3 and BR-6 provide for the establishment of a Wetland Mitigation Plan and a Drainage Parkway Plan for Elder and Gerber Creeks. The mitigation measures address the cumulative impacts of Specific Plan area development along Gerber Creek. The North Vineyard Greens Unit 1 and 3 projects contribution to the cumulative impacts are, therefore, covered by this prior mitigation. Mitigation measure BR-1 of this report is included to require compliance with the Wetland Mitigation Plan and Drainage Parkway Plan for Elder and Gerber Creeks. The plans were included as part of the permit application to the U.S. Army Corps of Engineers associated with the NVSSP Final SEIR. These plans have been reviewed by the County Board of Supervisors, and approved as part of the FSEIR project.

The combined North Vineyard Greens Unit 1, 3, and Gosal Estates projects result in the loss of 1.152 acres of seasonal wetlands, 0.974 acre of seasonal marsh, 0.150 acre of vernal pools, and an 0.008-acre seasonal wetland swale. In order to assure no net loss of jurisdictional wetland resources and to assure project compliance with Section 404 of the Clean Water Act mitigation measures are included in the "Mitigation Measures" section of this chapter, below.

Compliance with the recommended mitigation measures is expected to reduce cumulative wetland impacts of the project to a less than significant level.

### *SPECIAL-STATUS SPECIES*

Special-status species assessments were prepared by ECORP Consulting, Inc. in March 2004 for the North Vineyard Greens Unit 1, Unit 3, and Gosal Estates project sites. The reports describe the special-status plant and animal species that have the potential to occur on the project site or in the project area. The assessments of potentially occurring special-status plant and wildlife do not constitute determinate-level presence/absence surveys, which should be done during the appropriate season(s) for identifying special-status species. The ECORP reports are included as Appendix R of this Initial Study.

The federal Endangered Species Act of 1973 (50 CFR 17) provides legal protection, and requires definition of critical habitat and development of recovery plans for plant and animal species in danger of extinction. California has a parallel mandate embodied



in the California Endangered Species Act of 1984 and the California Native Plant Protection Act of 1977. These laws regulate the listing of plant and animal species as endangered, threatened, or in the case of plants, rare. The federal Endangered Species Act requires federal agencies to make a finding on all federal actions, including the approval by an agency of a public or private action, such as the issuance of a Section 10/404 permit, as to the potential to jeopardize the continued existence of any listed species potentially/impacted by the action. Section 9 of the federal Endangered Species Act prohibits the “take” of any member of an endangered species. “Take” is defined by the act as, “...to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” USFWS has further defined the terms “harass” and “harm” to include indirect injury through habitat destruction or modification. Section 10(a) of the federal Endangered Species Act permits the incidental “take” of an endangered species if the take is “incidental to, and not the purpose of, the carry out of an otherwise lawful activity.” Species listed by the State are not necessarily protected by the federal protection statutes. Under the State laws, the California Department of Fish and Game is empowered to review projects for their potential impacts to listed species and their habitats.

As a requirement of the Department of Interior, U.S. Fish and Wildlife Service, the following notification is provided to proponents of any project that has the potential to adversely affect threatened or endangered species:

“The applicant is hereby notified of additional conditions as stipulated by the U.S. Fish and Wildlife Service. Features of the applicant’s project may adversely affect federally listed threatened or endangered species. An applicant must go through one of two processes to obtain authorization to take federally listed species incidental to completing his or her project. One of the processes is formal consultation. When the authorization or funding of a Federal agency is an aspect of a project that may affect federally listed species, section 7 of the Endangered Species Act requires the Federal agency to formally consult with the Service. Formal consultation is concluded when the Service issues a biological opinion to the Federal agency. The biological opinion includes terms and conditions to minimize the effect of take on listed species. The Federal agency must make the terms and conditions of the biological opinion into binding conditions of its own authorization to the project applicant. An example of this process is when the U.S. Army Corps of Engineers consults with the Service prior to issuing a permit to fill jurisdictional waters under Section 404 of the Clean Water Act. The terms and conditions of the biological opinion become binding on the project applicant through the Corps’ 404 authorization. When no Federal funding or authorization is involved in a project, an applicant must prepare a habitat conservation plan and obtain a permit directly from the Service in accordance with section 10(a)(1)(B) of the Act. For additional information on these processes please contact the Endangered Species Division of the U.S. Fish and Wildlife Service’s Sacramento Fish and Wildlife Office at (916) 979-2725”.

**PLANTS**

The special-status species assessments identified seven special-status plants that are associated with vernal pools and marshes and may occur on the project sites (Table 10-3). An “X” in the table indicates potential for occurrence in each individual project site. The table also indicates which species are protected as state or federal rare, threatened, or endangered species.

**Table 10-3. Special Status Plant Species**

| Scientific Name                               | Common Name             | NVG Unit 1 | NVG Unit 3 | Gosal Estates | Protected Species |
|---|-------------------------|------------|------------|---------------|-------------------|
| <i>Downingia pusilla</i>                      | dwarf downingia         | X          | X          | X             | No                |
| <i>Gratiola heterosepala</i>                  | Boggs Lake hedge-hyssop | X          | X          | X             | Yes               |
| <i>Juncus leiospermus</i> var. <i>ahartii</i> | Ahart's dwarf rush      | X          | X          | X             | No                |
| <i>Legenere limosa</i>                        | Greene's legenere       | X          | X          | X             | No                |
| <i>Orcuttia tenuis</i>                        | slender Orcutt grass    | X          | X          |               | Yes               |
| <i>Orcuttia viscida</i>                       | Sacramento Orcutt grass | X          | X          |               | Yes               |
| <i>Sagittaria sanfordii</i>                   | Sanford's arrowhead     | X          | X          |               | No                |

Proposed project impacts to vernal pools and marsh areas (refer to the “Wetlands” section of this chapter, above) may impact protected plant species on the project site. Mitigation is included in the “Mitigation Measures” section of this chapter, below, to require determinate-level pre-construction surveys in areas of development to determine project impact to special-status plants and habitats of special-status species.

Permits must be obtained, as necessary, for the take of any protected species per the USFWS, CDFG, or other jurisdictional requirements. Project impacts associated with special-status plants are expected to be less than significant with mitigation.

**INVERTEBRATES**

The special-status species assessments identified four special-status invertebrate species that are associated with vernal pools and seasonal wetlands and may occur on the project sites (Table 10-4). All four of the species were identified as potentially occurring in each of the individual project sites. The table also indicates which species are protected as state or federal rare, threatened, or endangered species.

**Table 10-4. Special Status Invertebrate Species**

| Scientific Name                  | Common Name                | NVG Unit 1 | NVG Unit 3 | Gosal Estates | Protected Species |
|----------------------------------|----------------------------|------------|------------|---------------|-------------------|
| <i>Branchinecta lynchi</i>       | vernal pool fairy shrimp   | X          | X          | X             | Yes               |
| <i>Branchinecta mesoaliensis</i> | midvalley fairy shrimp     | X          | X          | X             | No                |
| <i>Lepidurus packardii</i>       | vernal pool tadpole shrimp | X          | X          | X             | Yes               |
| <i>Linderiella occidentalis</i>  | California linderiella     | X          | X          | X             | No                |

Proposed project impacts to vernal pools and wetland areas (refer to the “Wetlands” section of this chapter, above) may impact protected invertebrate species on the project site. Mitigation is included in the “Mitigation Measures” section of this chapter, below, to require determinate-level pre-construction surveys in areas of development to determine project impact to special-status invertebrate species. Permits must be obtained, as necessary, for the take of any protected species per the USFWS, CDFG, or other jurisdictional requirements. Project impacts associated with special-status invertebrates are expected to be less than significant with mitigation.

### **AMPHIBIANS AND REPTILES**

The ECORP report states that the seasonal wetlands, vernal pools, and adjacent grasslands are potential habitat for western spadefoot toad. The western spadefoot toad is a state and federal species of concern. No state or federally protected amphibian species is expected to occur on the project site.

Two protected reptile species may potentially occur on the project site: the giant garter snake and the northwestern pond turtle (refer to Table 11-5). Both species may occur in and around on-site wetlands, particularly Gerber Creek. Neither of these reptiles was observed on-site, and the occurrence of giant garter snake is considered unlikely because the nearest known occurrence is over four miles southwest of the project site. There is potential for the northwestern pond turtle to occur in the habitat area on-site associated with Gerber Creek. Mitigation is included to conduct a pre-construction survey for special-status reptiles on the project site, with protective measures required if any are found. Project impacts associated with special-status amphibians and reptiles are expected to be less than significant with mitigation.

**Table 10-5. Special Status Amphibians and Reptiles**

| Scientific Name          | Common Name              | NVG Unit 1 | NVG Unit 3 | Gosal Estates | Protected Species |
|--------------------------|--------------------------|------------|------------|---------------|-------------------|
| <i>Spea hammondi</i>     | western spadefoot toad   | X          | X          |               | No                |
| <i>Clemmys marmorata</i> | northwestern pond turtle | X          | X          |               | Yes               |
| <i>Thamnophis gigas</i>  | giant garter snake       | X          | X          |               | Yes               |

**Table 10-6. Special Status Birds**

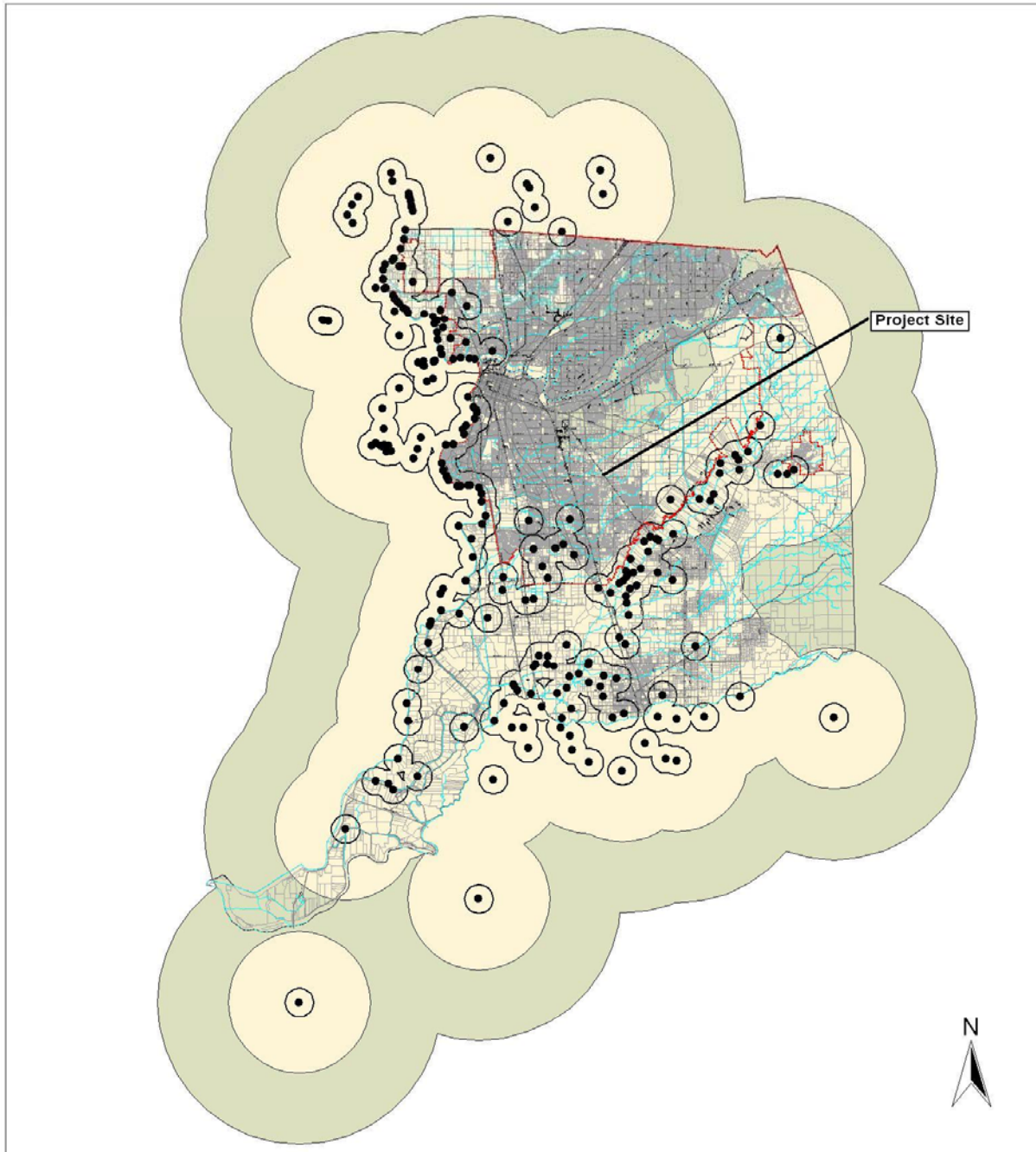
| Scientific Name            | Common Name          | NVG Unit 1 | NVG Unit 3 | Gosal Estates | Protected Species |
|----------------------------|----------------------|------------|------------|---------------|-------------------|
| <i>Accipiter cooperii</i>  | Cooper's hawk        | X          | X          | X             | No                |
| <i>Agelaius tricolor</i>   | tricolored blackbird | X          | X          | X             | No                |
| <i>Aquila chrysaetos</i>   | golden eagle         | X          | X          |               | Yes               |
| <i>Athene cunicularia</i>  | burrowing owl        | X          | X          | X             | No                |
| <i>Buteo regalis</i>       | ferruginous hawk     | X          | X          | X             | No                |
| <i>Buteo swainsoni</i>     | Swainson's hawk      | X          | X          | X             | Yes               |
| <i>Circus cyaneus</i>      | northern harrier     | X          | X          | X             | No                |
| <i>Elanus leucurus</i>     | white-tailed kite    | X          | X          | X             | Yes               |
| <i>Falco columbarius</i>   | Merlin               | X          | X          | X             | No                |
| <i>Lanius ludovicianus</i> | loggerhead shrike    | X          | X          | X             | No                |

**BIRDS**

The species assessments determined that the project site and/or surrounding area includes potentially suitable nesting and foraging habitat for ten special-status bird species (Table 10-6). None of the birds listed were observed during site surveys.

The project site includes 193± acres of suitable foraging habitat for the Swainson's hawk (133.7± acres on the North Vineyard Greens Unit 1 project site; 49.4± acres on the North Vineyard Greens Unit 3 project site; and 10.2± acres on the Gosal Estates project site). Both the Sacramento County Swainson's Hawk Locator Map (Plate BR-4) and the California Natural Diversity Database indicate nest sites between 1 and 5 miles of the project site. Currently, the Swainson's hawk is listed as a threatened species pursuant to the California Endangered Species Act (CESA). At a Federal level, the Swainson's hawk is provided protection under the Migratory Bird Treaty Act (MBTA). Impacts associated with Swainson's hawk include loss of foraging habitat on the proposed project sites.

**Plate BR-4. Sacramento County Swainson's Hawk Locator Map**



Swainson's Hawk nest location data was provided by The California Department of Fish and Game's California Natural Diversity Data Base, September 2002

**County of Sacramento  
Swainson's Hawk Nest Sites**

- Swainson's Hawk Nest Site
- - - Mitigation Boundary
- ▬ Urban Services Boundary
- 1 Mile Radius
- 5 Mile Radius
- 10 Mile Radius
- Parcel Boundary

June 24, 2003

The Swainson's hawk is a large (1.75-2 pounds), broad winged bird-of-prey that frequents open country. It is a long distance migrator, nesting in North America (Canada, western United States, and Mexico) and overwintering in South America. It was estimated that approximately 80% of the total statewide population of breeding pairs are found in the Central Valley (Estep, 1989). Swainson's hawk nests are generally found in scattered trees or along riparian systems adjacent to agricultural fields or pastures. These open fields and pastures are the primary foraging areas. Suitable foraging habitat is necessary to provide an adequate energy source for breeding adults, particularly for the support of nestlings and fledglings. If prey resources are not sufficient, or adults must hunt long distances from the nest site, the excess energy expended in the foraging effort may result in reduced nestling vigor with an increased likelihood of disease and/or starvation, or nest abandonment. A ten-mile radius is generally the maximum flight distance between active and successful nest sites and suitable foraging habitat.

The Swainson's hawk was historically regarded as one of the most common and numerous raptor (bird-of-prey) species in the state. The breeding population has declined by an estimated 91% in California since the turn of the century (Bloom, 1980). This dramatic population decline has been attributed to loss of native nesting and foraging habitat, and more recently to the loss of suitable nesting trees and the conversion of agricultural lands. Due to this precipitous decline, the California Fish and Game Commission in accordance with the California Endangered Species Act (CESA) has classified the Swainson's hawk (*Buteo swainsoni*) as threatened. CESA was passed in 1984 by the State of California to recognize and protect species that are endangered or threatened with extinction within the state of California. The California Endangered Species Act is intended to operate in conjunction with the California Environmental Quality Act (CEQA) to help protect the ecosystems upon which endangered and threatened species depend.

Sacramento, Yolo, and San Joaquin Counties support most of the Central Valley's breeding population of Swainson's hawk. Management and mitigation strategies for this population should be designed to ensure that suitable nesting habitat continues to be available by protecting existing nesting habitat and increasing the number of suitable nest trees. In addition, suitable foraging habitat must be made available by maintaining or creating foraging habitat in areas of existing and potential nest sites and along migration paths.

CDFG recommends implementing the mitigation measures set forth in the CDFG Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California (November 1, 1994). These state that no intensive new disturbances (e.g., heavy equipment operation associated with construction, etc.) should be initiated within ¼ mile of an active Swainson's hawk nest in an urban setting or within ½ mile in a rural setting between March 1 and September 15. The ECORP Special-Status Species Assessment indicated that potentially suitable nesting trees occur throughout the area of the project site for Swainson's hawk and other special-status raptors. As stated above, there are no known Swainson's hawk nest sites

located within 1 mile of the project site. Therefore, construction activities on the project site would not be expected to impact an active nest.

The 1994 guidelines also call for mitigation when there is a loss of foraging habitat as a result of project construction. CDFG has determined that parcels of land 5 acres in size or larger are recognized to be the minimum acreage required for viable foraging habitat.

The project site consists of 193± acres of viable foraging habitat. Project approval of the subdivision would allow parcelization of the project site into parcels less than 5 acres in size resulting in the loss of 146± acres foraging habitat (96± acres on the North Vineyard Greens Unit 1 project site; 40± acres on the North Vineyard Greens Unit 3 project site; and 10± acres on the Gosal Estates project site). Loss of Swainson's hawk foraging habitat as a result of project implementation would contribute cumulatively to a regionally significant impact.

The Board of Supervisors adopted the *Swainson's Hawk Impact Mitigation Program* (Chapter 16.130 of the Sacramento County Code) as a means to provide a mitigation option for loss of foraging habitat within Sacramento County. On June 8, 2005 the Sacramento County Board of Supervisors adopted a revised *Swainson's Hawk Impact Mitigation Program Ordinance*. The ordinance went into effect on July 8, 2005, 30 days after adoption.

The Board of Supervisors found that "the most effective means of mitigation for the loss of suitable Swainson's Hawk foraging habitat is the direct preservation, in perpetuity, of equally suitable foraging habitat on an acre-per-acre basis based on gross project size."

However, mitigation for foraging habitat for the Swainson's hawk is only feasible when replacement habitat is provided within the known foraging radius for the hawk.

Provision of lands for habitat by a project proponent may not always be feasible.

Therefore, the ordinance provides for the establishment of impact mitigation fees for the actual acquisition of foraging habitat. For projects that meet certain criteria, these mitigation fees may be paid in lieu of providing lands for foraging habitat.

For projects that are 40 acres or more in size, the project applicant shall preserve through conservation easement or fee title one acre of similar, suitable habitat for each acre developed. For projects that are under 40 acres in size, such as the Gosal Estates project, the project applicant can preserve one acre of similar, suitable habitat for each acre developed or submit payment of a Swainson's Hawk impact mitigation fee per acre of calculated habitat impacted to the County in the amount established. The amount may be amended from time to time to ensure that the fee will keep pace with the inflation of land prices. Because the North Vineyard Greens Unit 1 and Unit 3 project sites exceed 40 acres, only the land dedication option would apply for mitigation.

The current mitigation fee applicable to the Gosal Estates project site is \$16,000 per acre with an operations/management fee of \$2,375 per acre and a one time administrative fee of \$500.00. The current Gosal Estates proposal is estimated to result in the loss of 10± acres of foraging habitat; therefore, total fees are roughly calculated at \$184,250.

Additionally, the project proponent also has the option of preparing and implementing a Swainson's hawk mitigation plan that will include preservation of Swainson's hawk foraging habitat to the satisfaction of the California Department of Fish and Game in order to mitigate the loss of foraging habitat.

CDFG-recommended mitigation measures require setting aside other lands that provide Swainson's hawk foraging habitat and protecting those lands through fee title acquisition or conservation easement. The amount of land varies based upon the project site's distance from an active nest. The staff report reads as follows:

To mitigate for the loss of foraging habitat (as specified in this document), the Management Authorization holder/project sponsor shall provide Habitat Management (HM) lands to the Department based on the following ratios:

- (a) Projects within 1 mile of an active nest tree shall provide:
  1. one acre of HM land (at least 10% of the HM land requirements shall be met by fee title acquisition or a conservation easement allowing for the active management of the habitat, with the remaining 90% of the HM lands protected by a conservation easement [acceptable to the Department] on agricultural lands or other suitable habitats which provide foraging habitat for Swainson's hawk) for each acre of development authorized (1:1 ratio); or
  2. one-half acre of HM land (all of the HM land requirements shall be met by fee title acquisition or a conservation easement [acceptable to the Department] which allows for the active management of the habitat for prey production on the HM lands) for each acre of development authorized (0.5:1 ratio).
- (b) Projects within 5 miles of an active nest tree but greater than 1 mile from the nest tree shall provide 0.75 acres of HM land for each acre of urban development authorized (0.75:1 ratio). All HM lands protected under this requirement may be protected through fee title acquisition or conservation easement (acceptable to the Department) on agricultural lands or other suitable habitats that provide foraging habitat for Swainson's hawk.
- (c) Projects within 10 miles of an active nest tree but greater than 5 miles from an active nest tree shall provide 0.5 acres of HM land for each acre of urban development authorized (0.5:1 ratio). All HM lands protected under this requirement may be protected through fee title acquisition or conservation easement (acceptable to the Department) on agricultural lands or other suitable habitats that provide foraging habitat for Swainson's hawk.

As noted earlier, active Swainson's hawk nesting habitat is located between 1 and 5 miles of the project site, therefore measure (b) above applies to the project.

The project proponent will need to compensate for loss of Swainson's hawk foraging habitat. This can be done by utilizing the land dedication option contained in the County's *Swainson's Hawk Impact Mitigation Program* or by implementing a mitigation



plan acceptable to CDFG (typically using the guidelines established in the 1994 CDFG Staff Report as listed above or other guidelines established or recommended by CDFG). Mitigation measures that compensate for the loss of Swainson's foraging habitat should reduce singular and cumulative impacts to less than significant levels.

The "Environmental Mitigation Measures" section of this Initial Study provides the mitigation options, consistent with CDFG recommendations. Compliance with the recommended mitigation measures for the loss of Swainson's foraging habitat should reduce singular and cumulative impacts to less than significant levels.

### **MAMMALS**

Gerber Creek and the irrigated pastures on the project site may provide foraging habitat for a variety of special-status bats, listed in Table 10-7. The project site is not likely to provide breeding site habitat for these bats. None of these bat species are protected pursuant to the California or federal Endangered Species Acts, but they are considered species of special concern in California. No impacts to special-status mammal species are expected from the proposed project.

**Table 10-7. Special Status Mammals**

| Scientific Name                | Common Name              | NVG Unit 1 | NVG Unit 3 | Gosal Estates | Protected Species |
|--------------------------------|--------------------------|------------|------------|---------------|-------------------|
| <i>Antrozous pallidus</i>      | pallid bat               | X          | X          | X             | No                |
| <i>Corynorhinus townsendii</i> | Townsend's big-eared bat | X          | X          | X             | No                |
| <i>Myotis ciliolabrum</i>      | small-footed myotis      | X          | X          | X             | No                |
| <i>Myotis yumanensis</i>       | Yuma myotis              | X          | X          | X             | No                |

### *TREES*

Arborist reports were prepared by Sierra Nevada Arborists (McKee) for the North Vineyard Greens Unit 1 and Unit 3 projects (November 20, 2003, updated) and for the Gosal Estates project (June 6, 2003). The reports describe 14 protected native trees, as listed in Table 10-8. The arborist reports are included as Appendix S.

The Sacramento County General Plan Conservation Element Policy CO-130 states that the County "make every effort to protect and preserve non-oak native, excluding cottonwoods, and landmark trees and protect and preserve native oak trees measuring 6 inches in diameter at 4.5 feet above ground [or 10 inches cumulative diameter for multi-stem trees] in urban and rural areas, excluding parcels zoned exclusively for agriculture." A landmark tree is defined as an especially prominent or stately tree on

any land in Sacramento County. The fourteen protected trees identified in the arborist report include native valley oaks (*Quercus lobata*) and northern California black walnuts (*Juglans californica* var. *hindsii*). There are no landmark trees on the project site.

The northern California black walnut tree is a rare California native and is listed by the Federal Government as a “Species of Concern.” The California Native Plant Society has ranked it as extremely rare (List 1B). All CNPS List 1B plants meet the definition of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Sections. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code and are eligible for state listing. There are only two existing naturally occurring stands of northern California black walnuts in the state of California (CNPS *Inventory of Rare and Endangered Vascular Plant of California*, p. 174). Mature northern California black walnuts are being lost to urbanization and clearing for agricultural uses.

Trees #59, 62-64, and 66 are located on the North Vineyard Greens Unit 1 property on proposed Lots 17, 19, “C” Circle, proposed Lot 24, and the proposed water quality basin, respectively (Plate BR-5). All five trees are proposed for removal to accommodate construction of the proposed lots and facilities. Mitigation is included to compensate for the loss of these trees.

Trees #33, 34, and 37 on the North Vineyard Greens Unit 3 site are located on Lots 124, 111, and 136, respectively (Plate BR-6). Lot 136 is an existing residence with no proposed changes. Therefore, tree #37 should be preserved. Trees #33 and 34 are located on proposed Lots 124 and 111, and will need to be removed for home construction. Mitigation is included for the preservation and protection of tree #37 and for compensation for removal of trees #33 and 34.

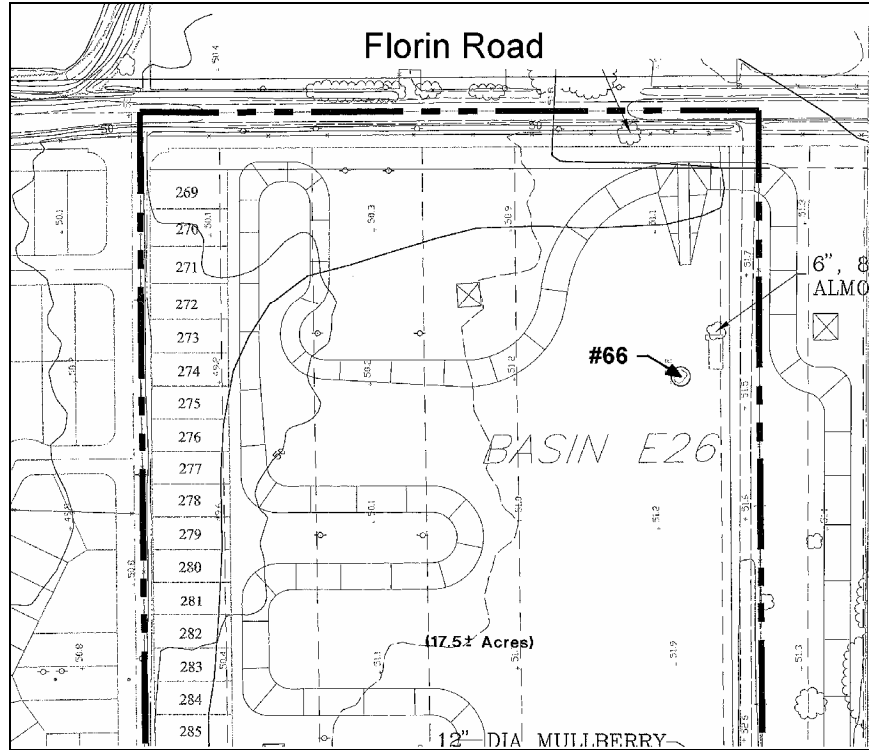
Trees #1-6 are located on or overhanging the Gosal Estates property (Plate BR-7). These trees are all located along the western and southern property boundaries. Trees #4 and 5 are located on the adjacent parcel (APN: 065-0080-016) to the west of the project site and overhang the Gosal Estates site. Trees #1-3 are located along Gerber Road and will have to be removed for the necessary roadway improvements. Mitigation is recommended to compensate for the loss of these trees. Trees #4 and 5 are located on the adjacent parcel and, therefore, should be protected during construction. Mitigation is included for the preservation and protection of trees #4 and 5. Tree #6 is located along the western site boundary and is proposed for removal to accommodate proposed development. The arborist report describes tree #6 as poor to fair condition with a dead central stem and evidence of decay. Mitigation is included to compensate for the removal of trees #1-3 and 6. A 50% reduction in the standard compensation mitigation is applied to tree #6 based on its condition.

**Table 10-8. Sacramento County Tree Ordinance-Protected Trees**

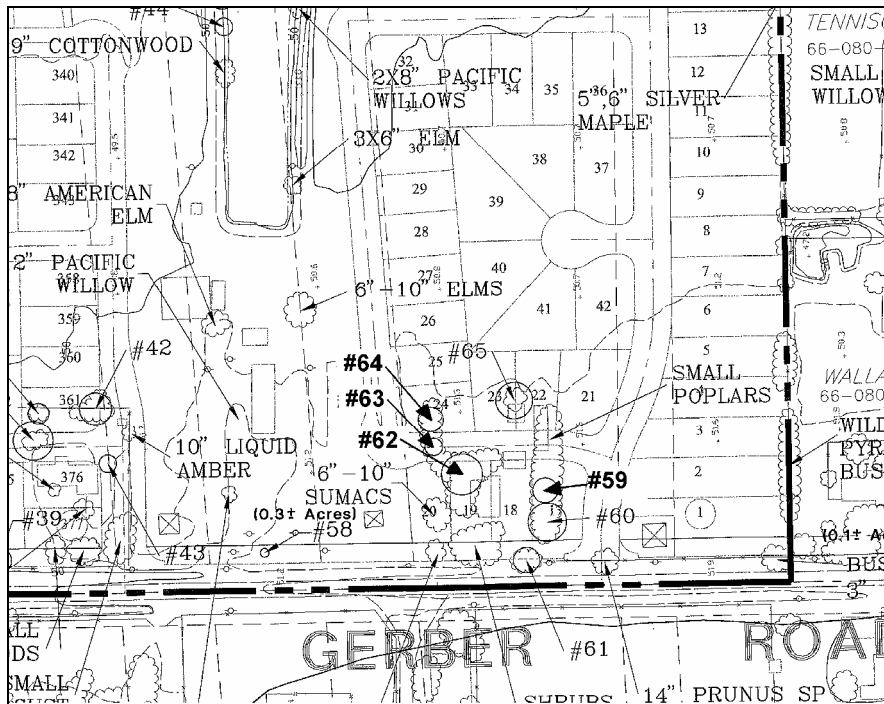
| Tree # | Species   | DBH | NVG1 | NVG3 | Gosal Estates | Note                                    |
|--------|---|-----|------|------|---------------|---|
| 59     | <i>Juglans californica</i><br>var. <i>hindsii</i> | 27* | X    |      |               | Located on proposed Lot 17              |
| 62     | <i>Juglans californica</i><br>var. <i>hindsii</i> | 31  | X    |      |               | Located on proposed Lot 19              |
| 63     | <i>Quercus lobata</i>                             | 8   | X    |      |               | Located on "C" Circle                   |
| 64     | <i>Quercus lobata</i>                             | 23* | X    |      |               | Located on proposed Lot 24              |
| 66     | <i>Juglans californica</i><br>var. <i>hindsii</i> | 7   | X    |      |               | Located in proposed water quality basin |
| 33     | <i>Juglans californica</i><br>var. <i>hindsii</i> | 13  |      | X    |               | Located on proposed Lot 124             |
| 34     | <i>Juglans californica</i><br>var. <i>hindsii</i> | 11* |      | X    |               | Located on proposed Lot 111             |
| 37     | <i>Quercus lobata</i>                             | 12  |      | X    |               | Located on proposed Lot 136             |
| 1      | <i>Juglans californica</i><br>var. <i>hindsii</i> | 14  |      |      | X             | Located along Gerber Road               |
| 2      | <i>Juglans californica</i><br>var. <i>hindsii</i> | 21* |      |      | X             | Located along Gerber Road               |
| 3      | <i>Juglans californica</i><br>var. <i>hindsii</i> | 14* |      |      | X             | Located along Gerber Road               |
| 4      | <i>Juglans californica</i><br>var. <i>hindsii</i> | 35* |      |      | X             | On adjacent parcel, central stem dead   |
| 5      | <i>Juglans californica</i><br>var. <i>hindsii</i> | 26* |      |      | X             | Located on adjacent parcel              |
| 6      | <i>Juglans californica</i><br>var. <i>hindsii</i> | 21* |      |      | X             | Central stem dead – mitigation reduced  |

\* = sum of DBH of multiple stems

**Plate BR-5. North Vineyard Greens Unit 1 Tree Exhibit**



Northern portion of project site at Florin Road



Southeast corner of project site at Gerber Road

Plate BR-6. North Vineyard Greens Unit 3 Tree Exhibit

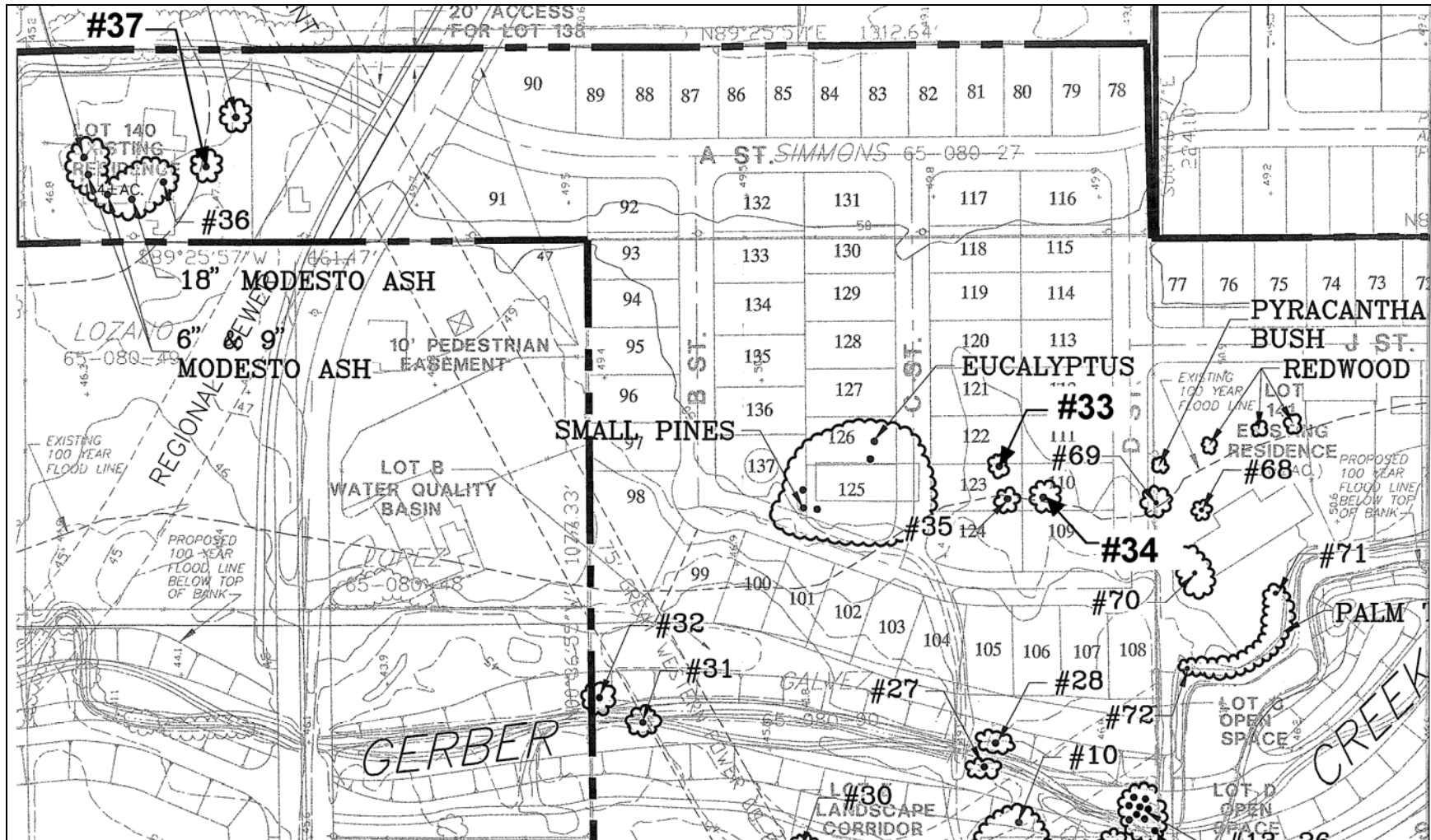
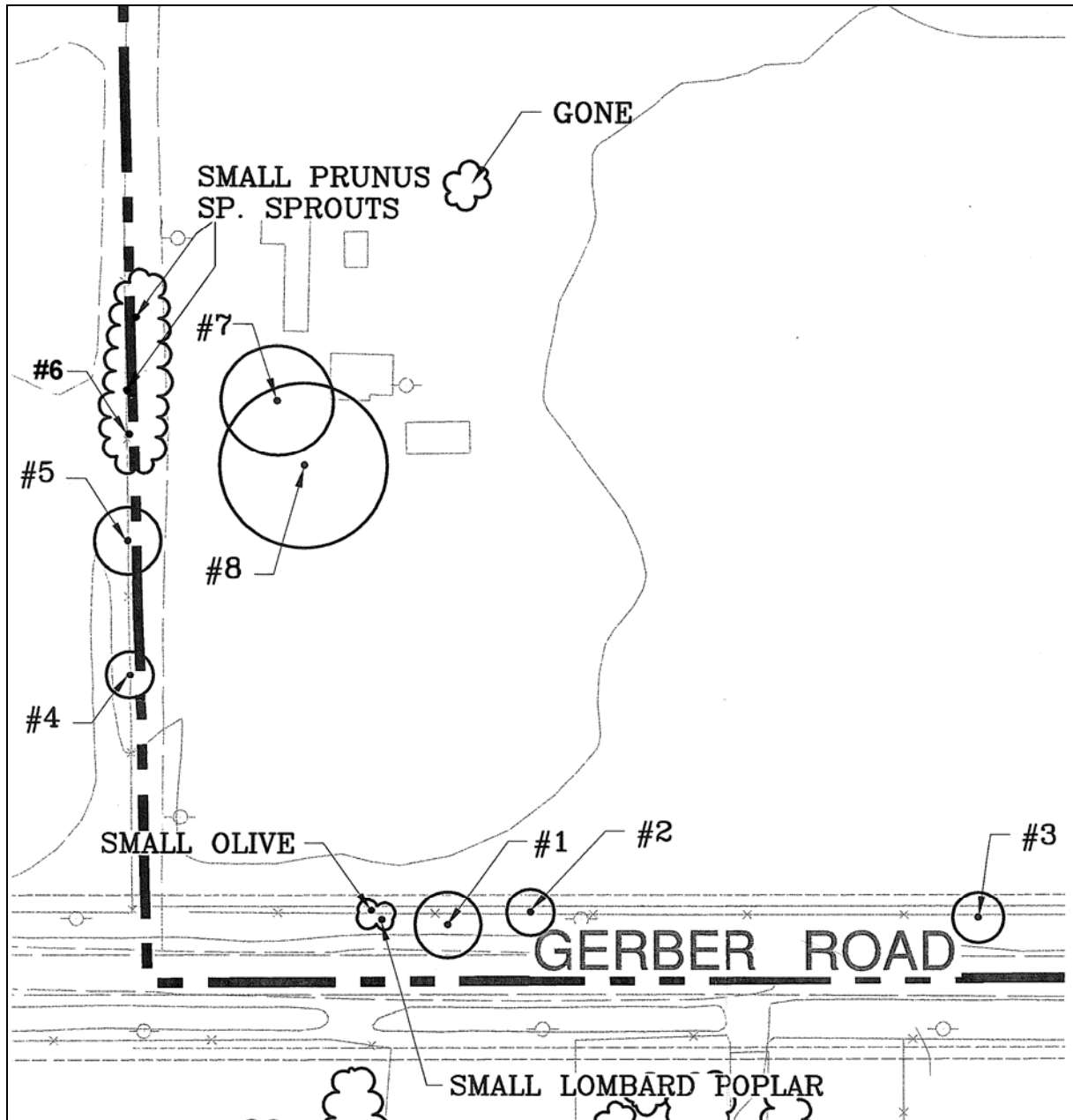


Plate BR-7. Gosal Estates Tree Exhibit



Southwest corner of project site

## MITIGATION MEASURES

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### **North Vineyard Greens Unit 1 (03-CZB-SVB-SPP-AHS-0099), North Vineyard Greens Unit 3 (03-RZB-SVB-SPP-AHS-0141), and Gosal Estates (03-RZB-UPP-PMR-AHS-0660)**

- BR-1. Comply with the Wetland Mitigation Plan for Elder and Gerber Creeks and the Drainage Parkway Plan for Elder and Gerber Creeks, prepared in compliance with wetlands mitigation measures BR-3 and BR-6 of the NVSSP EIR.
- BR-2 Prior to the approval of any grading and/or building permits for any development of the site, the project applicant or property owner shall obtain all applicable permits from the U. S. Army Corps of Engineers (USCOE) and shall pay to the County of Sacramento an amount based on a rate of \$35,000 per acre if less than 1:1 replacement/compensation occurs through the Federal permitting process. The proposed North Vineyard Greens Unit 1 project is expected to result in the loss of 0.653 acres of seasonal wetlands, 0.974 acre of seasonal marsh, 0.150 acre of vernal pools, and 0.008 acre of seasonal wetland swale. The proposed North Vineyard Greens Unit 3 project is expected to result in the loss of 0.489 acre of seasonal wetlands. The proposed Gosal Estates project is expected to result in the loss of 0.010 acre of seasonal wetlands. Any payment due shall be collected by the Department of Planning and Community Development and deposited in the Wetlands Restoration Trust Fund. A copy of any required USCOE permits and verification of any required payment shall be submitted to the Department of Environmental Review and Assessment.
- BR-3 The project site shall be surveyed for special-status plants by a qualified biologist prior to the start of construction activities (including clearing and grubbing) located within 200 feet of Gerber Creek and all other jurisdictional wetlands on the project site to determine project impact to special-status plants and habitats of special-status species. Permits must be obtained, as necessary, for the take of any protected species per the USFWS, CDFG, or other jurisdictional requirements. Results of the pre-construction survey shall be reported within 24 hours to the Department of Environmental Review and Assessment at 874-7914.
- BR-4 Prior to the start of construction activities (including clearing and grubbing), determinate-level special-status wetland invertebrate species surveys shall be conducted during the appropriate season(s) for identification of species and by a qualified biologist. If surveys are positive, prior to the approval of any grading and/or building permits for any development of the site the applicant will comply with the U.S. Fish

and Wildlife Service's *Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Vernal Pool Crustaceans Within the Jurisdiction of the Sacramento Field Office, California*. The project applicant or property owner shall obtain all applicable permits from the U.S. Fish and Wildlife Service as necessary. A copy of the survey results and all required permits shall be submitted to the Department of Environmental Review and Assessment. Any incidental take shall be reported to the USFWS at (916) 979-2725 and Department of Environmental Review and Assessment at (916) 874-7914 within one working day.

- BR-5 The project site shall be surveyed for special-status reptiles including giant garter snake (*Thamnophis gigas*), and northwestern pond turtle (*Clemmys marmorata marmorata*) by a qualified biologist within 24 hours prior to the start of construction activities (including clearing and grubbing) located within 200 feet of Gerber Creek and all other jurisdictional wetlands on the project site. Survey of the area shall be repeated if a lapse in construction activity of two weeks or greater occurs. If a giant garter snake, northwestern pond turtle and/or other special-status reptile is encountered during construction, activities shall cease until appropriate corrective measures have been completed or it has been determined that the animal will not be harmed. Special-status reptiles encountered during construction should be allowed to move away on their own. Capture and relocation of trapped or injured individuals shall only be attempted by personnel or individuals with current USFWS recovery permits. Any incidental take shall be reported to the USFWS at (916) 979-2725 and Department of Environmental Review and Assessment at (916) 874-7914 within one working day. Any special-status amphibian or reptile sightings shall be reported within 24 hours to the Department of Environmental Review and Assessment at 874-7914.

**North Vineyard Greens Unit 1 (03-CZB-SVB-SPP-AHS-0099) and North Vineyard Greens Unit 3 (03-RZB-SVB-SPP-AHS-0141)**

- BR-6 Prior to the approval of Improvement Plans, Building Permits, or recordation of the final map, whichever occurs first, implement one of the following options to mitigate for the loss of 96± acres of Swainson's hawk foraging habitat on the North Vineyard Greens Unit 1 project site and 40± acres of Swainson's hawk foraging habitat on the North Vineyard Greens Unit 3 project site:
- a. The project proponent shall, to the satisfaction of the California Department of Fish and Game, prepare and implement a Swainson's hawk mitigation plan that will include preservation of Swainson's hawk foraging habitat.



- b. The project proponent shall utilize the land dedication option established in Sacramento County's *Swainson's Hawk Impact Mitigation Program* (Chapter 16.130 of the Sacramento County Code).
- c. Should the County Board of Supervisors adopt a Swainson's hawk mitigation policy/program (which may include a mitigation fee payable prior to issuance of building permits) prior to the implementation of one of the measures above, the project proponent may be subject to that program instead.

**North Vineyard Greens Unit 3 (03-RZB-SVB-SPP-AHS-0141) and Gosal Estates (03-RZB-UPP-PMR-AHS-0660)**

BR-7 Tree #37 on the North Vineyard Greens Unit 3 site, and trees #4 and 5 on the property adjacent to the Gosal Estates site, shall be preserved and protected as follows:

- 1. A circle with a radius measurement from the trunk of the tree to the tip of its longest limb shall constitute the dripline protection area of each tree. Limbs must not be cut back in order to change the dripline. The area beneath the dripline is a critical portion of the root zone and defines the minimum protected area of each tree. Removing limbs that make up the dripline does not change the protected area.
- 2. Any protected trees on the site which require pruning shall be pruned by a certified arborist prior to the start of construction work. All pruning shall be in accordance with the American National Standards Institute (ANSI) A300 pruning standards and the International Society of Arboriculture (ISA) "Tree Pruning Guidelines."
- 3. No second-story residential construction will be permitted within the dripline protection area of protected trees. Grade beam construction with raised floors and pier footings no closer than 8-foot on-center shall be required for building areas within the dripline protection area of each tree.
- 4. Temporary protective fencing shall be installed at least one foot outside the driplines of the protected trees prior to the start of construction work, in order to avoid damage to the trees and their root systems.
- 5. No signs, ropes, cables (except those which may be installed by a certified arborist to provide limb support) or any other items shall be attached to the protected trees. Small metallic numbering tags for

the purpose of preparing tree reports and inventories shall be allowed.

6. No vehicles, construction equipment, mobile home/office, supplies, materials or facilities shall be driven, parked, stockpiled or located within the driplines of protected trees.
7. No grading (grade cuts or fills) shall be allowed within the driplines of protected trees.
8. Drainage patterns on the site shall not be modified so that water collects or stands within, or is diverted across, the dripline of any protected tree.
9. No trenching shall be allowed within the driplines of protected trees. If it is absolutely necessary to install underground utilities within the dripline of a protected tree, the utility line shall be bored and jacked under the supervision of a certified arborist.
10. The construction of impervious surfaces within the driplines of protected trees shall be stringently minimized. When it is absolutely necessary, a piped aeration system per County standard detail shall be installed under the supervision of a certified arborist.
11. No sprinkler or irrigation system shall be installed in such a manner that sprays water or requires trenching within the driplines of protected trees. An above ground drip irrigation system is recommended.
12. Landscaping beneath oak trees may include non-plant materials such as bark mulch, wood chips, boulders, etc. The only plant species which shall be planted within the driplines of oak trees are those which are tolerant of the natural semi-arid environs of the trees. Limited drip irrigation approximately twice per summer is recommended for the understory plants.

**Gosal Estates (03-RZB-UPP-PMR-AHS-0660)**

BR-8 Prior to the approval of Improvement Plans, Building Permits, or recordation of the final map, whichever occurs first, implement one of the following options to mitigate for the loss of 10± acres of Swainson's hawk foraging habitat on the Gosal Estates project site:

1. The project proponent shall, to the satisfaction of the California Department of Fish and Game, prepare and implement a Swainson's hawk mitigation plan that will include preservation of Swainson's hawk foraging habitat.

2. The project proponent shall utilize one or more of the mitigation options (land dedication and/or fee payment) established in Sacramento County's *Swainson's Hawk Impact Mitigation Program* (Chapter 16.130 of the Sacramento County Code).
3. Should the County Board of Supervisors adopt a Swainson's hawk mitigation policy/program (which may include a mitigation fee payable prior to issuance of building permits) prior to the implementation of one of the measures above, the project proponent may be subject to that program instead.

BR-9 The removal of 49 inches dbh of native northern California black walnut trees (#1, 2, and 3 on the Gosal Estates site) shall be compensated by planting native northern California black walnut trees (*Juglans californica* var. *hindsii*) equivalent to the dbh inches lost, based on the ratios listed below, at locations that are authorized by the Department of Environmental Review and Assessment. The removal of tree #6 (21-inch northern California black walnut) from the Gosal Estates site shall be compensated by replacement planting equivalent to 50% of the dbh inches lost (10 inches), based on the ratios listed below.

The removal of 31 inches dbh of native oak trees (#63 and 64 on the North Vineyard Greens Unit 1 site) shall be compensated by planting native oak trees (valley oak/*Quercus lobata*, interior live oak/*Quercus wislizenii*, and blue oak/*Quercus douglasii*) equivalent to the dbh inches lost, based on the ratios listed below, at locations that are authorized by the Department of Environmental Review and Assessment.

Therefore, equivalent compensation for 59 inches of northern California black walnut trees and 31 inches of native oak trees, based on the following ratios, is required:

- one deepot seedling (40 cubic inches or larger) = 1 inch dbh
- one 15-gallon tree = 1 inch dbh
- one 24-inch box tree = 2 inches dbh
- one 36-inch box tree = 3 inches dbh

Prior to the approval of Improvement Plans or building permits, a Replacement Tree Planting Plan shall be prepared by a certified arborist or licensed landscape architect and shall be submitted to the Environmental Coordinator for approval. The Replacement Tree Planting Plan(s) shall include the following minimum elements:

1. Species, size and locations of all replacement plantings;
2. Method of irrigation;

3. The Sacramento County Standard Tree Planting Detail L-1, including the 10-foot deep boring hole to provide for adequate drainage;
4. Planting, irrigation, and maintenance schedules;
5. Identification of the maintenance entity and a written agreement with that entity to provide care and irrigation of the trees for a 3-year establishment period, and to replace any of the replacement trees which do not survive during that period.

No replacement tree shall be planted within 15 feet of the driplines of existing trees or landmark size trees that are retained on-site, or within 15 feet of a building foundation or swimming pool excavation. The minimum spacing for replacement trees shall be 20 feet on-center. Examples of acceptable planting locations are publicly owned lands, common areas, and landscaped frontages (with adequate spacing). Generally unacceptable locations are utility easements (PUE, sewer, storm drains), under overhead utility lines, private yards of single family lots (including front yards), and roadway medians.

If tree replacement plantings are demonstrated to the satisfaction of the Environmental Coordinator to be infeasible for any or all trees removed, then compensation shall be through payment into the County Tree Preservation Fund. Payment shall be made at a rate of \$325.00 per dbh inch removed but not otherwise compensated, or at the prevailing rate at the time payment into the fund is made.

# 11 CULTURAL RESOURCES

## INTRODUCTION

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The California Environmental Quality Act (CEQA) defines cultural resources as historical and unique archaeological resources that meet significance criteria of the California Register of Historical Resources. The eligibility criteria of the California Register include the following:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important in our past;
- 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 values; or
- Has yielded, or may be likely to yield, information important in prehistory or history. (Public Resources Code SS5024.1, Title 14 CCR, Section 4852).

Under CEQA, lead agencies must consider the effects of their projects on cultural resources.

The North Vineyard Station Specific Plan Area (Plan Area) incorporates approximately 1,580 acres. The Plan Area is bounded on the north by Florin Road, on the east by (the eventual expansion of) Vineyard Road, on the south by Gerber Road and on the west by the channel of Elder Creek. The Plan Area is located near the geographic center of Sacramento County.

For the NVSSP FEIR, a total of 556 acres of the Specific Plan Area, known as the Survey Area, was given a complete pedestrian walk-over by a team of archeologists. This acreage did not include the areas encompassed by the North Vineyard Greens Unit 1, Unit 3, and Gosal Estates projects. The remaining 1,024 acres of the Specific Plan Area were inspected for the presence or absence of historic period structures via public roadways.

No prehistoric artifacts or evidence of prehistoric use of the Survey Area was found. One historic period archeological site was discovered near the Central California Traction Railroad in the northwest portion of the Plan Area. This site consists of a small scatter of 1930s/40s era refuse that was primarily domestic in nature. Broken condiment bottles, fragments of a child's decorated ceramic tea set, sardine cans, red

bricks, a sewer pipe fragment, and a bent iron pipe were all discovered protruding from the ground surface. No existing structures, or structures shown on historic period maps or other documentary sources, were located anywhere near this refuse deposit. The closest feature is the Central California Traction Railroad, which is located to the west and south of the site area. Given the types of historic period artifacts present at the site, it is unlikely that this refuse was once associated with the railroad. It would appear that this small refuse pile probably represents a single episode dumping of material that was once associated with a residence. The existing structure on this parcel is located approximately 2,000 feet to the north, northwest. This home was constructed in 1910, however, and it is possible that the refuse deposited at the site originated from this residence. According to the prior EIR, this deposit does not qualify as an important archeological resource, and no additional mitigation is required.

Twelve historic period (greater than 45 years old) structures were identified during the pedestrian and vehicular inspection of the Specific Plan Area. Three of these structures are located within the Survey Area, while the remaining nine were found within the remaining Specific Plan Area. The FEIR concluded the following regarding the historic period structures:

None of the surviving structures within the Survey Area represent the early years of pioneer settlement in this area. The earliest structures date to about the turn of the century. There are a number of structures in the Specific Plan Area dating within the 1900-1920 era representing small rural residence types and agricultural utility buildings common for this period. The types of residences within the Plan Area varied. The two most common styles were the Craftsman and bungalow, which was popular throughout rural America from about 1905 to 1920, and the Minimal Traditional, a style that became popular in the late 1930s and remained the dominant style during the post-war 1940s and 1950s. Examples in the Plan Area range from well preserved to poorly maintained to remodeled beyond recognition. None of the extant buildings are associated with important individuals or events, and therefore, do not constitute "important" resources under CEQA criteria in this area.

However, four historic structures were identified as potentially important due to their architectural integrity and as representative examples of identifiable architectural styles. At the time of publication of the prior EIR, these four properties were considered potentially significant historical resources, but were not evaluated for eligibility to the National Register of Historic Places.

The FEIR concluded that the project could result in future disturbance of known and unknown prehistoric and/or historic resources. These impacts are considered potentially significant. The County of Sacramento has an environmental review process for projects involving discretionary permits that requires cultural resource reports to be prepared in situations where development is proposed in areas known to be sensitive for cultural (archaeological and historic) resources. Since future development within the Plan area will require additional entitlements such development will also be subject to further discretionary review. Potential construction-related impacts to cultural resources will be addressed at that time. However, to ensure impacts to cultural resources are

minimized and addressed at the earliest stages of proposed development, mitigation measures were incorporated into the North Vineyard Station Specific Plan to require cultural resource surveys associated with future discretionary entitlement applications in the Specific Plan area. These measures remain applicable to the current project.

The County of Sacramento, Department of Environmental Review and Assessment (DERA) requested that an intensive cultural resource assessment be conducted by Peak & Associates for three project areas within the Plan Area:

North Vineyard Greens Unit 1 and Davis Property (Assessor's Parcel Numbers 065-0080-029, 066-0070-020, 066-0070-043, 066-0070-044, 066-0070-045, 066-0070-046, 066-0080-001, 066-0080-002, 066-0080-003, and 066-0080-016)

North Vineyard Unit 3 (Assessor's Parcel Numbers 065-0080-064, 065-0080-092, 065-0080-093, 065-0080-094, 065-0080-095, 065-0080-096, and 065-0080-097)

Gosal Estates (Assessor's Parcel Number 065-0080-057)

North Vineyard Greens Unit 3 and Gosal Estates lie in the south half of section 6, Township 7 North Range 6 East, mapped on the Elk Grove 7.5' USGS topographic quadrangle. The third project area, North Vineyard Greens Unit 1, lies in the western one-quarter of section 5 and the southeast quarter of Section 6, Township 7 North Range 6 East (Plate CR-1).

Melinda Peak served as principal investigator, with Ann Peak directing the field survey. Their report is included verbatim with minor editing for cohesiveness within this EIR.

## CULTURAL HISTORY

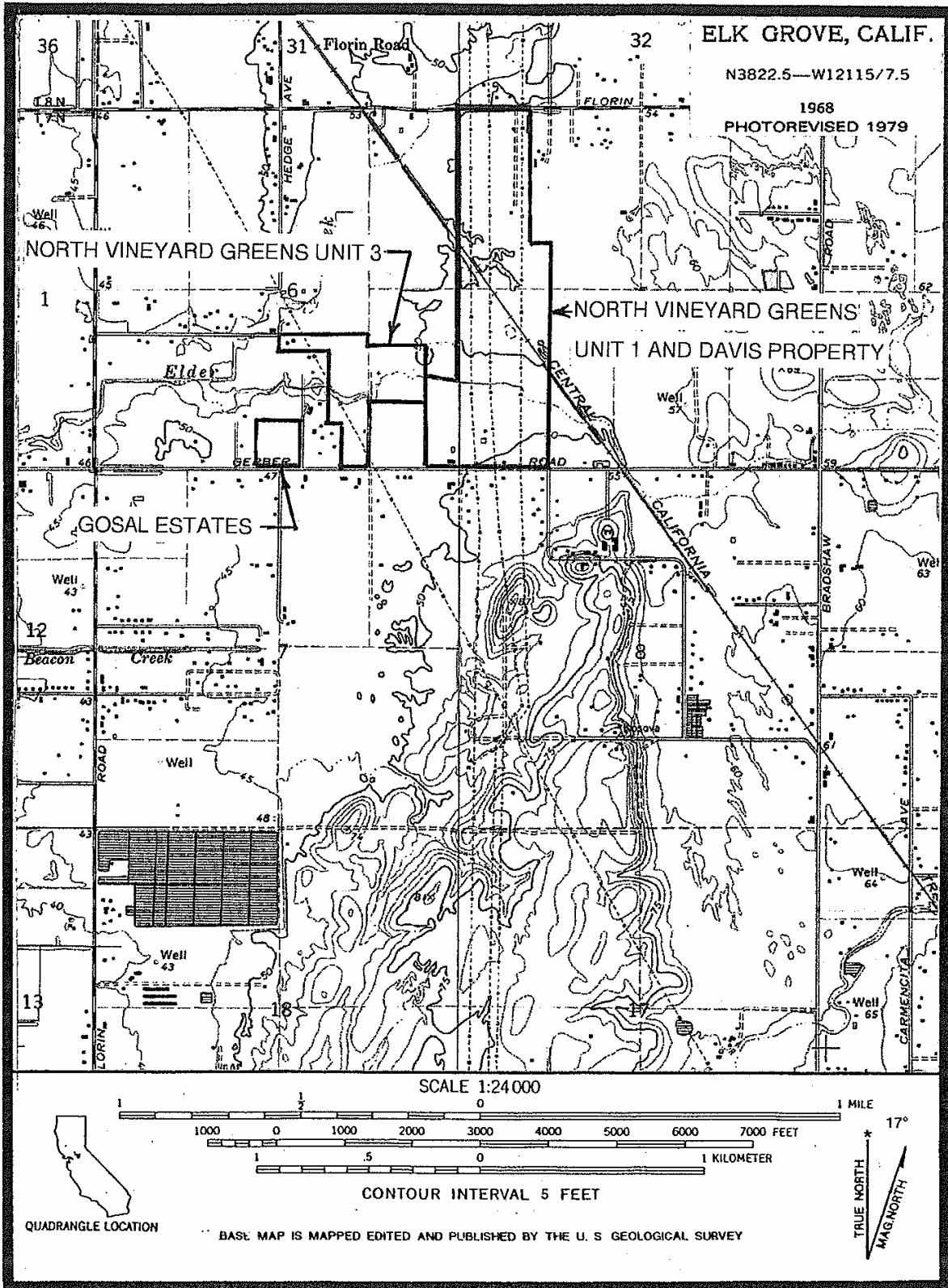
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### PREHISTORY

The Sacramento Delta was one of the first regions in California to attract intensive archeological fieldwork. Between 1893 and 1901, avocational archeologist J. A. Barr excavated many prehistoric mounds in the Stockton area. He collected nearly 2000 artifacts during the course of his investigations. H. C. Meredith was another avocational archeologist of the period who pursued collecting in the same Stockton locality. Meredith (1899, 1900) did publish a compilation of his own and Barr's findings, and these appear to constitute the earliest accounts of Delta archeology. Holmes (1902), from the Smithsonian Institution, further elaborated on the Delta or "Stockton District" archeology, presenting illustrations of artifacts collected by Meredith and Barr.

It was Elmer J. Dawson who first recognized culture changes through time in Delta archeology. Though he was an amateur archeologist, Dawson understood the necessity of keeping accurate notes on grave associations and provenience of artifacts. He collaborated with W. E. Schenck to produce an overview of northern San Joaquin Valley

Plate CR-1. Project Area



North Vineyard Greens Unit #1, #3,  
and Gosal Estates

03-CZB-SVB-SPP-AHS-0099  
03-RZB-SVB-SPP-AHS-0141  
02-RZB-UPP-PMR-AHS-0660  
03-PMR-0214



archeology (Schenck and Dawson 1929). The overview contained information on more than 90 prehistoric sites as well as data on previous collectors.

By 1931, the focus of archeological work was directed toward the Cosumnes River locality, where survey and exploration were conducted by Sacramento Junior College (Lillard and Purves 1936). Excavations, especially at the stratified Windmiller mound (CA-SAC-107), suggested three temporally distinct cultural traditions: Early, Transitional, and Late. Information grew as a result of excavations at other mounds in the Delta and lower Sacramento Valley by Sacramento Junior College and the University of California, Berkeley.

Previous investigations in the project region have focused upon very detailed archival research of Spanish sources (Bennyhoff 1977), and the archeological investigations at a number of small sites (Schulz et al. 1979; Schulz and Simons 1973; Soule 1976). A reexamination of earlier work has also been undertaken (Ragir 1972; Schulz 1981; Doran 1980). Several of the previously investigated sites probably represent satellite encampments or small villages associated with major villages.

The majority of the sites appear to be relatively late in time, and probably represent Plains Miwok. As mentioned above, the sites appear to be satellite encampments or small villages. The activities practiced are varied, but detailed studies on the faunal collection suggest seasonality of occupation and a focus on fish species other than the main channel varieties.

Writing the definitive summary of California archeology, Moratto (1984: 529-547) devoted an entire chapter to linguistic prehistory. For the Central Valley region, Moratto points out that some Early Horizon and Middle Horizon central California archeological sites appear at least in part, contemporaneous, based on existing radiocarbon dates. Cultural materials recovered from CA-SJO-68, an Early Horizon site, are thought to date to 4350 ± 250 B.P. or 2350 B.C. On the other hand, a Middle Horizon component at CA-CCO-308 dates to 4450 ± 400 B.P. or 2450 B.C. The antiquity of other Early and Middle Horizon sites demonstrate an overlap of the two horizons by a millennium or more.

One explanation proposes that the Middle Horizon represents an intrusion of ancestral Miwok speaking people into the lower Cosumnes, Mokelumne, and Sacramento River areas from the Bay Area. The Early Horizon may represent older Yokuts settlements or perhaps the speakers of an Utian language who were somehow replaced by a shift of population(s) from the bay.

## ETHNOLOGY

The Eastern Miwok represent one of the two main divisions of the Miwokan subgroup of the Utian language family (Levy 1978:398). The Plains Miwok, one of five separate cultural and linguistic groups of the Eastern Miwok, occupied the lower reaches of the Mokelumne, Cosumnes and Sacramento Rivers including the area of south Sacramento County surrounding the project area. Linguistic studies and the application of a lexicostatistic model for language divergence suggests that Plains Miwok was a distinct linguistic entity

for the last 2000 years (Levy 1970). This result led researchers such as Richard Levy (1978:398) to conclude that the Plains Miwok inhabited the Sacramento Delta for a considerable period of time.

The political organization of the Plains Miwok centered on the tribelet. Tribelets were comprised of 300 to 500 individuals (Levy 1978:410). Each tribelet was thought to control a specific area of resources and usually consisted of several villages or hamlets. Each tribelet also was divided along lineages. These lineages were apparently localized to a specific geographic setting and most likely represented a village site and their associated satellite sites where the seasonal collection of resources occurred (Levy 1978:398-399). Each settlement apparently contained roughly 21 individuals according to data collected by Gifford (Cook 1955:35).

The diet of the Plains Miwok emphasized the collection of floral resources such as acorns, buckeye, digger pine nuts, seeds from the native grasses and various fresh greens. Faunal resources such as tule elk, pronghorn antelope, deer, jackrabbits, cottontails, beaver, gray squirrels, woodrats, quail and waterfowl were hunted. Fishing, particularly salmon and sturgeon, contributed significantly to the Plains Miwok diet (Levy 1978:402-403). The primary method of collecting fish was by nets, but the use of bone hooks, harpoons and obsidian-tipped spears is also known ethnographically (Levy 1978:404).

Both twined and coiled basketry were manufactured by the Eastern Miwok. The uses of baskets included the collection and storage of seeds, basketry cradles and gaming (Levy 1978:406). Tule mats were also known to have been used by the Plains Miwok primarily as a floor covering. Other uses of tule included the manufacture of the tule balsa, a watercraft in which native people navigated and exploited adjacent delta and major river systems.

Four main types of structures were known among the Eastern Miwok, depending on the environmental setting. In the mountains, the primary structure was a conical structure of bark slabs. At lower elevations the structures consisted of thatched structures, semi-subterranean earth-covered dwellings and two types of assembly houses used for ceremonial purposes (Levy 1978:408-409).

Bennyhoff (1977:11) characterized the Plains Miwok as intensive hunter-gatherers, with an emphasis upon gathering. The seasonal availability of floral resources defined the limits of the group's economic pursuits. Hunting and fishing subsistence pursuits apparently accommodated the given distribution of resources. The Plains Miwok territory covered six seasonally productive biotic communities and as such native people could apparently afford to pick and choose the resources they ranked highest from each of these zones. The subsequent storage of floral resources (such as acorns in granaries) allowed for a more stable use of the resource base (Bennyhoff 1977:10). The acorn was apparently the subsistence base needed to provide an unusually productive environment as earlier non-acorn using peoples who resided in the same geographic setting apparently suffered some seasonal deprivation (Schulz 1981). Such an emphasis upon the gathering of acorns is consistent with the population increase evident during the Upper Emergent Period in California (Doran 1980).

The study of piscine (fish) remains from both CA-SAC-65 (Schulz et al. 1979) and CA-SAC-145 (Schulz n.d.; Schulz and Simons 1973) indicates that small villages away from the major rivers appear to concentrate on the collection of piscine species (particularly the Sacramento perch) that inhabited slow-moving waters. This would probably have been the case with any village located within or near the Plan Area, if there was a village in the immediate area.

The Plan Area is not known to be controlled by any particular tribelet of the Plains Miwok, but appears to lie in an unoccupied boundary zone between the Plains Miwok and the antagonistic Nisenan to the north (Bennyhoff 1977:58).

## HISTORY

The Plan Area does not lie on a portion of the early Mexican land grants nor does it lie within the land that could be mined for gold. As a result, there is no indication that any important events or activities occurred in the early history of the region. It was not long after the initial gold rush of the late 1840s-early 1850s, however, when the agricultural potential of the excellent farmlands of the Sacramento Valley was recognized. The first lands taken up were the rich bottomlands along the major watercourses. By the mid-1860s, the prime farmland had been claimed and the later settlers began to discover the potential of lands such as the Plan Area with poorer soil and less available water. In the 1860s and 1870s, virtually all land in the region was taken up by the later settlers for agricultural purposes. The Plan Area lies within the boundaries of the San Joaquin Township (Thompson & West 1880:234-235).

The historic maps of the Plan Area have been collected. The earliest map is the General Land Office plat of the township dating to 1856, which indicates a field on both sides of the line between the south halves of Sections 5 and 6, in what is now the North Vineyard Unit 1 and Davis Property project area. A road is indicated crossing the Plan Area in a northwest/southeast direction, within the south half of Section 6, crossing what is now the North Vineyard Unit 3. No structures are shown, but it is likely at least one ranch would be associated with the developed field.

The 1885 County map shows the subdivision of the land and the names of the landowners. Thomas G. Casey, who purchased the southeast quarter of Section 6 containing portions of all three of the project areas in 1880 for \$3000, has a biography in both the 1880 and 1890 County histories. Casey had been living in Brighton Township not too far north of the Plan Area in 1880. Casey added a number of improvements including fencing and outbuildings to his holding in the Plan Area. He is described as carrying on "general farming", but also had 15 acres of vineyard and orchards (Davis 1890).

The service center for the farmers of the Plan Area was the town of Florin, about three miles from the northwest quarter of the Plan Area. The town, formed in 1875 along the line of the Central Pacific Railroad branch, had a post office, railroad station, store, blacksmith shop, hotel, school, box factory and carpenter shop in 1880. The soils of the region overlie a hardpan layer, making them suitable primarily for the raising small fruits such as

strawberries, grapes, peaches and apples, with irrigation. Florin served as the shipping point for the farm products of the region (Thompson & West 1880).

The early years of the twentieth century were an era of rapid development of a large number of interurban electrified railways. The technological advances related to the production and long-distance transmission of hydroelectric power of the late nineteenth century made this a popular form of transportation for passenger service and freight service throughout the virtually flat terrain of the Central Valley. One of the systems to be organized and built in this era was the Central California Traction Railroad (CCT). The corporation was organized in 1905 with three goals in mind: to compete with the Southern Pacific and Western Pacific for transporting agricultural products of farms on the east side of the San Joaquin and Sacramento valleys; to develop farmland along the railroad right-of-way; and to provide a major customer for the power company owned by several of the corporate directors.

The 53-mile CCT main line connected Sacramento with Stockton, with a branch from the main line to Lodi. The section from Sheldon to Sacramento through the Plan Area was completed in 1910. Almost from the beginning, the railroad built up a substantial freight business, and was a financial success. In the 1920s, Southern Pacific, Santa Fe and Western Pacific purchased the railway jointly. Eventually, the increasing use of personal automobiles and bus lines brought a reduction in the number of passengers, for the CCT, and passenger service was eliminated in 1933. In 1946, the use of electricity was discontinued in favor of diesel service (Hilton and Due 1960: 401).

The railroad station along the line that would have been convenient for produce shippers within the Plan Area was located about one-quarter mile north of Florin Road, shown on a 1927 map of the county as the "Florin Road Station".

## INFORMATION CENTER RECORD SEARCH

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Records of previous cultural resource surveys and maps of recorded sites within the project area were reviewed at the North Central Information Center of the California Historical Resources Information Center. The records search studies found no prehistoric period archeological sites recorded in or near the project areas. Several historic period resources have been recorded in the project vicinity, including a section of the Central California Traction Railroad (CA-SAC-506H).

Very little of the project area has been systematically surveyed. In 1974, J. Johnson of CSU Sacramento completed a survey of Gerber Creek including a section that transects two of the project areas, North Vineyard Greens Unit 1 and North Vineyard Greens Unit 3. In 1979, Peak & Associates, Inc. completed a survey of the corridor for one of the SMUD transmission lines (Project A) that crosses the North Vineyard Greens Unit 1. Jones & Stokes completed a survey of the Bradshaw 6A Interceptor that crosses the western portion of the North Vineyard Greens Unit 3 project area in 2001. A number of surveys have been conducted in the project vicinity, including the surveys conducted by Peak & Associates for the North Vineyard Station Specific Plan Area in 1995. The 1995 study provided information on the history of the buildings within the Specific Plan Area, as well as recording and evaluating a number of the extant buildings.

## NATIVE AMERICAN AND HISTORICAL SOCIETY CONTACTS

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A letter was sent to the Native American Heritage Commission requesting a check of the Sacred Lands files. In their reply of June 3, 2005, the NAHC reported that there are no reported properties of concern in or near the project areas.

Letters have been sent to several Native American individuals and groups identified by the NAHC as having knowledge regarding the project area: Leland Daniels; Mary Daniels-Tarango, Wilton Rancheria; Glen Villa Jr. and Pamela Baumgartner, Lone Band of Miwok Indians; and Dwight Dutschke, Sierra Native American Council. No replies have been received to date.

## FIELD ASSESSMENT

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### METHODOLOGY

The field survey of the project areas was undertaken in May 2005 with a team of archeologists led by Ann S. Peak. The team covered the three project areas using complete coverage with transects no wider than 10 meters. Where necessary, small holes were hand-dug to check the sediments for evidence of prehistoric/historic occupation/use of the project areas. The *Cultural Resources Assessment of Three Projects Within the North Vineyard Station Specific Plan Area, Sacramento County, California* prepared by Peak & Associates, Inc. in July 2005 is included as Appendix S of this report.

### PREHISTORIC RESOURCES

No evidence was found of prehistoric use of the project areas.

## HISTORIC RESOURCES

The land of the project areas has been in agricultural use from the 1850s up to the present day. Generally, farmers first took up the land with first-rate soil, with a later wave of settlers selecting the tracts with second-rate soil. The soil type, combined with a lack of natural water sources, made the latter useful for dry land cultivation of hay and grain, or for seasonal grazing. Later, with the development of better systems for pumping water and irrigation, the land could be used more intensively for vineyards and small fruit orchards.

Historic research revealed that all of the project areas have contained buildings at various times, many of which were razed or replaced, with the exception of newer residences detailed below. Special emphasis was placed on a thorough examination of locations where buildings were shown on historic maps to determine if any trace of the old buildings could be located.

The early buildings that were present on the property appear to have been completely razed, leaving no surface evidence. The historic use evidence dates to less than 45 years in age, and was not formally recorded. North Vineyard Greens Unit 1 is crossed by the route of the Central California Traction Railroad, but the railroad easement is excluded.

The following is a summary of Peak's findings on the three separate project sites.

### *NORTH VINEYARD GREENS UNIT 1 AND DAVIS PROPERTY*

The project area contained three building sites, analyzed in Peak & Associates' 1995 overview for the North Vineyard Station Specific Plan Area as Buildings 3, 13 and 22. Building 3 was indicated in the northern portion of the project area within APN 066-0070-043 on the 1909 topographic map, and again on the 1942 15' topographic map. This building had apparently been razed by 1968, perhaps in preparation for the power line corridor added to the property between 1968 and 1980. At some point after 1980, a new building related to a nursery had been constructed on the site. There is no evidence of the earlier building.

Building 13 was shown on the 1909 topographic map on the south end of the property near Gerber Road. This building had also been razed by 1968, and there is no physical evidence of the site.

Building 22 was constructed within the project boundaries between 1909 and 1942 at a location just north of the Central California Traction line, at the east edge of the project area. By 1968, this building had also been removed. No physical evidence could be found of this building.

*NORTH VINEYARD GREENS UNIT 3*

North Vineyard Greens Unit 3 also contained three building sites, identified in the 1995 study as Buildings 14, 15 and 16. Building 14 dates to before 1909, but had been razed by 1942. Building 15 also dated to before 1909, but had been razed between 1942 and 1968. These sites lacked physical evidence of the earlier residences.

Building 16 dated to before 1909. This building was razed at an unknown date and replaced by a new residence in 1971, according to the Assessor's Building Record for the parcel (APN 065-0080-064). This building is to be retained in Lot 143.

There are two other residences on the project area. Both appear to have been constructed after 1968, and before 1980, based on the USGS topographic quadrangle. One is located in the westernmost arm of the project area in APN 065-0080-027. This building will be retained in Lot 140. The other residence is located in the eastern portion of the project area, on the north side of Gerber Creek in APN 065-080-090. This building will be retained in Lot 141.

*GOSAL ESTATES*

The Gosal Estates project area had a residence and outbuildings constructed on the site after 1980, as none of the topographic maps before that time indicate the presence of any buildings within the project area. The outlines of the buildings that comprised the complex appear on the topographic map for the project drawn from aerial photographs. One of the outbuildings, a small garage, is still present within the project area. The site does contain other physical evidence of use, including a buried cistern and the remnants of an unlined earthen fishpond and small wooden bridge. A neighbor claimed that the features are about thirty years old, but map evidence indicates they are less than twenty-five years old.

## REGULATORY SETTING

## GENERAL PLAN CONSERVATION ELEMENT

The General Plan of Sacramento County, adopted 1993, includes a section on Cultural Resources within its Conservation Element. Included within the Cultural Resources Section is the following goal:

Promote the inventory, protection and interpretation of the cultural heritage of Sacramento County, including historical and archaeological settings, sites, buildings, features, artifacts and/or areas of ethnic, historical, religious or socio-economical importance.

The General Plan sets forth policies and programs under the following objectives:

1. Attention and care during project review and construction to ensure that cultural resource sites, either previously known or discovered on the project site, are properly protected with sensitivity to cultural and ethnic values of all affected.
2. Structures such as buildings, bridges, or other permanent structures with architectural or historical importance preserved to maintain exterior design elements.
3. Protect any known cultural resources from vandalism, unauthorized excavation, or accidental destruction.
4. Comprehensive knowledge of archaeological and historic site locations.
5. Properly stored and classified artifacts for ongoing study.
6. Increase public education, awareness and appreciation of both visible and intangible cultural resources.

## PROPOSED FRAMEWORK FOR MANAGEMENT OF CULTURAL RESOURCES

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The California Environmental Quality Act (CEQA) requires that a Lead Agency “take all action necessary to provide the people of this state with ... historic environmental qualities.” Under CEQA, lead agencies must consider the effects of their projects on cultural resources. Appendix K of the CEQA guidelines defines archaeological impacts and provides the following direction in addressing those impacts:

Public agencies should seek to avoid damaging effects on an archaeological resource whenever feasible. If avoidance is not feasible, the importance of the site shall be evaluated using the criteria outlined in Section III.

Appendix K sets forth criteria for the identification of an “important” archaeological resource and establishes when an impact to an archaeological resource is considered to be a potentially significant environmental effect:

If the Lead Agency determines that a project may affect an archaeological resource, the agency shall determine whether the effect may be a significant effect on the environment. If the project may cause damage to an important archaeological resource, the project may have a significant effect on the environment. For the purposes of CEQA, an “important archaeological resource” is one which:

- A. Is associated with an event or person of:



1. Recognized significance in California or American history, or
  2. Recognized scientific importance in prehistory.
- B. Can provide information which is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable or archaeological research questions;
  - C. Has a special or particular quality such as oldest, best example, largest, or last surviving example of its kind;
  - D. Is at least 100 years old and possesses substantial stratigraphic integrity; or
  - E. Involves important research questions that historical research has shown can be answered only with archaeological methods.

State legislation (A.B. 2881) was enacted to create a California Register of Historical Resources and to reinforce the provisions of CEQA regarding historical resources. A.B. 2881 specifies that a project which results in substantial adverse change in the significance of an historical resource may have result in a significant effect on the environment. Substantial adverse change is defined as demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired. According to A.B. 2881, an historical resource includes a resource listed in, or determined to be eligible for listing in, the California, Register of Historic Resources. At this time, the California Register of Historic Resources includes all California properties formally determined to be eligible for listing, or that are listed in, the National Register of Historic Places. Criteria and guidelines have been developed for important resources which are not eligible to the National Register but are of local and/or regional significance, and these may also be included in the California Register.

## IMPACTS AND ANALYSIS

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### **Impact: Potential for impact to an important cultural resource.**

The project area lies on a flat open plain of the Sacramento Valley with no permanent water sources present. Prehistoric period campsites and villages are normally not discovered in areas with no permanent water sources. Gerber Creek, the creek that bisects North Vineyard Greens Unit 1 and North Vineyard Greens Unit 3 appears to have been only seasonal in nature, and is not even mapped on the 1909 Elk Grove 1:31,680 scale topographic map. It is entirely likely that the Native American people utilized this area for seasonal resource collection, but did not inhabit the project areas on a permanent basis. The gathering/hunting of plants and animals rarely leaves tangible evidence of this activity, other than the isolated, lost tool.

The land of the project areas has been in agricultural use from the 1850s up to the present day. Generally, farmers first took up the land with first-rate soil, with a later wave of settlers selecting the tracts with second-rate soil. The soil type, combined with a lack of natural water sources, made the latter useful for dry land cultivation of hay and grain, or for seasonal grazing. Later, with the development of better systems for pumping water and irrigation, the land could be used more intensively for vineyards and small fruit orchards.

The early buildings that were present on the property sites appear to have been completely razed, leaving no surface evidence.

However, subsurface cultural remains could be present due to the natural burial of prehistoric and historic sites by alluviation through periodic flooding or other natural phenomena. Mitigation has been added to ensure that impacts to potential subsurface cultural resources by ground disturbance from future construction are less than significant.

### **Mitigation Measures:**

To ensure protection of cultural resources, the following measure applies. This measure shall be included verbatim as a Construction Note on all Plans and Specifications for the project:

CR-1. Should any cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains be encountered during any development activities, work shall be suspended and the Department of Environmental Review and Assessment shall be immediately notified at (916) 874-7914.

At that time, the Department of Environmental Review and Assessment will coordinate any necessary investigation of the find with appropriate specialists as needed. The project proponent shall be required to implement any mitigation deemed necessary for the protection of the cultural resources. In addition, pursuant to Section 5097.97 of the State Public Resources Code and Section 7050.5 of the State Health and Safety Code, in the event of the discovery of human remains, all work is to stop and the County Coroner shall be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.

# 12 SUMMARY OF IMPACTS AND THEIR DISPOSITION

## SIGNIFICANT EFFECTS WHICH CANNOT BE AVOIDED

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### TRAFFIC AND CIRCULATION

The proposed project contributes to the significant and unavoidable traffic impact associated with development of the North Vineyard Station Specific Plan area, as identified in the NVSSP FEIR. Mitigation measures were included in the NVSSP FEIR to improve operating conditions under existing and cumulative conditions, but cumulative impacts were still considered significant.

### CONSTRUCTION AIR QUALITY IMPACTS

Emissions of NOx are expected to exceed the significance threshold of 85 lbs/day during ~~the first~~ each year of building construction (~~estimated as September to December 2006~~) and are considered potentially significant. The ~~2006~~ construction-related NOx air quality impacts of the project are expected to be reduced to less than significant with proposed mitigation, including standard construction mitigation measures and off-site fee mitigation. However, overall construction-related air quality impacts are considered cumulatively significant due to the potential for many other projects in the vicinity undergoing simultaneous construction. The project is expected to disturb more than 15 acres per day during development, therefore, the singular project PM<sub>10</sub> impact is considered significant and unavoidable.

### OPERATIONAL AIR QUALITY IMPACTS

The cumulative air quality impacts of project operation are considered significant and unavoidable, as identified in the NVSSP FEIR. The FEIR found that the specific Plan long-term emissions (ROG, NOx, PM10) from vehicle traffic and stationary sources would result in significant unavoidable impacts to regional air quality. The proposed residential development would contribute to this regionally significant impact.

## POTENTIALLY SIGNIFICANT EFFECTS WHICH COULD BE AVOIDED WITH IMPLEMENTATION OF MITIGATION MEASURES

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### TRAFFIC AND CIRCULATION

The traffic study prepared for the Waterman Road intersections with 1 Street and 2 Street indicated that a traffic signal is necessary at the Waterman Road/1 Street intersection. The intersection is expected to operate at LOS F with development of the project. Mitigation is included to install the required traffic signal. The mitigation is expected to result in LOS A at the intersection. Impacts of the proposed project related to traffic and circulation are considered less than significant with mitigation.

### NOISE

The expected future traffic volumes on Gerber Road, Florin Road, and Waterman Road are potential sources of traffic noise for the proposed residential lots on the project site. Mitigation (consistent with that contained in the NVSSP FSEIR) is recommended to include an 8-foot noise barrier along Gerber Road to comply with General Plan Noise Element standards. Mitigation is also recommended to include an 8-foot noise barrier along Florin Road and to include a 6-foot noise barrier along Waterman Road. Project impacts from traffic noise on these roadways are considered less than significant with mitigation. Although the CCTR is not currently in use, mitigation is included to ensure that residential buildings are built 28 feet or more from the CCTR right-of-way. Project impacts related to railroad noise are considered less than significant with mitigation.

### BIOLOGICAL RESOURCES

The proposed project is expected to impact wetlands, special-status species, and protected native trees. Mitigation is recommended to reduce the potential impacts of the project to less than significant.

### CULTURAL RESOURCE IMPACTS

The project is not expected to impact cultural resources. However, mitigation is recommended in the event that cultural resources are found during project construction. With mitigation as recommended, impacts to cultural resources are expected to be less than significant.

## EFFECTS FOUND NOT TO BE SIGNIFICANT

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Project approval is not expected to significantly affect:

- Land Use
- Public Services
- Drainage and Hydrology
- Grading and Erosion

## IRREVERSIBLE ENVIRONMENTAL CHANGES

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The project will result in the irreversible loss of agricultural-residential designated properties and the loss of a rural lifestyle in this area. Once land is converted to a higher density urban use and infrastructure is in place, it is highly unlikely that the land would revert back to rural uses. The commitment to urban uses will be permanent.

## CUMULATIVE IMPACTS

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Cumulative impacts of the project were fully analyzed throughout this document along with project-specific, singularly significant impacts.

## GROWTH INDUCING IMPACTS

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The properties surrounding the project site are included in the North Vineyard Station Specific Plan area. The NVSSP involves a change in development from agricultural-residential to urban for the majority of the plan area. Overall, the proposed project is consistent with the urban growth intended for the Specific Plan area. The potential for growth-inducing impacts resulting from this project is minimal. Therefore, growth-inducing impacts are considered less than significant.

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## 14 COMMENTS AND RESPONSES

The following text lists each Draft EIR reviewer, and paraphrases the comment(s) received. Responses to those comments immediately follow. Comment letters in their entirety are included at the end of this chapter.

Opportunity for oral comments was presented at the Project Planning Commission on February 6, 2006; however, no comments on the Draft EIR were received at that time.

### LETTERS RECEIVED:

1. Sacramento County Department of Water Resources
2. State of California Public Utilities Commission
3. Sacramento Metropolitan Air Quality Management District
4. State of California Department of Transportation
5. MacKay & Soms



LETTER 1

**Comment from Sacramento County Department of Water Resources**

**COMMENT:**

The Department of Water Resources adds the following clarifying conditions to ensure compliance with the North Vineyard Station Phased Drainage Master Plan and Drainage Fee Program:

Construct all off-site facilities required pursuant to the North Vineyard Station Drainage Master Plan. No fee credits shall be allowed for interim facilities other than those specifically described in the North Vineyard Station Supplemental Drainage Fee Program.

Offsite drainage improvements and easements shall be provided pursuant to the Sacramento County Floodplain Management Ordinance, and the Sacramento County Improvement Standards. Acquire all off-site easements necessary and complete the drainage facilities as required in the phased drainage master plan.

- a. The Water Agency shall compensate developers for the acquisition of detention basin land.
- b. The Agency shall pay fair market value appraised at the date of the filing of the tentative parcel or subdivision map or use permit plus associated carrying costs.
- c. Compensation shall be in the form of a fee credit agreement and reimbursements shall be made pursuant to the Sacramento County Water Agency Code, Section 2.60.
- d. The credit amount shall be adjusted by an appropriate percentage to account for inefficiencies of the system.

**RESPONSE:**

The Department of Water Resources' recommended conditions are noted and forwarded to the Board of Supervisors via this Final Supplemental EIR.

LETTER 2

**Comment from State of California Public Utilities Commission**

**COMMENT:**

As the agency responsible for rail safety within California, the CPUC recommends that development project planned near rail corridors be planned with the safety of the rail

corridor in mind. Considerations should include pedestrian circulation patterns/destinations with respect to railroad right-of-way; grade separations for major thoroughfares; improvements to existing at-grade highway-rail crossings; and appropriate fencing to limit trespassers from railroad right-of-way.

**RESPONSE:**

The CPUC comment is noted and forwarded to the Board of Supervisors via this Final Supplemental EIR.

*LETTER 3*

**Comments from Sacramento Metropolitan Air Quality Management District**

**COMMENT:**

The Air District advised that all the air quality mitigation measures from the North Vineyard Station Specific Plan (NVSSP) Final Supplemental EIR (AQ-1 through AQ-6) should be included for this project. Additionally, the text of AQ-4 from the NVSSP Final Supplemental EIR should replace the text of AQ-5 on page 6-7 of this Draft Supplemental EIR (DSEIR). (There should be a total of seven mitigation measures in this DSEIR after all recommended revisions.) All AQ-15 plan mitigation measures should be listed in their entirety, rather than simply by reference, in the body or an appendix of the document and in the MMRP to better facilitate implementation and enforcement. The Air District recommends that all projects in the area participate as a benefit zone of the County Service Area (CSA) or an equivalent financing mechanism to the satisfaction of the Board of Supervisors. Projects in the NVSSP area should ensure connectivity, for bicyclists and pedestrians, between developments and parks and commercial areas. The project is subject to Air District rules in effect at the time of construction.

**RESPONSE:**

The air quality mitigation measures in Chapter 6, Air Quality, have been revised as requested. Mitigation measures AQ-1 through AQ-6 from the NVSSP Final Supplemental EIR are included as AQ-1 through AQ-6 of this North Vineyard Greens 1, 3, and Gosal Estates Final Supplemental EIR. Additionally, AQ-4 from the DSEIR is now numbered AQ-7. Air District comments regarding CSA participation and development connectivity are noted and forwarded to the Board of Supervisors via this Final Supplemental EIR.

*LETTER 4***Comments from State of California Department of Transportation****COMMENT:**

The Department of Transportation (Caltrans) suggests that information regarding the project's environmental review be provided to the Sacramento Regional Transit, Altamont Commuter Express (ACE), and the City of Elk Grove, because of potential interest in the future use of the Central California Traction Company rail corridor (CCTR).

The EIR should address the comments in the March 28, 2005 Caltrans letter and address how to avert potential housing impacts and encroachment of the CCTR. The owner/developer must disclose to future/potential buyers that the CCTR is presently out-of-service, but not abandoned. It is possible that rail service could resume. Mitigation measure NO-2 should be clarified to state that the "28 feet or more" spacing would be housing separation from a needed noise attenuating sound wall, since the rail line is not abandoned from potential future use.

**RESPONSE:**

Rail corridor analysis in the Draft Supplemental EIR follows the scope of the original NVSSP EIR which considered continued heavy rail operations or light rail/transit thoroughfare use of the CCTR corridor. Proximity of residential lots to the CCTR right-of-way is considered compatible with the existing out-of-service status and the reasonably foreseeable future uses of the corridor.

Sacramento Regional Transit was sent a copy of the DSEIR and did not submit any comments. They will remain on the distribution list for the FSEIR. Altamont Commuter Express (Brian Schmidt, Rail Program Manager), and the City of Elk Grove (Taro Echiburu, Environmental Planning Manager) were contacted to confirm interest in receiving the FSEIR and were added to the distribution list.

Day-night average noise level analysis presented in Chapter 7, Noise, of the Draft Supplemental EIR concludes that buildings located 78 feet from the railroad centerline will be outside the 60 dB  $L_{dn}$  contour and a noise attenuating sound wall is not necessary. The analysis assumes four heavy rail trains per day. While a noise barrier is not required in order to mitigate projected noise impacts to within County standards, a condition of approval has nonetheless been recommended by the Project Planning Commission to require a 7-foot high solid masonry wall between the Central California Traction Railroad right-of-way and adjacent residential lots, consistent with conditions placed on previously approved projects in the immediate site vicinity. The Planning Commission submittal to the Board of Supervisors which includes this recommended condition is included as Appendix U of this FSEIR.

LETTER 5

**Comment from MacKay & Soms**

**COMMENT:**

The portion of mitigation measure AQ-5 that states, "The maximum actively disturbed area shall not exceed 15 acres on any given day" is economically infeasible and inefficient for operation of equipment. The balance of the mitigation in AQ-5 is sufficient to address particulate matter discharges from earth-moving operations.

**RESPONSE:**

The revisions to air quality mitigation measures suggested by the Air District will eliminate the 15-acre limitation for daily grading activities and, therefore, alleviate the concerns that MacKay & Soms expressed regarding the feasibility of this measure (Jim Ray, personal communication, 2/8/06). As a result of revising the air quality mitigation measures, the URBEMIS air quality emissions model was updated to include 33 acres (25% of project total area) as the maximum daily disturbed area. Consequently, the estimated construction emissions increased resulting in the increase of the off-site mitigation fee (see Mitigation Measure AQ-7) to adequately mitigate construction NOx exceedance. With the standard recommended construction mitigation measures and the off-site mitigation fee, construction air quality impacts related to NOx are considered individually less than significant. However, overall construction-related air quality impacts are considered cumulatively significant due to the potential for many other projects in the vicinity undergoing simultaneous construction. Furthermore, as the project is now expected to disturb more than 15 acres per day during development, the singular project PM<sub>10</sub> impact is considered significant and unavoidable.

Letter 1

COUNTY OF SACRAMENTO  
INTER-DEPARTMENT CORRESPONDENCE  
DEPARTMENT OF WATER RESOURCES

MEMORANDUM

Date: 10/13/05

**TO:** Steve Hong 01-304B  
Catherine Hack, DERA (01-220)

**FROM:** George Booth (and Bill Forrest)

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**PROJECT NAME: Draft Supplemental EIR**  
**North Vineyard Greens 1 & 3, Gosal Est, Davis TPM**  
**North Vineyard Station Specific Plan Area**

**CONTROL NUMBER: 03-0099, 03-0141, 02-0660, 03-0214**

Much effort has gone into the development of the phased drainage master plan and the associated finance mechanism (North Vineyard Station Supplemental Drainage Fee Program). Water Resources has conditioned these projects in the past. We make the following clarifying conditions:

1. Construct all off-site facilities required pursuant to the North Vineyard Station Drainage Master Plan. No fee credits shall be allowed for interim facilities other than those specifically described in the North Vineyard Station Supplemental Drainage Fee Program.
2. Offsite drainage improvements and easements shall be provided pursuant to the Sacramento County Floodplain Management Ordinance, and the Sacramento County Improvement Standards. Acquire all off-site easements necessary and complete the drainage facilities as required in the phased drainage master plan.
3. a) The Water Agency shall compensate developers for the acquisition of detention basin land pursuant to an approved Drainage Master Plan and the Zone 11 Drainage Impact Fee Plan and the North Vineyard Station Supplemental Drainage Fee Plan.  
b) The Agency (Zone 11A drainage fee credits) shall pay fair market value, hereby reserved pursuant to the California Subdivision Map Act, appraised at the date of the filing of the tentative parcel or subdivision map or use permit plus associated carrying costs. The Agency may terminate the reservation due to revised drainage master plan or disagreement of price. In no case will the compensation exceed the per acre value used in the Zone 11A Drainage Impact Fee Plan worksheet [\$100,000 per acre plus ENR inflator since 8/16/04].  
c) Compensation shall be in the form of a fee credit agreement and reimbursements shall be made pursuant to the Sacramento County Water Agency Code, Section 2.60.  
d) The credit amount shall be adjusted by an appropriate percentage pursuant to Section 2.55.020 of the Sacramento County Water Agency Code to account for inefficiencies of the system. - end --

TOTAL P.001

Letter 2

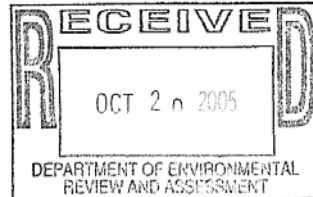
STATE OF CALIFORNIA  
PUBLIC UTILITIES COMMISSION  
505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298

ARNOLD SCHWARZENEGGER, Governor



October 19, 2005

Joyce Horizumi  
Sacramento County  
827 7th St., Room 220  
Sacramento, CA 95814



Dear Mr. Horizumi:

Re: SCH# 2005022149; North Vineyards Greens Units #1, #3, Gosal Estates and Davis Property Specific Plan Amendments, Rezones, Use Permit, etc.

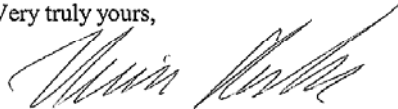
As the state agency responsible for rail safety within California, we recommend that any development projects planned adjacent to or near the rail corridor in the County be planned with the safety of the rail corridor in mind. New developments may increase traffic volumes not only on streets and at intersections, but also at at-grade highway-rail crossings. This includes considering pedestrian circulation patterns/destinations with respect to railroad right-of-way.

Safety factors to consider include, but are not limited to, the planning for grade separations for major thoroughfares, improvements to existing at-grade highway-rail crossings due to increase in traffic volumes and appropriate fencing to limit the access of trespassers onto the railroad right-of-way.

The above-mentioned safety improvements should be considered when approval is sought for the new development. Working with Commission staff early in the conceptual design phase will help improve the safety to motorists and pedestrians in the County.

If you have any questions in this matter, please call me at (415) 703-2795.

Very truly yours,



Kevin Boles  
Utilities Engineer  
Rail Crossings Engineering Section  
Consumer Protection and Safety Division

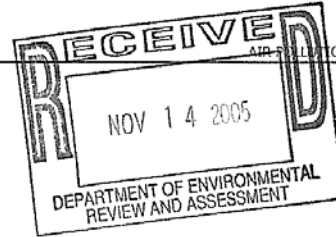
cc: Pat Kerr, UP

## Letter 3



November 8, 2005

Joyce Horizumi  
County of Sacramento  
Department of Environmental Review and Assessment  
827 7<sup>th</sup> Street, Room 220  
Sacramento, CA 95814



Larry Greene  
AIR QUALITY CONTROL OFFICER

**RE: Draft Supplemental Environmental Impact Report for North Vineyard Greens Units #1, #3 and Gosal Estates and Davis Property Specific Plan Amendments, Rezones, Use Permit, Vesting Tentative Parcel Map, Special Development Permits, Abandonment and Affordable Housing Plan (County Control Numbers: 03-CZB-SVB-SPP-AHS-0099, 03-RZB-SVB-SPP-AHS-0141, 02-RZB-UPP-PMR-AHS-0660, and 03-PMR-0214)**

Dear Ms. Horizumi:

Thank you for the opportunity to review and comment on the above referenced environmental document. Sacramento Metropolitan Air Quality Management District staff comments are as follows:

1. All air quality mitigation measures from the North Vineyard Station Specific Plan Final Supplemental EIR (NVSSP EIR) should be included in the list of mitigation measures which begins on page 6-6 of this document. Specifically, to address operational emissions, AQ-5 and AQ-6 from the NVSSP EIR are missing from this document and they read as follows:
  - *AQ-5 Comply with the adopted AQ-15 Plan, which is included in Section 7.6 (Travel Demand Reduction Measures) of the NVSSP text; and*
  - *AQ-6 No wood burning appliances shall be permitted in new construction within the Specific Plan area. Fireplaces and similar "wood stoves" shall be fueled by natural gas or propane.*
2. In addition, the text of AQ-4 from the NVSSP EIR should replace the text of AQ-5 on page 6-7 in the Draft Supplemental EIR for the North Vineyard Greens Unit 1 and 3 and Gosal Estates. The text of the measure to be included, as taken directly from the NVSSP EIR, reads as follows:
  - *AQ-4 The following construction-related measures apply to construction activities within the Specific Plan area:*
    - a. *Water exposed, graded surfaces at least two times per day and if possible, keep soil moist at all times*
    - b. *Properly maintain diesel and/or gas fueled construction equipment*
    - c. *Water haul roads at least two times per day*
    - d. *Use low VOC architectural coatings*

(There should be a total of seven mitigation measures in the Draft Supplemental EIR for North Vineyard Greens Units 1 & 3 et al, which begin on page 6-6 after all recommended revisions.)
3. In order to address any operational emissions all AQ-15 plan measures, from Section 7.6 in the text of the North Vineyard Springs Specific Plan, can be more readily referenced if listed in their entirety in the body of this document or in an Appendix to this document. In addition, all air quality measures should be listed in both the MMRP and COA, rather than simply by reference, to better facilitate implementation and enforcement.

North Vineyard Greens DSEIR  
November 8, 2005  
Page 2

4. In keeping with comments made on other projects in this geographic area we recommend that prior to the issuance of any building permit, the project shall participate as a benefit zone of the County Service Area (CSA), or an equivalent financing mechanism to the satisfaction of the Board of Supervisors. The purpose of the CSA is to fund programs and services to implement travel demand management measures that improve mobility and coincidentally reduce air quality impacts. Any component of the travel demand management strategy implemented through the CSA may be revised or discontinued if it is proven to be ineffective by the CSA Board. Additional programs and services shall be implemented in place of those discontinued as appropriate to assist in achieving the targeted reduction in daily vehicle trips. In the event the property owners fail to approve either the formation of the CSA or the property assessment for the CSA, no building permits shall be issued. In no event shall any owner of land within the project enter into any home sale agreement prior to formation of such CSA.
5. As more projects in the NVS Specific Plan area begin to build out, it is important to ensure excellent connectivity between developments, particularly for bicyclists and pedestrians, to area parks and commercial uses.
6. This project is also subject to any and all District rules in effect at the time of construction. The attached sheet enumerates some of those rules for your convenience. Additional information about those and all other rules that may be applicable can be found at [www.airquality.org](http://www.airquality.org) or by calling Compliance Assistance at (916) 874-4884.

Please contact me at (916) 874-4883; [cmchee@airquality.org](mailto:cmchee@airquality.org) or Jeane Borkenhagen at (916) 875-4885; [jborkenhagen@airquality.org](mailto:jborkenhagen@airquality.org) with any questions regarding these comments

Sincerely,



Charlene McGhee  
Associate Air Quality Analyst

Attachment

L:\MSD FOLDERS\Land Use & Transportation\LANDUSE\SAC200300674a

777 12th Street, 3rd Floor ■ Sacramento, CA 95814-1908  
916/874-4800 ■ 916/874-4899 fax  
[www.airquality.org](http://www.airquality.org)



## **SMAQMD Rules & Regulations Statement**

*The following statement is recommended as standard condition of approval or construction document language for **all** construction projects within the Sacramento Metropolitan Air Quality Management District (SMAQMD):*

All projects are subject to SMAQMD rules and regulations in effect at the time of construction. A complete listing of current rules is available at [www.airquality.org](http://www.airquality.org) or by calling 916.874.4800. Specific rules that may relate to construction activities may include, but are not limited to:

**Rule 201: General Permit Requirements.** Any project that includes the use of equipment capable of releasing emissions to the atmosphere may require permit(s) from SMAQMD prior to equipment operation. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact the District early to determine if a permit is required, and to begin the permit application process. Portable construction equipment (e.g. generators, compressors, pile drivers, lighting equipment, etc) with an internal combustion engine over 50 horsepower are required to have a SMAQMD permit or a California Air Resources Board portable equipment registration.

**Rule 403: Fugitive Dust.** The developer or contractor is required to control dust emissions from earth moving activities or any other construction activity to prevent airborne dust from leaving the project site.

**Rule 442: Architectural Coatings.** The developer or contractor is required to use coatings that comply with the volatile organic compound content limits specified in the rule.

**Rule 902: Asbestos.** The developer or contractor is required to notify SMAQMD of any regulated renovation or demolition activity. Rule 902 contains specific requirements for surveying, notification, removal, and disposal of asbestos containing material.

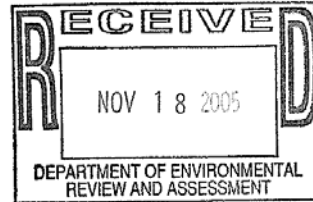
Other general types of uses that require a permit include dry cleaners, gasoline stations, spray booths, and operations that generate airborne particulate emissions.

## Letter 4

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

ARNOLD SCHWARZENEGGER, Governor

**DEPARTMENT OF TRANSPORTATION**  
 DISTRICT 3 – SACRAMENTO AREA OFFICE  
 VENTURE OAKS, MS 15  
 P. O. BOX 942874  
 SACRAMENTO, CA 94274-0001  
 PHONE (916) 274-0614  
 FAX (916) 274-0648  
 TTY (530) 741-4509



*Flex your power!  
 Be energy efficient!*

November 15, 2005

05SAC0174  
 03 SAC-99 PM 16.254  
 North Vineyard Greens Unit 1 and 3, Gosal Estates,  
 & Davis Property Parcel Map  
 Draft Supplemental EIR  
 SCH#2005022149

Ms. Joyce Horizumi  
 Sacramento County  
 Department of Environmental Review and Assessment  
 827 Seventh Street, Room 220  
 Sacramento, CA 95814

Dear Ms. Horizumi:

Thank you for the opportunity to review and comment on the DSEIR. We have the following comments:

- We suggest that Sacramento County and the project proponents provide information regarding this project's ongoing environmental review to Sacramento Regional Transit, Altamont Commuter Express (ACE), and the City of Elk Grove, since they have possible interest in the future use and development of the Central California Traction Company rail corridor. They would, therefore, be interested in any issues regarding this local land use project that might impact this potential rail transit corridor.
- Our comments in our letter of March 28, 2005 (copy enclosed) regarding this housing project and the rail corridor are still valid and should be acknowledged in the EIR. The EIR should include an analysis that addresses how to avert potential housing impacts and encroachment of the Central California Traction Company rail corridor.
- The owner/developer must disclose to future/potential buyers that although the Central California Traction Company rail line is presently out-of-service, it is not abandoned. It is possible the rail line could be used for future freight or transit service, and, if so used, associated noise, vibration, and other rail operation impacts will occur.
- Page 1-7 of the document addresses noise mitigation measures. Under "NO-2", regarding the recommended setback distances for this project's proposed housing next to the Central California Traction Company rail corridor, the DSEIR states that there should be "28 feet or

*"Caltrans improves mobility across California"*

Ms. Joyce Horizumi  
November 15, 2005  
Page 2

more" spacing from the edge of the 100 foot rail corridor. This noise mitigation should be clarified to state that this "28 feet or more" spacing would be housing separation from a needed noise attenuating soundwall, since the rail line is not abandoned from potential further use.

If you have any questions regarding these comments, please contact Ken Champion at (916) 274-0615.

Sincerely,



KATHERINE EASTHAM, Chief  
Office of Transportation Planning – Southwest

Enclosures

c: Scott Morgan, State Clearinghouse  
Olin Wood, SACOG  
Carrie Pourvahidi, High Speed Rail Authority

*"Caltrans improves mobility across California"*

**DEPARTMENT OF TRANSPORTATION**

DISTRICT 3 – SACRAMENTO AREA OFFICE  
 VENTURE OAKS, MS 15  
 P. O. BOX 942874  
 SACRAMENTO, CA 94274-0001  
 PHONE (916) 274-0614  
 FAX (916) 274-0648  
 TTY (530) 741-4509



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 Be energy efficient!*

March 28, 2005

05SAC0043  
 03 SAC-99 PM 16.254  
 North Vineyard Greens Unit 1 and 3, Gosal Estates,  
 & Davis Property Parcel Map  
 NOP  
 SCH#2005022149

Ms. Joyce Horizumi  
 Sacramento County  
 Department of Environmental Review and Assessment  
 827 Seventh Street, Room 220  
 Sacramento, CA 95814

Dear Ms. Horizumi:

Thank you for the opportunity to review and comment on the NOP. We have the following comments:

- The North Vineyard Greens Unit 1 development appears to enclose the California Traction Line Rail Corridor on two sides. The DEIR should include an analysis that addresses how to avert potential housing impacts to this rail corridor. This analysis should include what steps have been taken in the preparation of the housing parcel map to ensure that adequate set back allowances are made to preserve future rail uses of the corridor (ie. possible high speed or multiple tracked rail facilities). The analysis should also indicate how adequate sound and vibration attenuation will be provided for nearby planned residential structures. Further, a discussion of vehicular traffic circulation should be provided to show how traffic queues and at-grade rail intersection safety measures will be addressed in the near term. Future rail projects may require grade separation from local streets. Adequate right-of-way should be preserved to enable these improvements.

Until June 1998, the California Traction Line Rail Corridor was used as a freight corridor. The current status of the rail line is one of "being out of service". The rail line has not been abandoned. Important consultations and input for this DEIR, regarding the near term roadway grade crossing safety and future rail corridor needs in the vicinity of this project, should be obtained from the State Department of Transportation, Headquarters Rail Division.

- The housing project is regionally significant based on (1) its overall number of 641 residential units meeting the significance standard criteria, (2) its environmental document tiering from the larger North Vineyard Specific Plan, (3) its effect on increasing land values

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Ms. Joyce Horizumi  
March 28, 2005  
Page 2

in and near the train corridor, and (4) its potential encroachment around the periphery of an evolving rail transport line of inter-regional significance and uncertain future width dimensions.

The various housing development sites described in this Notice of Preparation document need to address the generated traffic and encroachment-related mitigation issues affecting this rail corridor. The California Environmental Quality Act (CEQA) and Public Resources Code Sections 21081.4, 21081.6 and 21081.7 mandate that lead agencies under CEQA provide the California Department of Transportation with information on transportation-related mitigation monitoring measures for projects that are of statewide, regional, or area-wide significance. The enclosed "Guidelines for Submitting Transportation Information from a Reporting or Monitoring Program to the Department of Transportation" (MM Submittal Guidelines) discuss the scope, purpose and legal requirements for mitigation monitoring reporting and submittal, specify the generic content for reports, and explain procedures for the timing, certification and submittal of the required reports. For this project and its part in increasing cumulative vehicular traffic demand and encroachment on rail corridor facilities, therefore, the enclosed Mitigation Monitoring Certification Checklist form should be completed and submitted to our office when appropriate mitigation measures are approved, and again when they are completed for all improvements related to this project.

If you have any questions regarding these comments, please contact Ken Champion at (916) 274-0615.

Sincerely,

**ORIGINAL SIGNED BY:**

KATHERINE EASTHAM, Chief  
Office of Transportation Planning – Southwest

Enclosures

c: Scott Morgan, State Clearinghouse  
Olin Wood, SACOG

*"Caltrans improves mobility across California"*

Ms. Joyce Horizumi  
March 28, 2005  
Page 3

bc: Victoria Coulter, HQ Office of Rail  
Tom Messer, HQ DOTP – Goods Movement  
Matt Paul, HQ Office of Rail  
Ron Hall, Office of Transportation Planning  
John Holzhauser, Office of Traffic Operations – Sacramento  
Tom Ganyon, Office of Right of Way  
Don Grebe, Office of Right of Way  
Scott Jackson, Office of Right of Way Engineering  
Bruce Capaul, Permits  
Ken Champion, District 3 – Sacramento County LDR Coordinator

KC/ kc

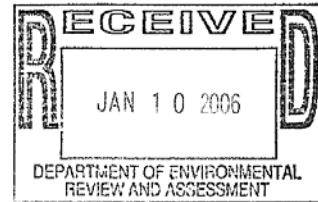
*"Caltrans improves mobility across California"*

Letter 5

7737-00

**MACKAY & SOMPS**  
ENGINEERS PLANNERS SURVEYORS

Catherine Hack  
Sacramento County Department of Environmental Review  
8027 7<sup>th</sup> Street, Room 220  
Sacramento, CA 95814



Re: North Vineyard Greens, Units 1 & 3, Gosai Estates  
03-GZB-SVB-SPP-AHS-0099, 03-RZB-SVB-SPP-AHS-0141  
02-RZB-UPP-PMR-AHS-0660, 03-PMR-0214

Dear Cathy:

On behalf of our client, Daru Developments Inc., we offer the following comments on the Draft Environmental Impact Report for your consideration. Please incorporate these comments into the Final EIR.

The Draft EIR recommends mitigation under the Air Quality section to reduce Particulate Matter (PM) emissions:

"The maximum actively distributed area shall not exceed 15 acres on any given day" (AQ-5 pg 1-6)

We submit the mitigation is economically infeasible due to the nature of the grading operations necessary to develop the site. Portions of the site need to be graded to raise the ground higher than the adjacent Gerber Creek. To accomplish this, material must be moved from the northern area of the project to the southern portion. To limit grading to only 15 acres on any given day would require a two-step construction method. First, excavate sufficient material and stockpile it. Second, on a subsequent day move the same stock piled material to the needed location. This is both economically and from operating of equipment standpoint inefficient. This would lead to increased costs and potentially extra operations of earth moving equipment. The alternative would be to handle this material once excavating and placing it in the same operation and avoiding an extra exposure of this material to the air.

We respectfully request that you find the suggested portion of AQ-5 mitigation to be infeasible and reject it. The balance of the mitigation contained in AQ-5 is sufficient to address particulate matter discharges from earth-moving operations. Please feel free to contact me if you have any questions.

Sincerely,

James C. Ray Jr.  
Vice President

Cc: Peter Daru

Dick Frascchetti  
1771 TRIBUTE ROAD, SUITE E SACRAMENTO, CALIFORNIA 95815-4408 PHONE (916) 929-6092 FAX (916) 923-5625  
OFFICES: LATHROP PLEASANTON ROSEVILLE SACRAMENTO  
www.msce.com

# **Appendix A**

## **Affordable Housing Plan**





Municipal Services Agency

Planning and Community Development

Robert Sherry, Director

Terry Schutten, County Executive  
Cheryl Creson, Agency Administrator

County of Sacramento

Richard Maddox, Code Compliance  
Leighann Moffitt, Long Range Planning  
Dave Pevny, Community Planning  
Ana Rhodes, Administration

August 29, 2005

Ben French  
MacKay & Soms  
1771 Tribute Road, Ste. E  
Sacramento, CA 95815-4487

RE: Revised Affordable Housing Plan for No. Vineyard Greens Units #1 and #3, and Gosal Estates, Control Nos. 02-0660, 03-0099, and 03-0141

Dear Mr. French:

The staff of the Planning and Community Development Department and the Sacramento Housing and Redevelopment Agency (SHRA) have reviewed your revised draft Affordable Housing Plan as submitted for the No. Vineyard Greens Units #1 and #3, and Gosal Estates projects. Pursuant to the affordable housing ordinance, Section 22.35.140 Affordable Housing Plan and Request for Determination of Site Suitability, subsection C, the Planning Director has determined that your revised draft plan will be recommended for *approval*, subject to the conditions set forth in the enclosed SHRA letter, dated August 29, 2005.

Your project will proceed through the normal planning process, including Department of Environmental Review and Assessment analysis. Your Affordable Housing Plan and staff's recommendation will be included with the staff report. If your project is modified, your Affordable Housing Plan may also require modification.

Please direct any correspondence to the Planning Department at the address below. If you have any questions regarding this letter, please contact me at (916) 874-6141.

Sincerely,

Jeff Gamel  
Senior Planner

Enclosure

c: Peter Daru  
Cindy Cavanaugh  
DERA

No. Vineyard Greens Units #1 and #3, and Gosal Estates



**RECEIVED**

**AUG 29 2005**

**PLANNING DEPT.  
County of Sacramento**

August 29, 2005

Jeff Gamel  
County of Sacramento  
Planning Department  
827 7<sup>th</sup> Street, Room 120  
Sacramento, CA 95814

**Re: North Vineyard Greens #1 and #3 and Gosal Estates – Approval for 7.07 net acres of land dedication and excess acreage credits for 3.49 net acres (2 sites)**

Dear Jeff:

I am writing in regards to North Vineyard Greens #1 and #3 and Gosal Estates, project numbers 02-0660, 03-0099, and 03-0141. As you know, this project is subject to the County of Sacramento Affordable Housing Ordinance, Chapter 22.35 of Title 22 of the County Code.

Pursuant to Section 22.35.140 of the County Code, the Developer prepared and submitted an Affordable Housing Plan for the Development Project on February 17, 2005 which was revised on March 23, 2005, April 21, 2005 and July 19, 2005. The affordable housing plan was found to be complete but unacceptable by SHRA in letters dated February 25, 2005, March 31, 2005, and May 19, 2005 respectively. Supplemental information was since received on August 15, 2005. The Sacramento Housing and Redevelopment Agency ("SHRA") has reviewed the enclosed Affordable Housing Plan and all supplemental information submitted, and found it to be acceptable under the Ordinance subject to the conditions as outlined in Attachment I. SHRA is now forwarding this Plan to the County for final review and recommendation for adoption by the Planning Director.

Should you have any questions, please feel free to contact Cindy Cavanaugh at (916) 440-1328.

Sincerely,

Darren Bobrowsky, Director  
Development Services

Cc Cindy Cavanaugh  
Lindsay Brown

**Attachment I**  
**North Vineyard Greens #1 and #3 and Gosal Estates**  
**Recommended Conditions of Land Dedication Approval**

The following are recommended conditions of land dedication with excess acreage credit approval for the Affordable Housing Plan for North Vineyard Greens #1 and #3, and Gosal Estates, project numbers 02-0660, 03-0099, and 03-0141 submitted on February 17, 2005 with supplemental material received on March 23, 2005, April 20, 2005, July 19, 2005, and August 11, 2005.

**Gosal Estates – site #1**

1. The proposed sites are determined to be feasible to develop for an affordable multi-family residential project because there are no known environmental or development constraints and/or the applicant has agreed to mitigate such adverse conditions prior to approval of the project's final map or concurrent with development of the applicant's project to be specified in the conditions of project approval.
  - a. The site contains a 0.01 acre wetland which shall be mitigated offsite.
2. The dedicated site shall be padded and graded using with suitable material and out of the 100 year flood plain.
3. The proposed site is currently or will be served with all of the necessary infrastructure improvements including, without limitation, extension of roadways, water and sewer lines, storm drainage and flood control systems, and dry utilities that are constructed or provided at the applicant's sole cost and expense to the Site concurrent with development of the applicant's project. All necessary infrastructure improvements shall be installed at an adequate depth and capacity to serve the entire proposed dedicated site.
4. Structures on site shall be cleared and removed from the site and the well on site shall be closed pursuant to appropriate regulatory agency guidelines at the sole cost and expense of Developer.
5. The proposed site size, as encumbered by easements and other constraints, will be sufficient to accommodate the number of affordable units identified in the Affordable Housing Plan, which are based on the number of market rate units proposed. Completion of all land use entitlements including the Development Plan Review process for the affordable project to be proposed on the dedicated site shall occur prior to first final map approval.

## **North Vineyard Greens – site #2**

6. The proposed sites are determined to be feasible to develop for an affordable multi-family residential project because there are no known environmental or development constraints and/or the applicant has agreed to mitigate such adverse conditions prior to approval of the project's final map or concurrent with development of the applicant's project to be specified in the conditions of project approval.
7. The dedicated site shall be padded and graded using with suitable material and out of the 100 year flood plain.
8. The proposed site is currently or will be served with all of the necessary infrastructure improvements including, without limitation, extension of roadways, water and sewer lines, storm drainage and flood control systems, and dry utilities that are constructed or provided at the applicant's sole cost and expense to the Site concurrent with development of the applicant's project. All necessary infrastructure improvements shall be installed at an adequate depth and capacity to serve the entire proposed dedicated site.
9. If applicable, any structures on site shall be cleared and removed from the site and any wells on site shall be closed pursuant to appropriate regulatory agency guidelines at the sole cost and expense of Developer.
10. The proposed site size, as encumbered by easements and other constraints, will be sufficient to accommodate the number of affordable units identified in the Affordable Housing Plan, which are based on the number of market rate units proposed. Completion of all land use entitlements including the Development Plan Review process for the affordable project to be proposed on the dedicated site shall occur prior to first final map approval.
11. Recommended approval of the proposed site is made absent an arborist report or biological resource study. We note that the site abuts a drainage parkway. If easements or other factors reduce the net buildable acreage, then the available credits will be correspondingly reduced.

## **Entire Development Project:**

12. The Developer will be required to enter into an Affordable Housing Agreement prior to the recordation of the first final map which will outline any mitigating measures, etc. as noted in the above conditions. The final map for the Development Project shall be conditioned upon

the recordation of a regulatory agreement on the dedicated sites, transfer of title to the dedicated sites to SHRA or its designee, and delivery of infrastructure necessary to accommodate the affordable housing component on the dedicated site.

13. The Developer will be required to enter into an Excess Acreage Credit Agreement prior to the recordation of the first final map. Excess Acreage Credits are only valid when:
  - a. The development project proposing to use the acreage credits is within the same community plan (North Vineyard Station) as the donor site or within a one-mile radius of the donor site.
  - b. The acreage credits have been issued within five years of the receipt of credits to the donor site; and
  - c. Acreage credits are sufficient to meet the entire obligation of a development project pursuant to Ordinance Section 22.35.070 (B).

**Affordable Housing Plan**  
**On-Site Land Dedication and Affordability Fee Payment**  
**North Vineyard Greens #1, #2 and Gosal Estates**

**Proposed Project**

North Vineyard Greens, GP is the developer (“Developer”) of that certain real property in the County of Sacramento (“County”) in which the Developer proposes to develop and construct the North Vineyard greens #1, #3, and Gosal Estates (“Development Project”). This proposed 124.7 Gross acre Development Project is located at address or descriptive location. The Development Project consists of the following unit mix:

| ZONING                          | GROSS ACRES        | UNITS            |
|---------------------------------|--------------------|------------------|
| <b>North Vineyard Greens #1</b> |                    |                  |
| RD – 5                          | 75.80              | 340              |
| RD - 7                          | 5.5                | 37               |
| <b>North Vineyard Greens #3</b> |                    |                  |
| RD – 5                          | 31.2 <sup>1</sup>  | 138              |
| RD – 20                         | 4.7 <sup>2</sup>   | AH site          |
| <b>Gosal Estates (AH site)</b>  |                    |                  |
| RD - 20                         | 7.5                | AH site          |
| <b>TOTAL</b>                    | <b>124.7 acres</b> | <b>515 units</b> |

\* Note that Gross acres excludes public parks, public schools, open space areas, habitat mitigation or other similar public non-residential features as defined in Section 22.35.020.

**Affordable Housing Policy**

The County of Sacramento (“County”) adopted an Ordinance adding Chapter 22.35 of Title 22 to the Sacramento County Code (“Ordinance”) on December 8, 2004. This Ordinance requires that Developers seeking Project Level Approvals for new

<sup>1</sup> Excludes 5.2 acres on which three (3) existing residents and will remain.

<sup>2</sup> Ordinance section 22.35.045(A)(1)(c) notes that affordable obligation of the [multifamily] sites identified by the Board during final hearings on the Specific Plan shall be calculated at RD – 7 zoning rather than the multifamily zoning density as required under Section 22.35.070(B)(2). This section applies to RD – 20 sites in North Vineyard Greens #1, #3, and Gosal estates. In addition, North Vineyard Greens, GP and Lennar Communities will perform a boundary line adjustment with each other, essentially trading the RD – 20 site in North Vineyard Greens #1 for comparable acreage of Lennar which abuts North Vineyard Greens #3. The gross acreage of the RD – 20 site combines North Vineyard Greens #3 multifamily land with land to be traded with Lennar.

Development Projects include or provide for an affordable housing component. Pursuant to section 22.35.050(A) of the Ordinance, Development Projects that are found to have suitable land may meet this obligation through the dedication of land and payment of an Affordability Fee. If suitable land is found to be ELI Competitive pursuant to Section 22.35.070(A)(1), the Developer must either build the standard affordable housing component on site or dedicate this land to the Sacramento Housing and Redevelopment Agency (“SHRA”) at no cost and pay an Affordability Fee to meet their affordable housing obligation. In addition, at the discretion of the County and SHRA, the Developer may request to donate additional land pursuant to Section 22.35.050(A)(3) and retain excess affordable housing credits above the required dedication to supplement the required dedication or to reach the minimum size required to be deemed suitable.

Pursuant to the County Code Section 22.35.140, an Affordable Housing Plan (“Plan”) must be submitted as part of the application for the Development Project’s application for a Project Level Approval. The hearing body shall consider this Plan along with the Project Level Approvals, and compliance with the Plan shall become a condition of the Project. County Code Section 22.35.140 (B)(3) sets forth the required information to be included in this Plan. This document constitutes the Plan, and, as supplemented and amended from time to time, is intended to begin implementation of the affordable housing requirement for the Development Project. All future approvals for the Development Project shall be consistent with this Plan.

**Land Suitability Findings**

Pursuant to Section 22.35.050(A) of the Ordinance, the Developer may dedicate land and donate additional land to comply with the affordable housing obligation if the County and SHRA have determined that there is suitable land in the Development Project for land dedication. Pursuant to Section 22.35.070(B), the land obligation of the Development Project is based on a formula that considers both land size and proposed zoning. In order for land to be deemed suitable by the County and SHRA, the land obligation of the Development Project plus the additional land proposed to be donated must be, at a minimum, four net buildable acres. The required land obligation for the Development Project is:

| Acres of Land                   | Assumed Zoning * | Formula                   | Acreage Requirement |
|---------------------------------|------------------|---------------------------|---------------------|
| <b>North Vineyard Greens #1</b> |                  |                           |                     |
| 75.80                           | RD - 5 (x5)      | $x 15\% x 1.25 \div 17 =$ | 4.18                |
| 5.4                             | RD -7 (x6)       | $x 15\% x 1.25 \div 17 =$ | 0.36                |
| <b>North Vineyard Greens #3</b> |                  |                           |                     |
| 31.2                            | RD - 5 (x5)      | $x 15\% x 1.25 \div 17 =$ | 1.72                |
| 4.7                             | RD - 20 (x6)     | $x 15\% x 1.25 \div 17 =$ | 0.31                |

|                                      |                 |                                |   |
|--------------------------------------|-----------------|--------------------------------|---|
| <b>Gosal Estates</b>                 |                 |                                |   |
| 7.5                                  | RD – 20<br>(x6) | $x 15\% \times 1.25 \div 17 =$ | 0.50  |
| <b>124.70 total acres in project</b> |                 |                                | <b>7.07 total net acres required for dedication</b> |

\* Assumed zoning is equal to the midpoint between RD-5 and the actual zoning ((actual zoning + 5) ÷ 2) for acres zoned or proposed to be zoned RD-1 to RD-10 OR the actual proposed zoning for acres proposed to be zoned RD-15 or higher.

In addition to the 7.07 total net acres required for dedication, the Developer is proposing to donate an additional 3.49 acres and to retain Acreage Credits on that additional land for a total of 10.56 net acres dedicated/donated. This additional land is being proposed because (select one):

- The Developer wishes to donate land above the required amount for the purposes of retaining Acreage Credits.
- The total net acreage required for dedication in the Development Project is less than four net acres, and the Developer wishes to donate additional land to access the land dedication option and to retain Acreage Credits.

In addition to the minimum size requirements detailed above, the dedicated/donated land must meet additional suitability requirements prior to the County and SHRA recommending approval of the Plan. The County and SHRA have found ELI Competitive land in the Development Project as determined by the following:

- √ The land dedication/donation required or proposed by Development Project is equal to at least four net buildable acres per the land dedication formula in Section 22.35.070(B) and as demonstrated in Exhibit 3. The Development Project must contribute at least 7.07 acres as calculated above.
- √ The land proposed for dedication is no larger than ten Gross acres in any one location.
- √ The land proposed for dedication is feasible to develop considering known environmental constraints. Final acceptance of the land for dedication is conditioned upon agreement by the Developer to comply with the conditions of approval from the Tentative Map or other Project Level Approval. Such conditions may include measures to mitigate identified environmental and development constraints.
- √ The Developer must disclose any known environmental and development constraints and certify their agreement to mitigate any constraints discovered prior to acceptance of the dedication by completing and signing the disclosure and certification statement included at Exhibit 1.
- √ The land proposed for dedication is served with (or will be served with) the necessary infrastructure for development of the affordable project prior to acceptance of the dedication unless agreed by SHRA or its designee to defer



improvements as detailed in the “Concurrency and Development of Dedicated of Land” section of this Affordable Housing Plan.

- √ The land proposed for dedication is free of Mello Roos or other special assessments.
- √ The roads abutting the land proposed for dedication are (or will be) improved as required by the County, including but not limited to road widening, installation of any roadway signals or other improvements.
- √ The land proposed for dedication/donation is located within a half mile of at least three of the following amenities as shown in the amenity map included as Exhibit 2 (check all that apply):

- An existing or planned public elementary, middle or high school:  
**Site 2 - proposed school southeast of Waterman Road at proposed 5<sup>th</sup> Street**
- An existing or planned public park or recreational facility:  
**Site 1 – proposed park on the north side of 1<sup>st</sup> Street east of Waterman Road. Site 2 – proposed park south side of 6<sup>th</sup> Street.**
- An existing or planned transit stop:  
**Site 1 & 2– located along the proposed Gerber Road transit corridor.**
- An existing or planned grocery store or planned commercial center of at least ten (10) acres:  
**Site 1 – located on the north east and southeast corners of Elk Grove – Florin Road and Gerber Road.**
- An existing or planned public library:  
**Name and location of library**

Based on the above findings and the early determination of site suitability heard by the Sacramento County Board of Supervisors on date, the site more particularly described in Exhibit 3 is proposed for dedication to SHRA at no cost to meet the Development Project’s affordable housing obligation. (THIS SECTION IS NOT APPLICABLE).

**Excess Affordable Housing Acreage Credits**

Pursuant to Section 22.35.070(D), a Developer may request to donate additional ELI Competitive land and retain affordable housing acreage credits on that land above and beyond the land required to be dedicated per the formula in Section 22.35.070(B). The Development Project is requesting such credits, subject to the regulations detailed in Section 22.35.070(D).

The total excess affordable housing acreage credits being requested for the Development Project is 3.49 net acres. The use of these acreage credits is subject to the approval of the Planning Director and the following requirements:

- √ Pursuant to Section 22.35.070(D)(3)(b), the acreage credits may only be used for future Development Projects within the same community plan area as the Donor site or within a one-mile radius of the Donor site, with the exception of Development Projects within the unincorporated areas of the Delta, Consumnes, and Southeast community planning areas and Rancho Murieta planned unit development, which may purchase credits within the adjacent Vineyard or Rancho Cordova community planning areas. The Development Project proposing the donation of excess land is located in North Vineyard Station Community Plan Area.
- √ Pursuant to Section 22.35.070(D)(3)(b), the acreage credits may only be used within five (5) years of the issuance of the credits, or the date of this Affordable Housing Plan, August 10, 2005.

### **Affordability Fee Calculations**

As set forth in Section 22.35.070(A)(3), the Developer must, in addition to dedicating/donating the suitable land to SHRA at no cost, pay an Affordability Fee for each market rate unit pursuant to Section 22.35.080(B)(1). The Development Project must only pay the Affordability Fee on the required dedication, not on any excess land donated for purposes of retaining excess affordable housing acreage credits. Based on the proposed Development Project of 515 market rate units and the current fee schedule of \$3,000 per market rate unit, the Affordability Fee for the Development Project is as follows:

Affordability fee:     515 units x \$3,000 = \$ 1,545,000

Pursuant to Section 22.35.080(A)(2), this fee is to be paid concurrently with the payment of building permit fees for the Development Project in proportion to the number of permits being pulled. The Developer shall pay the per unit affordability fee in effect at the time the building permit is issued.

### **Concurrency and Development of Dedicated Land**

Pursuant to Section 22.35.060(B), prior to the recordation of the first final map and transfer of title from the Developer to SHRA or its designee, the Developer must either demonstrate that the dedicated land has all necessary infrastructure improvements and land use entitlements required for development of the affordable project or submit an alternate phasing schedule for development of the improvements which is subject to SHRA's approval.

Approval of the first final map will be conditioned on the completion of these improvements and approval of these entitlements, development plan review approval for the project being built on the dedicated site, and the transfer of the dedicated/donated land to SHRA or its designee by agreement. Exhibit 4 is a proposed timeline for development, including the milestones associated with the concurrency.

In addition, the first final map will be conditioned upon the recordation of a regulatory agreement between SHRA and the affordable developer on the dedicated/donated site indicating the number of affordable units required to be built on the dedicated/donated site and income targeting for those affordable units. Pursuant to Section 22.35.070(E), SHRA shall cause to be constructed on each dedicated/donated site at least the number of affordable units attributable to the dedicated/donated site. In accordance with Section 22.35.140(B)(3)(c) the number of units attributable to the dedicated/donated site for the Development Project is as follows:

| <b>DEVELOPMENT PROJECT OBLIGATION:</b> |                              |                |   |
|--|------------------------------|----------------|---|
| <b>Acres of Land</b>                   | <b>Assumed Zoning *</b>      | <b>Formula</b> | <b>Unit Requirement</b>                                 |
| 75.80                                  | RD – 5 (x5)                  | x 15% =        | 57  |
| 5.5                                    | RD -7 (x6)                   | x 15% =        | 5   |
| 31.2                                   | RD – 5 (x5)                  | x 15% =        | 23  |
| 1.21 (4.7-3.49)                        | RD – 20 (x6)                 | x 15% =        | 1   |
| 7.5                                    | RD – 20 (x6)                 | x 15% =        | 7   |
| <b>121.2 total acres in project</b>    |                              |                | <b>93 total units required from Development Project</b> |
| <b>EXCESS DONATED LAND OBLIGATION:</b> |                              |                |   |
| <b>Acres of Land (net)</b>             | <b>Zoning (85% of RD-20)</b> | <b>Formula</b> | <b>Unit Requirement</b>                                 |
| 3.49                                   | RD - 17                      | x 100% =       | 59  |

\* Assumed zoning is equal to the midpoint between RD-5 and the actual zoning ((actual zoning + 5) ÷ 2) for acres zoned or proposed to be zoned RD-1 to RD-10 OR the actual proposed zoning for acres proposed to be zoned RD-15 or higher.

Pursuant to Section 22.35.070(E), SHRA must ensure that the units built on the dedicated/donated site are both sufficient in numbers to meet the obligation of the Development Project and that they are provided in proportion to the obligation. For ELI Competitive sites, the following proportions must be met:

- At least 20% of the required affordable units must be affordable to Extremely Low Income households;
- At least 40% of the required affordable units must be affordable to Very Low Income households;
- At least 40% of the required affordable units must be affordable to Low Income households.

Therefore, for the Development Project and the excess donated land, the following minimum number of units at the required affordability levels will be required to be developed on the dedicated/donated site and the regulatory agreement recorded on the dedicated/donated site will reflect this unit mix:

| <b>Affordability Level</b> | <b>Number of Units</b> |
|----------------------------|------------------------|
|----------------------------|------------------------|

|                                |            |
|--------------------------------|------------|
| Low Income (80% AMI)           | 61         |
| Very Low Income (50% AMI)      | 61         |
| Extremely Low Income (30% AMI) | 30         |
| <b>TOTAL</b>                   | <b>152</b> |

The dedicated land and all affordable housing units shall be subject to recorded legal documents, including an Affordable Housing Regulatory Agreement with SHRA detailing the affordable housing requirements.

**Incentives**

Pursuant to Section 22.35.090, the Developer may request a variety of incentives from the County as part of the Development Project’s affordable housing plan. The density bonus incentives detailed in Section 22.35.090(A) must be approved as part of the Development Project’s Affordable Housing Plan. In accordance with this section, the Developer is applying for the following density bonus incentives (check all that apply):

- A density bonus to allow the affordable housing obligation to be built on the dedicated site(s) at no more than 30 dwelling units per acre.
- A density bonus of number units to allow the Development Project to incorporate the units foregone on the dedicated site(s) in the remaining market rate development as follows:

$$\frac{\text{Number of acres being dedicated} \times \text{proposed zoned density of single family product}}{\text{TOTAL UNITS FOREGONE}}$$

**Administration**

The Planning Director, with the advice of the Executive Director of SHRA, shall administer this Affordable Housing Plan. The Planning Director may make minor administrative amendments to the text of this Plan, which may include a change in the number of units in the Development Project prior to payment of building permits for the Development Project, or other amendments as deemed appropriate. Such changes shall be reflected in a written addendum to the Affordable Housing Plan. The Developer is responsible for notifying SHRA and County staff of any changes to the Development Project, subdivision map or environmental documents that occur after approval of the Affordable Housing Plan, but before approval of the final Project Level Approval.

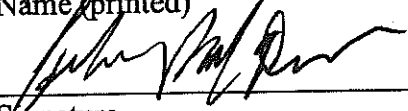
The funds collected from the in-lieu and affordability fees shall be collected by the County of Sacramento and administered by the Executive Director of SHRA in accordance with Sections 22.35.150 and 22.35.160 of the Ordinance.

**Developer Acknowledgement**

I attest that I have prepared this Affordable Housing Plan to comply with the affordable

housing requirements of Section 22.35 of the County Code and that all information provided is accurate and complete to the best of my knowledge. Except for project-specific information requested in the template, I have not modified the language provided in the County-provided template.

PETER PAUL DARY  
\_\_\_\_\_  
Name (printed)

  
\_\_\_\_\_  
Signature

M. M.  
\_\_\_\_\_  
Title

8/15/05  
\_\_\_\_\_  
Date

**Exhibit 1  
Disclosure and Certification**

**Property Development Disclosure**

Please indicate below the conditions of the Property to be dedicated to the Sacramento Housing and Redevelopment Agency (SHRA) for development of affordable housing in compliance with the County of Sacramento's Affordable Housing Ordinance (Chapter 22.35 of Title 22 of the Sacramento County Code). The Developer's response is based on the conditions of the Property that are known as of the date of this certification. The Developer must provide SHRA with copies of all available documents that support the answers provided below. If new information is discovered after this certification is executed which would change the Developer's response to any of these questions, the Developer is obligated to immediately inform SHRA and to provide the applicable new information and will be required to mitigate for these conditions. Please respond to each question. If a qualification is necessary, please explain below or reference which document contains the qualifying information.

| Property Suitability (if any "no" answer, please explain below)   |  | Yes | No |
|---|--|-----|----|
| 1. The Property is at least four net buildable acres and is no more than ten Gross acres at one location?   |  | x   |    |
| 2. The Property is currently located along an approved public roadway, or improved public streets will be extended to the Property by the Developer as a map condition?   |  | x   |    |
| 3. The Property is currently served by all necessary infrastructure including wet and dry utilities (storm drain, sewer, water, cable, phone, gas, electric and television) with sufficient capacity required for development of the Property, or all necessary infrastructure with sufficient capacities will be extended to the Property by the Developer as a map condition? |  | x   |    |
| 4. The Property will be accessible to allow for its development either before or concurrently with development of the Developer's market rate project?  |  | x   |    |
| Environmental Constraints (if any "yes" answer, please explain below)   |  | Yes | No |
| 5. Does the Property contain ponded depressions or is adjacent to a drainage swale, creek or stream?  |  | x   |    |
| 5a. If Yes to Question 5: Are such areas verified or suspected wetlands?  |  | x   |    |
| 6. Is the Property suspected of containing any elderberry bushes or other vegetation that may support endangered or special status plant or animal species?   |  |     | x  |
| 6a. If Yes to Question 6: Has a field survey been conducted to verify if species exist?   |  |     |    |
| 7. Are there any endangered or special status animal species (i.e. giant garter snake, burrowing owls, swainson's hawk) known to inhabit the property?  |  |     | x  |
| 8. Are there any trees on the Property that might require mitigation (i.e. heritage trees)?   |  |     | x  |
| 9. Are there any known or suspected historical or cultural resources on or adjacent to the Property?  |  |     | x  |
| 10. Was the Property used in the past for any operations that may have involved hazardous substances?   |  |     | x  |

|  |            |           |
|--|------------|-----------|
| 10a. If Yes to Question 10: Have the soils and/or groundwater been tested?   |            |           |
| 11. Was the property used as a staging or wash out area during construction of adjacent parcels?   |            | x         |
| <b>Development Constraints (if any "yes" answer, please explain below)</b>   | <b>Yes</b> | <b>No</b> |
| 12. Are there any structures or wells on-site?   | x          |           |
| 13. Is an import or export of soil required on the site to balance?  |            | x         |
| 14. Is the Property subject to flooding during wet weather? (If there are any flood or drainage conditions associated with the site that might impede development, please explain below)   |            | x         |
| 14a. Does the site lie within the 100 year flood plain?  |            | x         |
| 14b. Is there adequate drainage facilities provided to the site?   | x          |           |
| 15. Does the Property have expansive soils, mining spoils (i.e. dredge tailings, cobbles or slickens), peat soil or unsuitable materials? (If there are any soil conditions that might impede development, please describe below.) |            | x         |
| 15a. Are there serpentine rocks or natural occurring asbestos sources?   |            | x         |
| 16. Does the property currently or will it contain public utility easements? (If Yes, please provide a proposed site plan showing those easements)   | x          |           |

**Explanations:**

5a. 0.01 acres of seasonal wetlands.

12. One structure and one well on the Gosal site.

16. A portion of the Gerber Road and Waterman Road rights-of-way to be dedicated as part of this project will have public utilities within the right-of-way. The Gosal Estates site contains a portion of a 75' sewer easement and a 30' access I.O.D.

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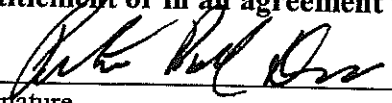
In addition to providing reports and documents that verify the foregoing responses, the Developer must provide the following reports on the dedicated site(s) for the Affordable Housing Plan to be deemed complete:

- Current Aerial Photo with site plan overlay
- Soils/Geotechnical Reports (if not currently available, must be provided 60 days prior to the approval of the project's tentative map)
- Phase I Environmental Site Assessment
- Preliminary Title Report

Please also submit the following reports, if available:

- Stamped and signed plat and legal description
- Biological Resources Studies
- Arborist Report
- Cultural Resource Survey
- Phase II Environmental Site Assessment
- Infrastructure Plan
- Utility "Will Serve" Letters
- Historical Aerial Photo
- Alta Survey

I hereby certify to the best of my knowledge using information currently available that the foregoing responses are true and correct, and that I will be responsible for the cost to mitigate any adverse environmental condition or development constraint as noted above as specified in the conditions of approval of my development project entitlement or in an agreement with SHRA:

  
Signature

7/19/05  
Date

PETER DARU  
Name

641-2084  
Phone Number

M. M.  
Title

N. V. Greens LLC  
Firm Name

720 Howe Ave #103, Sacto  
Address



**Exhibit 1  
Disclosure and Certification**

**Property Development Disclosure**

Please indicate below the conditions of the Property to be dedicated to the Sacramento Housing and Redevelopment Agency (SHRA) for development of affordable housing in compliance with the County of Sacramento's Affordable Housing Ordinance (Chapter 22.35 of Title 22 of the Sacramento County Code). The Developer's response is based on the conditions of the Property that are known as of the date of this certification. The Developer must provide SHRA with copies of all available documents that support the answers provided below. If new information is discovered after this certification is executed which would change the Developer's response to any of these questions, the Developer is obligated to immediately inform SHRA and to provide the applicable new information and will be required to mitigate for these conditions. Please respond to each question. If a qualification is necessary, please explain below or reference which document contains the qualifying information.

| <b>Property Suitability (if any "no" answer, please explain below)</b>  | <b>Yes</b> | <b>No</b> |
|---|------------|-----------|
| 1. The Property is at least four net buildable acres and is no more than ten Gross acres at one location?   | x          |           |
| 2. The Property is currently located along an approved public roadway, or improved public streets will be extended to the Property by the Developer as a map condition?   | x          |           |
| 3. The Property is currently served by all necessary infrastructure including wet and dry utilities (storm drain, sewer, water, cable, phone, gas, electric and television) with sufficient capacity required for development of the Property, or all necessary infrastructure with sufficient capacities will be extended to the Property by the Developer as a map condition? | x          |           |
| 4. The Property will be accessible to allow for its development either before or concurrently with development of the Developer's market rate project?  | x          |           |
| <b>Environmental Constraints (if any "yes" answer, please explain below)</b>  | <b>Yes</b> | <b>No</b> |
| 5. Does the Property contain ponded depressions or is adjacent to a drainage swale, creek or stream?  | x          |           |
| 5a. If Yes to Question 5: Are such areas verified or suspected wetlands?  | x          |           |
| 6. Is the Property suspected of containing any elderberry bushes or other vegetation that may support endangered or special status plant or animal species?   |            | x         |
| 6a. If Yes to Question 6: Has a field survey been conducted to verify if species exist?   |            |           |
| 7. Are there any endangered or special status animal species (i.e. giant garter snake, burrowing owls, swainson's hawk) known to inhabit the property?  |            | x         |
| 8. Are there any trees on the Property that might require mitigation (i.e. heritage trees)?   |            | x         |
| 9. Are there any known or suspected historical or cultural resources on or adjacent to the Property?  |            | x         |
| 10. Was the Property used in the past for any operations that may have involved hazardous substances?   |            | x         |

|  |            |           |
|--|------------|-----------|
| 10a. If Yes to Question 10: Have the soils and/or groundwater been tested?   |            |           |
| 11. Was the property used as a staging or wash out area during construction of adjacent parcels?   |            | x         |
| <b>Development Constraints (if any "yes" answer, please explain below)</b>   | <b>Yes</b> | <b>No</b> |
| 12. Are there any structures or wells on-site?   |            | x         |
| 13. Is an import or export of soil required on the site to balance?  |            | x         |
| 14. Is the Property subject to flooding during wet weather? (If there are any flood or drainage conditions associated with the site that might impede development, please explain below)   |            | x         |
| 14a. Does the site lie within the 100 year flood plain?  | x          |           |
| 14b. Is there adequate drainage facilities provided to the site?   | x          |           |
| 15. Does the Property have expansive soils, mining spoils (i.e. dredge tailings, cobbles or slickens), peat soil or unsuitable materials? (If there are any soil conditions that might impede development, please describe below.) |            | x         |
| 15a. Are there serpentine rocks or natural occurring asbestos sources?   |            | x         |
| 16. Does the property currently or will it contain public utility easements? (If Yes, please provide a proposed site plan showing those easements)   | x          |           |

**Explanations:**

5. The property is located adjacent to Gerber Creek.

5a. The property does not contain any wetlands.

14a. The southern portion of the property lies within the 100 year flood plain. The 100 year flood line will be contained within Gerber Creek as soon as the drainage improvements have been completed. Drainage improvements will be completed prior to development of this site.

16. A portion of the Waterman Road right-of-way to be dedicated as part of this project will have public utilities within the right-of-way.


In addition to providing reports and documents that verify the foregoing responses, the Developer must provide the following reports on the dedicated site(s) for the Affordable Housing Plan to be deemed complete:

- Current Aerial Photo with site plan overlay
- Soils/Geotechnical Reports (if not currently available, must be provided 60 days prior to the approval of the project's tentative map)
- Phase I Environmental Site Assessment
- Preliminary Title Report

Please also submit the following reports, if available:

- Stamped and signed plat and legal description
- Biological Resources Studies
- Arborist Report
- Cultural Resource Survey
- Phase II Environmental Site Assessment
- Infrastructure Plan
- Utility "Will Serve" Letters
- Historical Aerial Photo
- Alta Survey

**I hereby certify to the best of my knowledge using information currently available that the foregoing responses are true and correct, and that I will be responsible for the cost to mitigate any adverse environmental condition or development constraint as noted above as specified in the conditions of approval of my development project entitlement or in an agreement with SHRA:**

  
Signature

8/15/05  
Date

PETER PAUL DARY  
Name

212-0968  
Phone Number

M. M  
Title

Firm Name  
720 Howe Ave #103  
Address

**Exhibit 2  
Site Amenity Map**

**Maps for Site #1 and #2 are on file with SHRA.**

**Exhibit 3  
Description and Land Size Calculation of Dedicated Site(s)**

*Insert here the legal description and APN of the dedicated site(s), or, if not available a locational description and map of the site(s).*

*In addition, please provide an explanation of how "net buildable acreage" was calculated and show the calculation (gross acreage - easements and encumbrances = net buildable acreage). Please list and describe all current and anticipated future easements and encumbrances being "netted" out in the formula. Please show these easements/encumbrances on the site map, as applicable.*

Gosal APN 065-0080-057

|                         |      |
|-------------------------|------|
| Gross Land Acreage      | 10.1 |
| Less Detention Basin    | 2.6  |
| Less 30' IOD            | .4   |
| Less Gerber Road Access | .6   |
| Net Site Acreage        | 6.5  |

**Exhibit 3**  
**Description of Dedicated Site(s)**

*Insert here the legal description and APN of the dedicated site(s), or, if not available, a locational description and map of the site(s).*

*In addition, please provide an explanation of how "net buildable acreage" was calculated and show the calculation (gross acreage - easements and encumbrances = net buildable acreage). Please list and describe all current and anticipated future easements and encumbrances being "netted" out in the formula. Please show these easements/encumbrances on the site map, as applicable.*

The site is located along the southeast side of Waterman Road approximately 500 feet southwest of the California Traction Railroad tracks and immediately north of Gerber Creek.

Net Buildable acreage calculation

4.70 gross acres  
- 0.64 Waterman Road  
4.06 net acres

**Exhibit 4  
Project Timeline**

*(Please attach an expected project timeline, including dates for all entitlements, infrastructure improvements, construction beginning, sale releases and construction ending. Please be as detailed as possible, including any potential infrastructure or construction phasing for both the Development Project and dedicated site, in accordance with the concurrency requirements.)*

| <b>INFRASTRUCTURE IMPROVEMENTS</b> | <b>EXPECTED COMPLETION</b> |
|------------------------------------|----------------------------|
| Sewer and water                    | 2008                       |
| Stormwater                         | 2008                       |
| Utilities                          | 2008                       |
| <b>LAND USE ENTITLEMENT</b>        | <b>EXPECTED APPROVAL</b>   |
| Rezone, development plan           | 2007                       |
|                                    |                            |

# **Appendix B**

## **Infrastructure Finance Section Comment Letter**




**RECEIVED****COUNTY OF SACRAMENTO**

DEC 02 2004

**MUNICIPAL SERVICES AGENCY**PLANNING DEPT.  
County of Sacramento*Inter-Departmental Correspondence*

November 30, 2004

**TO:** Dick Frascchetti, Project Manager  
Planning and Community Development Department

**FROM:** Susan Goetz, Senior Civil Engineer   
Infrastructure Finance Section

**SUBJECT:** NORTH VINEYARD GREENS – UNIT 1  
CONTROL NO: (03-CZB-SVB-0099)

The following are recommended rezone conditions for the subject project. The first condition (A) insures the full participation in the resulting financing mechanisms recommended in the North Vineyard Station Specific Plan Public Facilities Financing Plan. The second condition (B) requires the property owner to participate in a County Service Area, or equivalent financing mechanism, to fund a variety of transportation demand management services. The third condition (C) requires the property owner to participate in a funding mechanism for County General Fund (sheriff etc) services.

- A. "No final map, with the exception of large lot final maps, shall be recorded until the financing mechanisms recommended in North Vineyard Station Specific Plan Public Facilities Financing Plan (Financing Plan) have been implemented. The property owners shall comply with the implementation of financing mechanisms recommended in the Financing Plan."
- B. "Prior to the issuance of any building permit, the property owner shall participate in a County Service Area (CSA), or an equivalent financing mechanism to the satisfaction of the Board of Supervisors, for the purposes of funding a variety of transportation demand management (TDM) services to implement an overall TDM strategy that will contribute to the goal of reducing vehicle trips. The purpose of this CSA, or equivalent financing mechanism, is to fund programs and services to implement trip reduction measures that improve mobility and coincidentally reduce air quality impacts. Such programs and services may include but are not limited to:
- on-site transportation coordinators and education outreach
  - incentives for alternative mode use such as transit subsidies, guaranteed ride home programs, and bicycle purchase subsidies
  - programs encouraging people to work close to where they live
  - grade school trip pool programs
  - transit shuttle system

Any component of the trip reduction strategy implemented through the CSA or equivalent financing mechanism may be revised or discontinued if it is proven to be ineffective. Additional programs and services may be implemented as appropriate to

assist in achieving the targeted reduction in daily vehicle trips. In the event the property owners fail to approve either the formation of the CSA or the property assessment for such CSA, no building permits shall be issued. In no event shall any owner of land within the project enter into any home sale agreement prior to the formation of such CSA. For purposes of this condition, the term "formation" shall mean the completion of formation proceedings as required by Proposition 218."

- C. "No building permits shall be issued unless the County has determined whether a funding mechanism, such as a Mello-Roos District, should be formed to mitigate impacts of the project on services otherwise financed by the County General Fund. If the County determines that such funding is necessary, such financing mechanism shall be formed and implemented prior to the issuance of any building permits. Notwithstanding the foregoing, if the County has not made such determination and commenced the formation of such funding mechanism by April 1, 2005 (which in the case of a Mello-Roos District, shall mean the adoption of a Resolution of Intention by April 1, 2005, with a formation hearing scheduled not later than sixty (60) days thereafter), Developer shall consent to, and the County shall commence the formation of a Mello-Roos district on or before April 1, 2005 and complete proceedings for the formation thereof not later than July 1, 2005, which District shall be authorized to levy a maximum annual tax of not more than \$500.00 per single-family unit in support of law enforcement (sheriff) services or other services as the County deems appropriate. In no event shall any portion of the authorized tax be levied in an amount, which exceeds the same or similar tax levied for the same purposes by the County on other property within the County after the effective date of this condition. In the event that the electors fail to approve either the formation of such a Community Facilities District (CFD) or the maximum tax rate for such CFD, no building permits shall be issued. Proportional tax rates shall be levied against non-residential uses, and against medium and high density residential units, excluding those affordable to low, very low, and extremely low income families. If the County, by an action of the Board of Supervisors on or before April 1, 2005, has determined not to proceed with such a funding mechanism then this condition shall not be operative."

These three recommended rezone conditions are consistent with those approved for Vineyard Creek and Vineyard Point. In addition, there are numerous other conditions relating to public facilities requirements with threshold constraints included in Vineyard Creek and Vineyard Point rezones that should also be included for all rezones within the North Vineyard Station Specific Plan area. Please work with each individual Department if you have any questions regarding the specific facilities requirement conditions.

If you have any other questions, I can be reached at 874-5082.

BSG:eas

cc: Bob Davison Elizabeth Sparkman Teresa Mack  
Dan Shoeman Matt Darrow  
North Vineyard Greens GP, Peter Daru  
MacKay and Somps, Ben French

# **Appendix C**

## **Sheriff's Department Comment Letters**

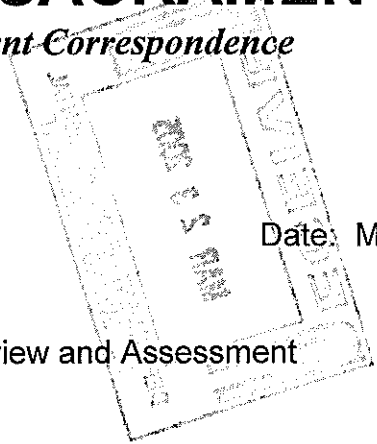
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LOU BLANAS  
Sheriff

# COUNTY OF SACRAMENTO

*Inter-Department Correspondence*



Date: March 21, 2005

To: JOYCE HORIZUMI  
Department of Environmental Review and Assessment

From: CSS III JEFF RODRIGUES, Crime Prevention Specialist  
Sacramento County Sheriff's Department

*[Handwritten signature]*

**Subject: NORTH VINEYARD GREENS SUPPLEMENTAL EIR**

The Sacramento County Sheriff's Department requests the following conditions be added to the proposed fence use permit for the "North Vineyard Greens Supplemental EIR:

**1) LOCATION/STREET LAYOUT:**

- a) There shall be no "dogleg" courts or cul-de-sacs. Law enforcement needs unobstructed views into each of these courts should a tactical situation arise.
- b) All private roadways shall have in place a homeowner's association or joint maintenance agreement to ensure the timely repair of roadways and associated facilities.

**2) LANDSCAPING:**

- a) Landscaping shall be of the type and situated in locations to maximize observation while providing the desired degree of aesthetics. Security planting materials are encouraged along fences and property lines and under vulnerable windows.
- b) All curbs shall be vertical in design. Rounded curbs shall be avoided whenever possible.

**3) FENCING/ACCESS CONTROL**

Vertical wrought-iron fencing material shall be used for all fences between private lots and open space, parks, right of ways, or other public access land. This is to allow visibility to those areas and encourage residents to view activities in those areas. In addition this will make those areas less attractive to loiterers and others who wish to use those locations for criminal or mischievous purposes.

#### 4) PEDESTRAIN AND BICYCLE TRAILS

- a) Pedestrian easements have historically been a problem area for law enforcement. Depending on the design, they can be choke points for criminal activity, i.e. assault, rape, drug dealing, gang activity, or they can be a conduit for aiding crimes. The classic example of this would be someone committing a burglary on one side of the passage way and escaping to the other side on a bike or on foot to a parked car. The pursuing patrol vehicles have to drive blocks around the easement and try to locate the fleeing suspects.
- b) Although the best solution for law enforcement is to avoid the use of pedestrian easements, we realize the perceived and actual usefulness of such walkways. Prior to considering a pedestrian easement, a direct street connection between retail/commercial and residential areas should be evaluated. Secondary feeder streets and the like create attractive and safe access points between typically conflicting uses. The following listings of conditions are the standard items requested by the Police Department on easements:
  - c) Fencing for the side yards of the two homes adjacent to the walkway shall be constructed of vertical wrought iron or tubular steel to allow for visibility into the easement while discouraging trespassing.
  - d) The walkway shall be a minimum width of 12 feet, to allow public safety vehicles direct access to the walkway. The opening of the easement shall be accessible to public safety vehicles using a "Knox box", knockdown bollard, or similar devices. The walkway material shall be to the satisfaction of the fire district.
  - e) All homes along the walkway shall either face or directly back up to the walkway. No side yards shall be allowed along these easements. This is to allow for direct visibility into the walkway. Side yards are not typically well used by residents.
  - f) There shall be no gate or closing device used to block the entrance to the walkway.
  - g) Crime prevention landscape materials shall be used along the fencelines to discourage loitering and minimize opportunities for suspects to "lie in wait" for potential victims.
  - h) The walkway shall be straight, with no areas for suspects to hide or sit without being seen.
  - i) Proper curb and signs at both entrances prohibiting parking in front of the passage way. A standard eight inch vertical curb, painted red and signs will discourage most unwanted traffic.

- j) Night illumination of 1.5 footcandles minimum maintained along the foot walk. Fixtures will be vandal resistant and have shields to prevent unwanted light directed into adjacent homes.
- k) A funding mechanism and/or CC&R's in place to provide costs for lighting and maintenance, road and fence repair, clean up, and enforcement of the parking laws.
- l) There is an understanding that the Sheriff's Department can have design inputs to satisfy our public safety concerns. We are to work with the project applicants [engineers and contractors] to come up with a design that would be approved by the Planning Commission before being passed on to the Board of Supervisors for final approval.

**5) SUBDIVISION/BUILDING CONDITIONS**

- a) Applicants shall be encouraged to develop neighborhoods that provide for "eyes on the street". Living areas such as kitchens, eating areas, living rooms, and office/den spaces should be provided on the front of residential units. This will allow for the "natural visibility" of roadways by residents during the normal course of their days. Would-be burglars don't like the possibility of being visible to residents. Front porches/patios shall be provided to allow for the natural viewing of the roadways by residents.
- b) All homes placed along a public roadway or right-of-way shall be oriented to face the public roadway. This will discourage illegal "car dumps", excessive parking on-street, and other traffic and parking related activities.
- c) All public roadways shall be developed to the specifications of the fire marshal to allow for sufficient space for parking on both sides of the street.

**6) LIGHTING**

- a) There shall be on-street lighting to allow for adequate visibility by residents, law enforcement, and passersby during nighttime hours.
- b) All lighting fixtures shall be of a type and kind to resist breakage and other vandalism.
- c) Parking areas, roadways, and driveways shall be illuminated with high intensity discharge lighting with sufficient wattage to provide adequate illumination to provide a safe, secure environment for persons, property, and vehicles on site. Such lighting shall be equipped with vandal-resistant covers and photocell control. A lighting level of .25 to .50 foot-candles, maintained at ground level, is required for the site in general; entry intersections should be .50 or greater.

**JOYCE HORIZUMI**

March 21, 2005

Page 4

**7) ADDRESSING**

- a) A street number shall be displayed in a prominent location on the street side of the residence in such a position that the number is easily visible to approaching emergency vehicles.
- b) The numerals shall be no less than three (3) to four (4) inches in height and shall be of a contrasting color to the background to which they are attached.
- c) The numerals shall be lighted at night.

**8) LAW ENFORCEMENT STAFFING**

- a) The Vineyard area of Sacramento County is a fast-growing area. As significant new housing is added to the unincorporated area of Sacramento County, the need for Sheriff's services will also increase. Based on D.E.R.A. residency estimates of 2.7 people per home, the Sheriff's Department will require an additional 1.0 officers to maintain the 1 to 1000 officer/population staffing level.
  - i) This estimate does not include resources necessary should the multi-family lots proposed be developed.

If you should have any questions regarding the above conditions, please feel free to contact me anytime at 876-7599.



LOU BLANAS

*Sheriff*

# COUNTY OF SACRAMENTO

*Inter-Department Correspondence*

RECEIVED

FEB 03 2005

PLANNING DEPT.  
County of Sacramento

Date: February 1, 2005

To: JEFF FISHER, Project Manager  
Department of Planning and Community Development

From: CSS III JEFF RODRIGUES, Crime Prevention Specialist  
Sacramento Sheriff's Department

Subject: 02-RZB-PMR-UPP-0660 GOSAL ESTATES

The Sacramento Sheriff's Department requests that the following conditions be appended to the subject application:

## 1) LOCATION/STREET LAYOUT/ADDRESSING

- a) Applicant shall provide a detail elevation map to the Sheriff's Department prior to approval of the requested Use Permit. The provided materials do not satisfactorily identify main entrances to each unit, location of possible "tot lot" or other public use facilities, etc.
- b) All gates shall meet Sacramento County Fire Code specifications for accessibility, and be equipped with all access devices for public safety access.
- c) Building numbers shall be posted on each building in locations and heights as to allow visibility by responding public safety personnel.
  - i) A lighted monument sign shall be placed inside the main access gate identifying building numbers and corresponding apartment numbers located in that building.
- d) All curbs shall be vertical in design. Rounded curbs shall be avoided whenever possible.

## 2) LANDSCAPING

- a) Landscaping shall be of the type and situated in locations to maximize observation while providing the desired degree of aesthetics. Security planting materials are encouraged along fences and property lines and under vulnerable windows. A partial list of suggested materials is available from the Sheriff's Department upon request.

## 3) FENCING/ACCESS CONTROL

- a) Vertical wrought-iron fencing material shall be used for all fences between private lots and open space, parks, right of ways, or other public access land. This is to



allow visibility to those areas and encourage residents to view activities in those areas. In addition this will make those areas less attractive to loiterers and others who wish to use those locations for criminal or mischievous purposes.

**4) LIGHTING**

- a) There shall be on-site lighting to allow for adequate visibility by residents, law enforcement, and passersby during nighttime hours.
- b) All lighting fixtures shall be of a type and kind to resist breakage and other vandalism.
- c) Parking areas, roadways, and driveways shall be illuminated with high intensity discharge lighting with sufficient wattage to provide adequate illumination to provide a safe, secure environment for persons, property, and vehicles on site. Such lighting shall be equipped with vandal-resistant covers and photocell control. A lighting level of .25 to .50 foot-candles, maintained at ground level, is required for the site in general; entry intersections should be .50 or greater.

**5) BUILDING DESIGN**

- a) All private patios shall be enclosed utilizing vertical wrought iron or other materials that will allow for maximum visibility to the common areas of the complex. This will provide for natural visibility that will increase residents' perception and feeling of safety. Please note that vertical wrought iron, specifically, is not being required, but any design or material that will allow for visibility into and out from, each patio and apartment.

**6) LAW ENFORCEMENT STAFFING**

- a) Based on DERA residency estimates of 2.7 people per home, the Sheriff's Department will require an additional .33 officers to maintain the 1 to 1000 officer/population staffing level.

If you should have any questions regarding the above conditions, please feel free to contact me anytime at 876-7599.

# **Appendix D**

## **Fire District Comment Letter**



Rick Martinez  
Fire Chief

# Sacramento Metropolitan Fire District

3012 Gold Canal Dr., Rancho Cordova, CA 95670 • (916) 942-3390 • Fax (916) 942-3400

RECEIVED

May 23, 2003

MAY 28 2003

PLANNING DEPT.  
County of Sacramento

County of Sacramento  
Planning and Community Development Department  
827 7<sup>th</sup> Street, Room #202  
Sacramento, CA 95814

**Attention:** Nick Pascoe, Project Manager

**Subject:** Subdivision Name: North Vinyard Greens-Unit#1  
APN: 066-0070-020  
Location: North Gerber Rd/west of Bradshaw  
Control No.: 03-CZB-SVB-0099

Dear Mr. Pascoe

The Sacramento Metropolitan Fire District has completed a review for the above noted project.

**THE FOLLOWING ITEMS ARE STANDARD FIRE DEPARTMENT COMMENTS CLEARLY ADDRESSED IN POLICY AND GUIDELINES. THIS INFORMATION IS OFFERED TO ASSIST THE APPLICANT AND SHOULD BE SHOWN IN THE FINAL DEVELOPMENT PLANS:**

1. Provide approved steamer type fire hydrants for residential areas located as follows:
  - A. Maximum 500 feet between hydrants: Provide steamer type fire hydrants as follows:
    - 1) One fire hydrant shall be located between 150 and 250 feet from the end of the access roadway or cul-de-sac.
    - 2) A hydrant installed at the end of an access roadway, as a "blow off" for the water district does not meet the fire department requirements.
    - 3) Existing "wharf" fire hydrants are not acceptable to meet the requirements for new construction.
    - 4) Each steamer hydrant shall have a minimum flow of 1000 gpm at 20 pounds of residual pressure for residential areas where the total square feet of the building and garage is no more than 3600 square feet. UFC App. III A, Sect. 5.1

**NOTE:** Specifications for fire hydrants are available at the Fire Prevention office.

- A. Name the access road and ensure that the new addresses be listed for the newly named "street, and meet the requirement above or...
  - B. Provide approved address numbers on the homes and for each of the homes on the access drive, provide approved address numbers posted next to the entrance to the access drive, facing the public street in an approved manner to meet the above requirement.
9. Should security gates be considered for this project, the developer shall contact this office for approval of specific clearances, locking mechanisms, or systems which will accommodate emergency fire department use and then follow established permit procedures pursuant to Sacramento County Code, Chapter 16.70. Further information can be obtained by calling the Crime Prevention Unit of the Sacramento county sheriff's Office at (916) 440-5151. UFC 1208
10. Remove from any roof, court, yard, vacant lot or open space all accumulations of wastepaper, hay, grass, straw, weeds, litter or combustible or flammable waste material, waste petroleum products or rubbish of any kind. All weeds, grass, vines or other growth, when same endangers property or is liable to be fired shall be cut down and removed by the owner or occupant of the property. When total removal of growth from a piece of property is impractical due to size or to environmental factors, approved fuel breaks may be established between the land and the endangered property. The width of the fuel break shall be determined by height, type and amount of growth wind conditions, geographical conditions and type of exposures threatened. UFC 1103.2.4 (Minimum width of clearance shall be 30 feet or to the property line, whichever is less. Specific conditions may require additional clearance width. UFC APPENDIX II-A,16)
11. All fire protection equipment to be maintained in operative condition. UFC 1001.5.1
- Our review is not to be construed as abrogating more restrictive requirements by other agencies having jurisdiction. Final acceptance is subject to field inspection and necessary tests.

If you have any questions, call Inspector Sigi



# Sacramento Metropolitan Fire District

Fire Prevention Bureau

3012 Gold Canal Drive • Rancho Cordova, California 95670-6116 • Phone (916) 942-3300 • Fax (916) 942-3400

RICK MARTINEZ  
Fire Chief

**RECEIVED**

DEC 04 2003

PLANNING DEPT.  
County of Sacramento

December 2, 2003

**REVISED**

County of Sacramento  
Planning and Community Development Department  
827 7<sup>th</sup> Street, Room #230  
Sacramento, CA 95814

**Attention:** Dick Frascetti, Project Manager  
South Area Team

**Subject:** Control No. 03-0141  
APN: 065-0080-027, 080 and 090  
Location: North Vineyard Greens Unit 3  
Sac Metro No. 2003-3467

Applicant: It is highly recommended that specific requirements for new construction be obtained from the fire district during the planning stage of construction. Requirements for bridges, entry gates, fire hydrants and access roadways must be clearly understood. Call the Fire Prevention Bureau at (916) 942-3300 and request a design review conference. A consultation fee will apply, but could save considerable time and resources.

If there are no immediate plans for new construction or storage of combustible materials on this project, the requirements applicable to construction may be held in abeyance until such time that development occurs. It is important to note that if the property is sold, the seller of the property is encumbered to disclose the above requirements to the buyer.

## THE FOLLOWING ARE COMMENTS SPECIFIC TO THIS APPLICATION:

1. Provide approved steamer type fire hydrants for residential areas located as follows:
  - A. Fire hydrants shall be spaced at intervals a maximum of 500-feet.
  - B. One fire hydrant shall be located between 150 to 250 feet from the end of the access roadway. The required access roadway extends to within 150 feet of any portion of the exterior wall of a building.
  - C. A hydrant installed at the end of an access roadway, as a "blow off" for the water district does not meet the fire department requirements.
  - D. Existing "wharf" fire hydrants are not acceptable to meet the requirements for new construction.
  - E. Each steamer hydrant shall have a minimum flow of 1000 gpm for residential areas.

**NOTE:** Specifications for fire hydrants are available at the Fire Prevention office.

E. Additional requirements apply for residential dwellings having areas greater than 3,600 square feet.

**EXCEPTION:** Single-family dwellings provided with an approved automatic fire sprinkler system.

2. Plans shall be submitted to the fire prevention bureau showing hydrant locations for review and approval prior to construction. **FIRE HYDRANT DETAIL AND FIRE DEPARTMENT NOTES SHALL BE SHOWN ON THE PLANS OR IMPROVEMENT DRAWINGS.**
3. Residences located within a high hazard severity zone are subject to more restrictive requirements that may include wider access roadways, a non-combustible roof covering, fire sprinklers, and additional clearances from wild lands.
4. Residential roof coverings shall not be less than Class C when there is no public water supply source with a distribution system conforming to County Standards.
5. Provide access roadways with all-weather driving surface of not less than 20 feet of unobstructed width, with a minimum turning radius of 38 feet inside/58 feet outside dimension capable of supporting the imposed loads of fire apparatus and having a minimum of 13 feet, 6 inches of vertical clearance. The access roadway shall be extended to within 150 feet of all portions of the exterior walls of the first story of any building.

**Exception:** The required clear width may be reduced to a minimum of 16 feet for access roadways serving only 1 or 2 single-family dwellings. It may not be reduced to the last two dwellings on road serving more than two dwellings.

6. When the "access roadway" length exceeds 150 feet from the public road, an approved fire apparatus turn around shall be provided. The fire apparatus turn around shall conform to any of the designs shown on Sacramento Metropolitan Fire District Standard 444.302. The intent is for the turnaround to be located within 100 feet of the end of the access roadway. All parcels zoned as "Residential" (RD) shall be provided with a finished surface of pavement consisting of 2 inches of asphaltic concrete (AC) over 6 inches of aggregate base (AB) or the equivalent in "all" concrete or approved comparable surface. This includes existing gravel roadways.
7. All parcels zoned as "Agricultural/Residential (AR) -10 acres or less" shall be provided with a dust free surface such as "Chip Seal."
8. Parcels zoned Agricultural (AR) greater than 10 acres, shall have a minimum width of 16 feet of compacted gravel surface.
9. There shall be no parking on any street narrower than 28 feet. Streets that are wider than 36 feet shall be allowed parking on both sides. Measurements shall be from gutter-line or edge of pavement to the same on the other side of the roadway. On private streets, marking of the fire lanes per the Sacramento Metro Fire Lane Standard may be required. Contact the Fire Prevention Bureau for a copy of the fire lane standard.
10. Provide approved address numbers on the building in such a position as to be plainly visible and legible from the street or road fronting the property. Said numbers shall contrast with their background and on all new buildings, shall be illuminated at night.

**NOTE:** In order to meet this requirement the following methods are acceptable:

- A. Name the access road and ensure that the new addresses be listed for the newly named "street, and meet the requirement above or...

- B. Provide approved address numbers on the homes and for each of the homes on the access drive, provide approved address numbers posted next to the entrance to the access drive, facing the public street in an approved manner to meet the above requirement.
11. Should security gates be considered for this project, the developer shall obtain a copy of the Sacramento County Fire Code, Amendment VII, Emergency Access Gates and Barriers. The design of the entry shall conform to this standard.

Our review is not to be construed as abrogating more restrictive requirements by other agencies having jurisdiction. Final acceptance is subject to field inspection and necessary tests. If you have any questions or need further assistance, please contact me Monday through Thursday 8am to 4:30pm at (916) 942-3353.

Sincerely,

A handwritten signature in black ink, appearing to read "Chrishana McDonald". The signature is fluid and cursive, with a large loop at the end.

Chrishana McDonald  
Fire Inspector

Cc: File



## Sacramento Metropolitan Fire District

3012 Gold Canal Drive · Rancho Cordova, California 95670 · Phone (916) 942-3300 · Fax (916) 942-3400

RICK MARTINEZ  
Fire Chief

March 2, 2005

RECEIVED

MAR 04 2005

PLANNING DEPT.  
County of Sacramento

County of Sacramento  
Planning and Community Development Department  
827 Seventh Street, Room 230  
Sacramento, California 95814  
ATTN: Jeff Fisher

**Re: Project Name: Gosal Estates**  
**Control Number: 02-RZB-PMR-UPP-0660**  
**Fire District Submittal Number: 2005-0255**

Dear Mr. Fisher:

I have received the plans submitted by your office for review and comment relative to fire and life safety. The following conditions will apply to this project:

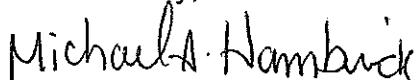
1. In every new building where the total floor area exceeds 3,599 square feet an automatic fire sprinkler system shall be installed and equipped with an electronic monitoring system. The system shall be designed and installed as per the guidelines of National Fire Protection Association standard 13, latest edition, and the Fire Prevention Standards of this fire district number 442.501.
2. The minimum required fire flow for commercial developments is outlined in the Uniform Fire Code, Table A-III-A-1, but shall not be less than 1500 gallons per minute at 20 pounds per square inch residual for a duration of two (2) hours.
3. Every building shall be accessible to fire district fire apparatus by means of an all-weather driving surface designed to meet Traffic Index 5.5. The access shall be a minimum of 20 feet wide and have a minimum turning radius of 38 feet inside and 58 feet outside. The minimum vertical clearance 13 feet 6 inches. The access roadways are to be extended within 150 feet of all portions of the exterior walls of the first story. Dead-end fire department access roads in excess of 150 feet shall be provided with an approved means for turning around the fire apparatus. This fire apparatus access lane and turnaround shall be identified in accordance with the California Vehicle Code. The access roadways are to be provided prior to any construction or storage of combustible materials on site.



4. All fire department connections for the automatic fire extinguishing system shall be located within forty feet of a fire hydrant and a minimum of forty feet from any openings within the protected building.
5. Commercial buildings exceeding 5,000 square feet must be tested to verify adequate transmission and reception of public safety radio signals. These signals operate on the 800 MHz frequency. If reception or transmission is not adequate, 800 MHz radio amplification systems shall be installed in the building.
6. If the crossing of a creek is going to be included, the installation of a private bridge shall be required and shall be designed for a minimum of HS20-44 loading as prescribed by the American Association of State Highways and Transportation Officials. The width shall be minimum of twenty (20) feet. The maximum allowable grade change of the approach to and the departure from the bridge will not exceed eight (8) percent for a distance of ten (10) feet.
7. The following plans and specifications must be submitted to the fire district for review:
  - A. Civil engineering (site) plans.
  - B. Building construction plans.
  - C. Underground fire service plans.
  - D. Fire sprinkler plans
  - E. Fire alarm plans

If you have any questions or need further assistance do not hesitate to give me a call Monday –Thursday 8:00am – 5:00pm at (916) 942-3338.

Sincerely,

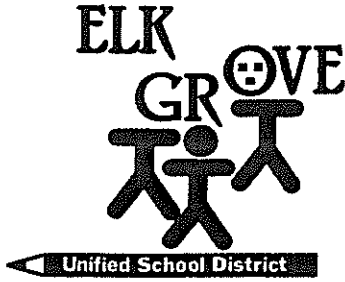


Michael A. Hambrick  
Fire Inspector II

Cc: Russ Blair, Supervising Inspector  
File

# **Appendix E**

## **Elk Grove Unified School District Comment Letter**



**Members of the Board:**

Jeanette J. Amavisca  
 Pollyanna Cooper-Levangie  
 Priscilla S. Cox  
 Pamela A. Irely  
 William H. Lugg, Jr.  
 Chet Madison, Sr.  
 Brian D. Myers

**Constantine I. Baranoff**  
 Assistant Superintendent  
 Facilities and Planning

Robert L. Trigg Education Center  
 9510 Elk Grove-Florin Road, Elk Grove, CA 95624

(916) 686-7711  
 FAX: (916) 686-7754

February 10, 2005

SENT VIA E-MAIL- gamelj@saccounty.net

Mr. Jeff Gamel, Senior Planner  
 County of Sacramento  
 Planning and Community Development Department  
 827 Seventh Street, Room 230  
 Sacramento, CA 95814

**REVISED**

FEB 10 2005

**Subject: North Vineyard Greens #1 – Revised (03-0099)**

**Project Location and Description: A rezone of 146.7 acres from AR-10 and AG-20 to RD-5, RD-7, RD-20 and O and a tentative subdivision map to create 363 single family residential lots and a 3 acre multi-family lot. The project is located between Florin Road and Gerber Road on both sides of the Central California Traction Railroad tracks in the North Vineyard Station Specific Plan. (065-0080-029; 066-0070-020, 043, 044, 045, 046; 066-0080-001, 002, 003, 016)**

Dear Mr. Gamel:

The Elk Grove Unified School District appreciates the opportunity to review the subject application. We request the following response be made a part of the public record of the Planning Commission and/or the Board of Supervisors hearings.

**The District is currently impacted, overcrowded and experiencing a high rate of growth. This and other development projects will have a negative impact upon the District's existing school facilities. The District does not have the financial capability to purchase school sites nor construct and furnish needed school facilities with local funds alone. Developer fees and Mello-Roos taxes collected by the District are not sufficient or timely to satisfy the need. The District relies on statewide school bonds to provide funding necessary to construct new school facilities.**

**Without continued state funding, the District is in a school housing crisis. The District will continue to seek additional state funds to construct needed school facilities. Until such time as adequate facilities are available for current and projected students, students may be housed on campuses that have exceeded their intended capacity.**

On July 6, 2004, the Board of Education adopted a new residential development fee in accordance with Senate Bill 50. The new fee is \$3.95 per square foot and became effective on July 7, 2004. The district must update the School Facilities Needs Analysis annually; therefore the residential development fee is subject to change annually. At the time a building permit is applied for, the development will be subject to the residential fee in place.

On March 2, 2004, voters in California passed Proposition 55, a statewide bond authorizing 12.3 billion dollars to help fund public school facility needs. Specifically, the bond funds will provide a total of 7.75 billion dollars for new K-12 school construction and 2.25 billion dollars for K-12 reconstruction/modernization needs. The remaining 2.3 billion are reserved for community college, California State University, and University of California facilities.

County Planning policies PF-39, 40, 43, 45 and 46 are stated in the Public Facilities Element of the Sacramento County General Plan adopted by the Board of Supervisors on December 15, 1993. These policies describe several alternatives for addressing overcrowded schools. We request the Planning Commission and/or the Board of Supervisors comply with these provisions on this project.

Enclosed sheets provide estimates of student generation and financial impacts resulting from the construction of the proposed project. Our office will require additional information to determine the extent of the cumulative impacts that will result from the development of this project. Please include the District on your mailing list for subsequent stages of planning and environmental review. As in the past, we are available to review the impact of this project with you. If you have any questions or comments, please contact me at (916) 686-7590.

Thank you again for the opportunity to comment and your continuing assistance and cooperation.

Sincerely,

*Kim Williams*

Kim Williams  
Planner, Facilities and Planning

h:/North Vineyard Greens #3 Rev comment letter

Enclosures – See additional attached file

**ELK GROVE UNIFIED SCHOOL DISTRICT**  
**PROJECT REVIEW/ENVIRONMENTAL REPLY FORM**

Date February 10, 2005

Prepared by: Kim Williams

Name of Project: North Vineyard Greens #1 – Revised (03-0099)

**Project Location and Description:** A rezone of 146.7 acres from AR-10 and AG-20 to RD-5, RD-7, RD-20 and O and a tentative subdivision map to create 363 single family residential lots and a 3 acre multi-family lot. The project is located between Florin Road and Gerber Road on both sides of the Central California Traction Railroad tracks in the North Vineyard Station Specific Plan. (065-0080-029; 066-0070-020, 043, 044, 045, 046; 066-0080-001, 002, 003, 016)

|                                    | Current School Attendance Area |          |         |
|------------------------------------|--------------------------------|----------|---------|
|                                    | K - 6                          | 7 - 8    | 9 - 12  |
| Project                            | Sierra Enterprise              | Smedberg | Sheldon |
| North Vineyard Greens #1 – Revised | 180                            | 42       | 83      |

**CURRENT CAPACITY/ENROLLMENT AT SERVING SCHOOLS**

|   | K - 6 | 7 - 8 | 9 - 12 |
|---|-------|-------|--------|
| Current OPSC Determined Capacity  | 800   | 1,350 | 3,078  |
| Current Year Enrollment (October, 04)<br>w/ special ed, w/o cont hs               | 549   | 1,744 | 3,369  |
| Current Students Residing (10/04)<br>in attendance area w/ spec ed & w/o cont hs  | 465   | 1,662 | 3,212  |
| Number of students residing in attendance<br>area who are attending other schools | 76    | 94    | 144    |

**FINANCIAL IMPACT OF PROJECT ON ELK GROVE UNIFIED SCHOOL DISTRICT**

|   |                    |
|---|--------------------|
| <b>Current Student Housing Costs for Project (Land, Construction &amp; Furnishing)</b>  | <b>\$7,389,562</b> |
| (Based upon costs of \$19,576 per K-6 grade student, \$28,126 per 7-8 grade student and \$32,086 per 9-12 grade student)      |                    |
| <b>Total School Residential Development Fee Generated by Project</b>  | <b>\$3,736,341</b> |
| (Based upon an average 2,443 square foot single family home and 985 square foot multi-family unit at \$3.95 per square foot.) |                    |
| <b>Current Negative Financial Impact upon the District</b>  | <b>\$3,653,221</b> |



**Members of the Board:**

Jeanette J. Billingsly  
Pollyanna Cooper-Levangie  
Priscilla S. Cox  
Pamela A. Ireby  
William H. Lugg, Jr.  
Chet Madison, Sr.  
Brian D. Myers

**Constantine I. Baranoff**  
Assistant Superintendent  
Facilities and Planning

Robert L. Trigg Education Center  
9510 Elk Grove-Florin Road, Elk Grove, CA 95624

(916) 686-7711  
FAX: (916) 686-7754

**REVISED**

December 29, 2003

**SENT VIA E-MAIL**

Mr. Dick Frascchetti, Project Manager  
County of Sacramento  
Planning and Community Development Department  
827 Seventh Street, Room 230  
Sacramento, CA 95814

**Subject: North Vineyard Greens Unit #3 (03-0141)**  
**A rezone and a revised subdivision map to create 131 single family lots. The project is located north of Gerber Road and east of Elk Grove-Florin**

Dear Mr. Frascchetti:

The Elk Grove Unified School District appreciates the opportunity to review the subject application and/or environmental documentation. We request the following response be made a part of the public record of the Planning Commission and/or the **Board of Supervisors** hearings.

**The District is currently impacted, overcrowded and experiencing a high rate of growth. This and other development projects will have a negative impact upon the District's existing school facilities. The District does not have the financial capability to purchase school sites nor construct and furnish needed school facilities with local funds alone. Developer fees and Mello-Roos taxes collected by the District are not sufficient or timely to satisfy the need. The District relies on statewide school bonds to provide funding necessary to construct new school facilities.**

**Without continued state funding, the District is in a school housing crisis. The District will continue to seek additional state funds to construct needed school facilities. Until such time as adequate facilities are available for current and projected students, students may be housed on campuses that have exceeded their intended capacity.**

On March 17, 2003, the Board of Education adopted a new residential development fee in accordance with Senate Bill 50. The new fee is \$3.43 per square foot and became effective on March 18, 2003. The district must update the School Facilities Needs Analysis annually; therefore the residential development fee is subject to change annually. At the time a building permit is applied for, the development will be subject to the residential fee in place.

On November 5, 2002, voters in California passed Proposition 47, a statewide bond authorizing 13.05 billion dollars to help fund public school facility needs. Specifically, the bond funds will provide a total of 8.1 billion dollars for new K-12 school construction and 3.3 billion dollars for K-12 reconstruction/modernization needs. The remaining 1.65 billion are reserved for community college, California State University, and University of California facilities. At the time of the passage of Proposition 47, there were projects totaling 6.3 billion dollars eligible to receive funds from the bond. Because of this backlog, it is inevitable that the state will once again exhaust this source of funding prior to the passage of an additional statewide bond measure in the Spring of 2004. The possible shortfall in state funding is an ongoing problem. Once bond funds have been depleted, all new school construction will be delayed until a statewide bond is passed or until the District can obtain an alternate funding mechanism.

Enclosed sheets provide estimates of student generation and financial impacts resulting from the construction of the proposed project. Our office will require additional information to determine the extent of the cumulative impacts that will result from the development of this project. Please include the District on your mailing list for subsequent stages of planning and environmental review. As in the past, we are available to review the impact of this project with you. If you have any questions or comments, please contact me at (916) 686-7590.

Thank you again for the opportunity to comment and your continuing assistance and cooperation.

Sincerely,

Marnie Rosenstein  
Planning Manager, Facilities and Planning

MR:KW  
h:/Wildhawk South comment letter

Enclosures – See additional attached file

cc: Kathleen J. Moore

# **Appendix F**

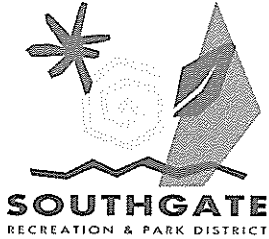
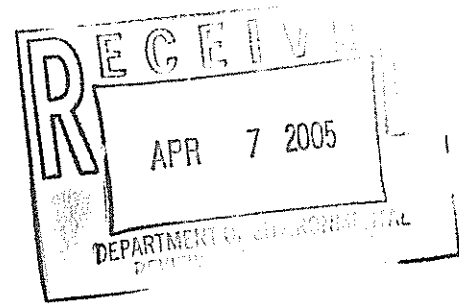
## **Southgate Recreation and Park District Comment Letter**



JH

April 6, 2005

Ms. Joyce Horizumi  
Environmental Coordinator  
County of Sacramento  
Environmental Review and Assessment  
827 7<sup>th</sup> Street, Room 220  
Sacramento, CA 95814



SUBJECT: Response to Notice of Preparation of a Supplemental Draft Environmental Impact Report for the North Vineyard Greens Units 1 and 3, Gosal Estates and Davis Property

*Sheldon*  
*Administrative Headquarters*  
6000 Orange Avenue  
Sacramento, CA 95823-3225  
Phone 916-428-1171  
Facsimile 916-428-7334  
www.southgaterecandpark.net

Dear Ms. Horizumi:

*Board of Directors*  
Rolfe P. Appel  
John E. Cockerham  
Edwin A. Smith  
Christine Thompson  
Shirley J. Wirth

*General Manager*  
Ward Winchell

Southgate Recreation and Park District (District) thanks you for the opportunity for to review and comment on the Notice of Preparation for the above referenced projects as a responsible agency. The District has completed its review of the Notice of Preparation and is pleased to transmit the following comments.

The proposed projects lie within the District's boundaries. The District has previously sent maps of our District boundaries and the respective park, recreational, open space, trail and landscape corridor facilities that are planned and existing and that would potentially be impacted. We are also attaching adopted Resolutions from our Board of Directors regarding these projects. Southgate's conditions for these projects are the same that were included and approved as part of the North Vineyard Station Community Plan Amendment as well as the Vineyard Pointe Rezone, Vesting Tentative Map, and Tentative Subdivision Map, and the Vineyard Creek Rezone and Vesting Tentative Subdivision Map.

Based on the review of the NOP dated February 25, 2005, the District requests that the County of Sacramento analyze the potentially

significant impacts of all the proposed projects on the District's existing and proposed resources, as applicable in the document. Specifically, the Supplemental EIR should address the comments contained within the attached Resolutions as well as the following:

- **Reasonable Foreseeable Construction of Recreational Facilities:** A project is defined as the whole of an action that results in a reasonably foreseeable physical change in the environment. Pursuant to Appendix G of the California Environmental Quality Act (CEQA) Guidelines, projects that include recreational facilities or require the construction or expansion of recreational facilities, which may have an adverse physical effect on the environment, are considered to have a significant impact on recreation and require a discussion of the impacts and an evaluation of potential mitigation measures. The Supplemental EIR should identify reasonably foreseeable impacts of the proposed projects on the following facilities as well as the impact of development of dedicated park space, sport field lighting, recreational facilities and trails (including those as part of the storm water detention basins) will conversely have on surrounding development (i.e these Projects). The supplemental EIR shall also analyze the potential of such development that result in significant environmental impacts. Potential impact areas include biological resources, hydrology and water quality, noise, transportation/traffic, health and safety. The trail placement and alignments have been defined and submitted to the Army Corps of Engineers under the County's 404 Permit and provided to the County of Sacramento Planning and Water Resources Departments. Descriptions of the other recreation, park and trail facilities/improvements have also previously been provided to the County and are attached for your reference.

- **Land Use:**

1. **Open Space and Trails**

With the filing of the Army Corps of Engineers 404 Permit and the development of the Elder and Gerber Creek Corridor/Open Space Preserve the following conditions affect these projects and any and all other projects whose boundaries touch or include this land. The supplemental EIR shall address these areas for impact and comments incorporated and considered with these projects:

- A. **Open Space-General:**

Open Space, as shown on these maps, shall be dedicated to the Southgate District as a gift, with plans and specifications to be approved by the District, and be fully developed and improved by the Developer. The District shall accept the completed open space area after it has passed inspections, accepted conditions required by the Army Corp of Engineers, and received a clear title report. The District shall maintain the trails and open space areas through Community Facilities District (CFD) proceeds. The District shall not take responsibility for creek channel maintenance or drainage functions. The Developer shall comply with all MMRP requirements as they pertain to the open space areas and shall notify and comply with all conditions as set forth by the Preserve Manager (Southgate). These same conditions and restrictions shall be passed on to future property owners and included in Developer's C, C & R's for this subdivision. All construction within 200 feet of an open space preserve or a recreational area should be coordinated with the preserve or recreational area manager

- B. **Elder & Gerber Creek Drainage/Preserve Corridor Trails:**

These trails are part of the overall Gerber Creek and Elder Creek Open Space area as identified in the Sacramento County land use plan. Improvements along the trail and open space corridor shall be consistent with the overall design planned for the North Vineyard Station Specific Plan Area and as shown on the Proposed Drainage Corridor Improvements Map. Trail access shall be

provided to the future residents of North Vineyard Greens Units 1 & 3 and Gosal Estates.

**C. Other Open Space Lots not within Preserve Corridors:**

The District will accept Open space lots (Power line (SMUD and USBR) corridor and Regional Sewer Interceptor area)). No Quimby credits will be given for this open space property. The Developer shall provide minimal landscape improvements to street frontage of open space as specified by the District. The developer shall construct a bicycle/pedestrian trail as required under the North Vineyard Station PFFP. Trail design standards shall be provided to the Developer by the District.

**D. Potential Land Use Conflicts:**

The District's required standard for land dedication is 5 acres per 1,000 individuals. The County of Sacramento should evaluate and present impacts of increased densities beyond the current land use plan, and shall further require dedication of sufficient parkland or in lieu fees to address any shortages.

**2. All Recreation, Park, Trail Facilities/Improvements, Basins, Open Space, Operations and Programs within the North Vineyard Station Specific Plan**

**A. Inclusion in Financing Districts:**

The Developers shall consent to the inclusion of these projects within the North Vineyard Station Community Facilities District, and the Southgate District-wide Landscaping and Lighting Assessment District. The Developer shall be responsible for notification to all subsequent purchasers of land parcels of the inclusion within said financing districts. The CFD will be established by the District for additional improvements, programs and ongoing maintenance and operations.

**B. North Vineyard Station Public Facilities Financing Plan:**

As determined by the County Board of Supervisors, these subdivisions will be included in the Southgate Recreation and Park District component of the North Vineyard Station Public Facilities Financing Plan. The District reserves the right to revise park land dedication requirements and financing mechanisms to adapt to changes resulting from modifications to the policy or the

creation of a new plan by the County of Sacramento. As such, the District will approve of an open space land acquisition component if one is so requested by the County Infrastructure Finance Section and included within the Financing Plan.

**C. Recreation Facility User Hazards:**

The District Master Plan Map dated August 2004, includes park areas and trail alignments in the proposed project area. In accordance with Appendix G of the State CEQA Guidelines, the proposed projects may substantially increase hazards to pedestrians and cyclists using these recreational facilities (if they have been constructed), thus requiring the consideration of mitigation measures. Of particular concern are the bicycle/pedestrian trail crossings at roadways, especially at Waterman Road. The District recommends that the County of Sacramento analyze these impacts and include mitigation measures to reduce the potential safety hazard to below the threshold for significance.

**D. Detention Basins:**

After the completion of the installation of the infrastructure and landscape improvements for the Detention Basin, the Developer shall provide the District with a Grant Deed for the Detention Basin Lot at the time of acceptance of the Detention Basin improvements by Sacramento County Dept. of Water Resources (SCDWR) and the District and upon satisfactory completion of all applicable conditions required by the District and the County. Public access points and connection to basin trails and open space/preserve corridor trails shall be provided by Developers. Public access to trails from Gosal Estates shall be specifically addressed as it is not clarified on the project map. Improvement Plans & Specifications, and the Landscape Planting Plan & Specifications for the Detention Basin shall be submitted to the District and the SCDWR for approval. (Perimeter security lighting may also be a requirement of basin improvements).

The District has no objection to any of the proposed amendments contained within this NOP. Please also see the enclosed copies of District correspondence, previously forwarded to the County of Sacramento Planning and Community Development Department,

regarding the North Vineyard Greens Units 1, and 3 Rezone, Vesting Tentative Map, and Tentative Subdivision Map for a detailed description of potential mitigation measures to assist in reducing potential impacts of the project. The District requests the opportunity to formally comment on the Gosal Estates Multi-family site for comments to be included and conditioned with the proposed rezone and use permit.

The District recommends that the proposed projects be refined so any potential impacts are avoided. Should the Agency determine that it is not feasible to avoid an impact, coordination should be undertaken with the District to evaluate all feasible mitigation measures to reduce any impacts resulting from construction and implementation of the proposed project to below the level of significance.

The District thanks the County of Sacramento for the opportunity to comment on the NOP. As the Responsible Agency, the District requests one copy of the Supplemental Draft EIR, including all technical appendices, to be provided for our review. If you have any questions or require any additional information regarding District operations, please contact Ms. Judy Robinson at (916) 428-1171, ext. 14, or via e-mail at [jrobinson@southgaterecandpark.net](mailto:jrobinson@southgaterecandpark.net).

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Judy Robinson', is written over the typed name.

Judy Robinson  
Planning & Facilities Manager

Encl.

**RESOLUTION OF THE BOARD OF DIRECTORS OF THE SOUTHGATE RECREATION AND PARK DISTRICT COMMENTING ON THE NOTICE OF PREPARATION OF A SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE NORTH VINEYARD GREENS UNITS 1 AND 3, GOSAL ESTATES AND DAVIS PROPERTY**



*Sheldon*  
*Administrative Headquarters*  
6000 Orange Avenue  
Sacramento, CA 95823-3225  
Phone 916-428-1171  
Facsimile 916-428-7334  
www.southgaterecandpark.net

*Board of Directors*  
Rolfe P. Appel  
John E. Cockerham  
Edwin A. Smith  
Christine Thompson  
Shirley J. Wirth

*General Manager*  
Ward Winchell

WHEREAS, the District is in receipt of a Notice of Preparation of the North Vineyard Greens Unit 1 Specific Plan Amendment, Rezone, Tentative Vesting Subdivision Maps, Special Development Permit and Affordable Housing Plan; North Vineyard Greens Unit 3 Rezone, Vesting Tentative Subdivision Maps, Special Development Permit, and Affordable Housing Plan; Gosal Estates Rezone, Use Permit, Tentative Parcel Map, Affordable Housing Plan and Abandonment; and Davis Property Tentative Parcel Map; and

WHEREAS, the North Vineyard Station Specific Plan Area runs through the central portion of the Southgate Recreation and Park District potentially impacting District parks, landscape corridors, open space, trails, detention basins and recreational facilities; and

WHEREAS, the Board of Directors has previously commented on proposed projects within the North Vineyard Station Specific Plan area inclusive of Resolutions 03-171 for North Vineyard Greens Unit #1 and Resolutions 02-151 and 03-77 for North Vineyard Greens Unit #3; and

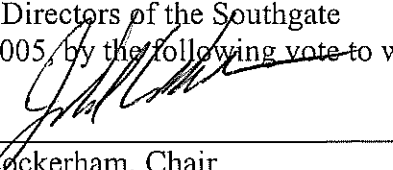
WHEREAS, there could be significant impacts to the value of parks, recreation and open space in the existing and future recreational facilities in the North Vineyard Station Specific Plan area, requiring mitigation measures in order to reduce the impacts to below the level of significance.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Southgate Recreation and Park District hereby provides the comments contained in the attached letter to be addressed and clarified by the County of Sacramento where indicated and included with the Supplemental Environmental Impact Report.


BE IT FURTHER RESOLVED that adequate response to the District's comments, with a detailed description of potential mitigation measures to assist in reducing potential impacts be included in Supplemental Environmental Impact Report.

PASSED AND ADOPTED by the Board of Directors of the Southgate Recreation and Park District this 5th day of April, 2005, by the following vote to wit:

AYES:  
Appel, Cockerham,  
Smith & Wirth

  
\_\_\_\_\_  
John Cockerham, Chair

NOES: None  
Absent: Thompson

  
\_\_\_\_\_  
Shirley Wirth, Clerk

**North Vineyard  
Station**

**Playgrounds & Phase 2  
Improvements**

| Park/Facility<br>Name or Number      | Type     | Acres       | Soccer Fields | Softball Fields | Youth Baseball Fields | Sport &/or Tennis Courts (set of 2) | Sport &/or Basketball Courts (1/2 Ct.) | Shade Shelter & Picnic Tables | Restrooms | Playgrounds   | Parking Lot |
|--------------------------------------|----------|-------------|---------------|-----------------|-----------------------|-------------------------------------|--|-------------------------------|-----------|---------------|-------------|
|                                      |          |             |               |                 |                       |                                     |  |                               |           |               |             |
| <b>PHASE A-1</b>                     |          |             |               |                 |                       |                                     |  |                               |           |               |             |
| Vineyard Point Park North - Phase I  |          | 10.0        | 1*            |                 | 1                     |                                     | 1*                                     | 2S                            | 1         | 1L/1S         | 1           |
| Vineyard Point Park North - Phase II |          | 4.2         | 1*            |                 |                       |                                     | 1                                      | 1S                            |           |               |             |
| <b>Sub-total</b>                     | <b>C</b> | <b>14.2</b> | <b>2</b>      | <b>0</b>        | <b>1</b>              | <b>0</b>                            | <b>2</b>                               | <b>3S</b>                     | <b>1</b>  | <b>1L/1S</b>  | <b>1</b>    |
| <b>PHASE A-2</b>                     |          |             |               |                 |                       |                                     |  |                               |           |               |             |
| Vineyard Creek Park                  | C        | 14.3        | 2*            | 3*              |                       | 3*                                  | 2                                      | 1L/2S                         | 1         | 1L/1S         | 1           |
| North Morvai Park                    | M        | 2.0         |               |                 |                       |                                     | 1                                      | 2S                            |           | 1S            |             |
| <b>Sub-total</b>                     |          | <b>16.3</b> | <b>2</b>      | <b>3</b>        | <b>0</b>              | <b>3</b>                            | <b>3</b>                               | <b>1L/4S</b>                  | <b>1</b>  | <b>1L/2S</b>  | <b>1</b>    |
| <b>PHASE B</b>                       |          |             |               |                 |                       |                                     |  |                               |           |               |             |
| South Morvai Park                    | N        | 6.4         | 1             |                 | 1                     |                                     | 1                                      | 2S                            |           | 1L/1S         |             |
| <b>Sub-total</b>                     |          | <b>6.4</b>  | <b>1</b>      | <b>0</b>        | <b>1</b>              | <b>0</b>                            | <b>1</b>                               | <b>2S</b>                     | <b>0</b>  | <b>1L/1S</b>  |             |
| <b>PHASE C</b>                       |          |             |               |                 |                       |                                     |  |                               |           |               |             |
| Apostol Park                         | M        | 2.0         |               |                 |                       |                                     |  | 1S                            |           | 1L            |             |
| Florin/Saca Park                     | M        | 2.0         |               |                 |                       |                                     |  | 1S                            |           | 1L            |             |
| Law Park                             | N        | 6.5         | 1             |                 |                       |                                     | 1                                      | 2S                            |           | 1L/1S         |             |
| Oshiro Park                          | N        | 6.5         | 1             |                 | 1                     |                                     | 1                                      | 2S                            |           | 1L/1S         |             |
| <b>Sub-total</b>                     |          | <b>17.0</b> | <b>2</b>      | <b>0</b>        | <b>1</b>              | <b>0</b>                            | <b>2</b>                               | <b>6S</b>                     | <b>0</b>  | <b>4L/2S</b>  |             |
| <b>PHASE D</b>                       |          |             |               |                 |                       |                                     |  |                               |           |               |             |
| Aston Trust Park                     | N        | 7.9         | 3*            |                 | 2*                    |                                     |  | 2S                            | 1         | 1L/1S         |             |
| Vineyard Point Park East             | N        | 5.0         | 1             |                 | 1                     |                                     | 1                                      | 2S                            |           | 1L            |             |
| <b>Sub-total</b>                     |          | <b>12.9</b> | <b>4</b>      | <b>0</b>        | <b>3</b>              | <b>0</b>                            | <b>1</b>                               | <b>4S</b>                     | <b>1</b>  | <b>2L/1S</b>  |             |
| <b>PHASE E</b>                       |          |             |               |                 |                       |                                     |  |                               |           |               |             |
|                                      |          | <b>0.0</b>  |               |                 |                       |                                     |  |                               |           |               |             |
| Additional Park Acreage              | N        | 6.3         | 1             |                 | 1                     |                                     | 1                                      | 2S                            |           | 1L/1S         |             |
| <b>Total (1)</b>                     |          | <b>73.1</b> | <b>12</b>     | <b>3</b>        | <b>7</b>              | <b>3</b>                            | <b>10</b>                              | <b>1L/21S</b>                 | <b>3</b>  | <b>10L/8S</b> | <b>2</b>    |

C=Community Park; M=Mini Park; N=Neighborhood Park

\* Sports Field Lighting to be included.

(1) Total Park Acreage based on current estimated Park DUE's of 5101



**North Vineyard Station Comprehensive Plan  
Capital Improvements Plan Summary**

| Description  | Units                    | Cost per Unit   | Total Cost           |
|--|--------------------------|-----------------|----------------------|
| <b>Basic Park Development Costs (1)</b>  |                          |                 |                      |
| 1 to 3 acres   | 6.0 acres                | \$ 167,245      | \$ 1,003,470         |
| 3 to 6 acres   | 9.2 acres                | \$ 109,223      | \$ 1,004,852         |
| 6 to 11 acres  | 43.6 acres               | \$ 93,303       | \$ 4,068,011         |
| 11 + acres   | 14.3 acres               | \$ 80,189       | \$ 1,146,703         |
| <b>Sub-Total Basic Park Development Costs</b>  | <b>73.1 acres</b>        |                 | <b>\$ 7,223,035</b>  |
| <b>Community Center</b>  |                          |                 |                      |
| Site Improvements for 2 Acre Site  | 15,000 square feet       | \$ 230          | \$ 3,454,200         |
| Architectural & Engineering Fees @ 12%   | lump sum                 |                 | \$ 575,000           |
|  | percentage               |                 | \$ 483,504           |
| <b>Sub-Total Community Center Costs</b>  |                          |                 | <b>\$ 4,512,704</b>  |
| <b>Drainage Parkway and Other Trail Facilities</b>                                       |                          |                 |                      |
| <b>Pedestrian Signal Crossings</b>   |                          |                 |                      |
| Gerber Creek at Bradshaw Rd.&Waterman Rd.  | 2 lump sum               | \$ 70,000       | \$ 140,000           |
| <b>Drainage Parkway Trail Facilities (2)</b>   |                          |                 |                      |
| Gerber Creek Trail System Improvements*  | 13,590 lineal feet       | \$ 87.00        | \$ 1,182,330         |
| Elder Creek Trail System Improvements  | 6,595 lineal feet        | \$ 87.00        | \$ 573,765           |
| <b>Other Linear Open Space Trail (3)</b>   | <b>5,225 lineal feet</b> | <b>\$ 30.00</b> | <b>\$ 156,750</b>    |
| <b>Sub-Total Trail Costs</b>   |                          |                 | <b>\$ 2,052,845</b>  |
| <b>Park Playground Facilities</b>  |                          |                 |                      |
| Playground Equipment - Small   | 8 each                   | \$ 55,000       | \$ 440,000           |
| Playground Equipment - Large   | 10 each                  | \$ 75,000       | \$ 750,000           |
| <b>Additional Park Improvements Costs</b>  |                          |                 |                      |
| Soccer Fields  | 12 each                  | \$ 4,000        | \$ 48,000            |
| Softball Fields  | 3 each                   | \$ 44,000       | \$ 132,000           |
| Youth Baseball Fields  | 7 each                   | \$ 40,000       | \$ 280,000           |
| Tennis Court W/Fence (set of 2)  | 3 each                   | \$ 92,000       | \$ 276,000           |
| Sports Lighting (3)  | 99 each                  | \$ 21,000       | \$ 2,079,000         |
| Basketball Courts (1/2 Court)  | 10 each                  | \$ 31,000       | \$ 310,000           |
| Shade Structures - Large (50 people)   | 1 each                   | \$ 60,000       | \$ 60,000            |
| Shade Structures - Small (25 people)   | 21 each                  | \$ 25,000       | \$ 525,000           |
| Restroom Buildings   | 3 each                   | \$ 105,000      | \$ 315,000           |
| <b>Parking Lots (2 Lots; 2 @ 70 &amp; 150 stalls)</b>                                    | <b>220 stall</b>         | <b>\$ 2,000</b> | <b>\$ 440,000</b>    |
| <b>Sub-Total Park Improvements Costs</b>   |                          |                 | <b>\$ 4,465,000</b>  |
| <b>TOTAL Park Improvement Costs</b>  |                          |                 | <b>\$ 19,443,584</b> |
| Contingency Allowance @ 5%   |                          | percentage      | \$ 972,179           |
| District Park, Recreation & Open Space Master Plan                                       |                          | lump sum        | \$ 35,000            |
| Community Facilities District (CFD) Formation  |                          | lump sum        | \$ 15,000            |
| <b>TOTAL COST</b>  |                          |                 | <b>\$ 20,465,763</b> |
| <b>Total Estimated Park DUE's (4)</b>  | <b>5,076</b>             |                 |                      |
| <b>Fee per Park DUE</b>  |                          |                 | <b>\$ 4,032</b>      |
| <b>ADD: JOINT-USE Detention Basins (Five Basins)</b>                                     |                          |                 |                      |
| Trail & Trailside Improvements (5)   | 16,500 lineal feet       | \$ 109          | \$ 1,798,500         |
| <b>ADD: INFRASTRUCTURE-Drainage &amp; Sewer Impact Fees &amp; Zone 40 Water Fees (6)</b> |                          |                 |                      |
|  |                          |                 | <b>\$ 2,213,608</b>  |
| <b>TOTAL COST with Detention Basins</b>  |                          |                 | <b>\$ 24,477,871</b> |
| <b>Fee per Park DUE's With Detention Basins</b>  |                          |                 | <b>\$ 4,822</b>      |

May 20, 2004



*Sheldon*

*Administrative Headquarters*

6000 Orange Avenue  
Sacramento, CA 95823-3225

Phone 916-428-1171

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*Board of Directors*

Rolfe P. Appel

John E. Cockerham

Edwin A. Smith

Christine Thompson

Shirley J. Wirth

*General Manager*

Rod Cooper

*Assistant General Manager*

Ward Winchell

Dick Frascchetti, Project Manager  
County of Sacramento  
Planning & Community Development Department.  
827 – 7<sup>th</sup> Street, Rm. 230  
Sacramento, CA 95814

RE: Control No. 03-CZB-SVB-0099 “North Vineyard Greens Unit #1  
REVISED”

Dear Dick;

Thank you for the opportunity to respond to the “North Vineyard Greens Unit #1 Revised Rezone and Tentative Subdivision Map, dated February 29, 2004”, proposed on the north side of Gerber Road and south side of Florin Road, in the Vineyard Community.

Attached please find Resolution 03-171 adopted by our Board of Directors at their May 18, 2004 meeting. Since this proposed map is within the North Vineyard Station Specific Plan Area, whose financing plan has yet to be finalized, the District’s comments are preliminary until specific items of improvements have been included in the financing plan. The District reserves the right to comment in greater detail at a future date.

The District requests that the comments contained within the resolution be adopted by the County of Sacramento and included in the map requirements. Our comments are as follows:

1. Landscape Corridors on Waterman Road, Florin Road, Gerber Road

Landscape Corridors, a minimum of 25 feet wide with soundwalls, along both sides of Waterman Road (Landscape Corridor Lots C, D, E, F, H and I), Florin Road (Lot W) and Gerber Road (Landscape Corridor Lots Q, R & V) will be accepted by the District. The Developer shall dedicate the landscape corridor to Southgate as a gift deed and be fully developed by the Developer with plans and specifications to be approved by the District. Landscape corridors shall have a

Type 2 curb and gutter and a meandering six foot wide sidewalk separated from traffic. A Type 3 curb is required at the back of sidewalks for landscaped areas (except turf). Landscape corridors are to be connected to the District's computerized irrigation system (maxicom) which includes maxicom controller, phone line, and electricity. The District shall accept the completed landscape corridors after they have passed inspections and shall maintain the landscape corridors through assessment district proceeds. It is understood that the District does not maintain subdivision signage. The District does not require subdivision entrance lighting; however, more residents are requesting landscape lighting to illuminate subdivision entryways and street names. In lieu of lighting, the District does request the installation of wiring and connection to the electric boxes of: Florin Road (both ends of Lot W); Waterman Road (Lots E and C; Lots F and D, west ends of Lots H and I) and on Gerber Road (on each side of Lots V, Q and R) for future installation of lighting, should it become necessary.

2. Interior Landscape Corridor Lots K, L and N

The Developer shall dedicate these landscape corridors to Southgate as a gift deed and be fully developed by the Developer with plans and specifications to be approved by the District. Corridors shall have a vertical curb and connected 6' wide concrete sidewalk. Street lighting shall be provided in front of these corridors on the same side of the street for security purposes. The District shall accept the completed landscape corridor after they have passed inspections and the District has received a current and clear title report. The District shall maintain the landscape corridor through assessment district proceeds. It is understood that the District does not maintain subdivision signage. Due to the proximity of these corridors to the adjacent open space and CCTR (rail corridor), the District requests tubular steel fencing behind Lots K & L, and post and cable fencing along the open space perimeter of Lot N continuing south along 2 Street across the open space and Gerber Creek.

3. Six foot (6') high Masonry Wall along Landscape Corridors

The Developer shall install a 6' high masonry wall for lots that back up or side-on to the landscape corridors along Waterman Road, Florin Road and Gerber Road (also including Lots 176-180 as part of Landscape Corridor Lot F). The design for all masonry walls shall be treated with graffiti-resistant coating and the design approved by the District. Where no residential lots exist the open space area shall be visible from the street, with post and cable fencing separating the landscaped corridors from the open space.

4. Quimby Requirements Land Dedication

The District will accept land (approximately 5.0 acres for this subdivision based on 363 residential lots) pursuant to the requirements of the Subdivision Map Act. The proposed park location shall be to the immediate west of the future 14.2 acre

site adjacent to the eastern side of this subdivision. The specific park location shall be determined by the District. The District further requests that there be street frontage on the ultimate western portion of the park site. Proposed residences along K Street that back on to the park site will not be accepted.

5. Open Space Lots B, G, J, M and P in Transmission Easement

Due to the proximity of the proposed streets to the open space lots, the District requests that minimally landscaped corridors be approximately 10' wide from back of sidewalk to open space area, with minimal landscape improvements approved by District (trees, drip irrigation, native shrubs, etc) and provided by Developer. The District also requests these same improvements on both sides of the street be included along streets that cut through all open space areas in this subdivision (i.e. 4 Street, 2 Street, and D Street and any other future streets in this project that front on the open space). The Developer shall dedicate these landscaped portions of the open space, as part of the open space, to the Southgate District as a gift deed and be fully developed by the Developer with plans and specifications to be approved by the District. Street frontage shall have a square curb and meandering pathway separated from traffic. The District shall accept the completed landscaped areas at the same time as the open space after they have passed inspections and shall maintain the open space through assessment district proceeds.

6. Open Space along Gerber Creek & Transmission Easement:

Open space area shall front on a public road per County of Sacramento General Plan requirements. For areas of Open Space that front on a public street, a "setback" area of approximately 10 feet (from back of sidewalk into Open Space area) shall be minimally landscaped (to District's specifications) to provide an aesthetic transition into the Open Space area. Any lots backing on to the open space corridor shall have a 6' high tubular steel fence constructed by Developer, and approved by the District. Fencing belongs to and is the responsibility of the residential property owner. Open space will have post and cable fencing along the back edge of the open space setback area, a vertical curb and connected 6-foot wide concrete sidewalk along Street fronting open space area. Irrigation system to be connected to the District's maxicom computerized irrigation system inclusive of: controller, phone line and electricity. Open Space shall be dedicated to the District as a gift with a clear title report, and be fully developed and improved by the developer with plans and specifications to be approved by the District. No Quimby credit or Developer Fee credit will be given for this open space or improvements. Developer shall pay for these improvements. The Developer shall install street lighting along streets fronting on all open space areas, on the open space side of the street. The District shall accept the completed open space area after they have passed inspections and received a clear title report. The Developer shall agree to the inclusion in an additional assessment zone, to go towards the maintenance of the trail and open space area. The District

shall maintain the trails and open space areas through assessment district zone proceeds.

7. Six foot (6') high Tubular Steel Fence along Residential lots that Border Open space, and adjust street alignments to front more on the open space

The Developer shall construct a 6' high tubular steel fence for residential lots that border (back on or side on) on all open space lots. The design for all tubular steel fencing shall be approved by the District. The District has concern about the lack of visibility within the Transmission Easement area and requests that: 1. P Street be moved to front on the open space Lot B, and 2. B Court and C Court connect through lots 29 and 38.

8. Acceptance of Open Space Lots B, G, J, M, O and P

The District will accept Open space Lots B, G, J, M, O, and P as identified on the Vesting Tentative Subdivision Map dated February 29, 2004. No Quimby credits will be given for this open space property. Developer shall provide minimal landscape improvements to street frontage of open space as described in #5 and #6 of this document.

9. Power towers in Landscape Corridors and Open Space

All lots that are designated for P,G and E purposes and which fall within the landscaped corridors or open space areas shall be secured by tubular steel fencing or similar fencing acceptable to the District, to prevent access to the tower. The District further requests that; any sidewalks be located so as to go around the tower to keep people as far away as possible, that the area underneath the tower be filled with concrete or another material which will minimize maintenance, and that this area remain as a County Right of Way and P, G & E easement. The District will not accept the towers as part of the parcels when the corridors and open space are deeded to the District.

10. Review and Acceptance of Army Corp of Engineer Comments and Requirements:

The District requests review of all Army Corp of Engineer, Fish and Game, Fish and Wildlife or any other State or Federal Agency comments and requirements as well as the final permit and conditions as they pertain to the open space property, and will then determine acceptance of the conditions and respective property.

11. Adequate funding for perpetual Maintenance and Monitoring of Open Space:

The District requests that through the provision of an adequate endowment (if necessary as required by the Army Corp of Engineers, Fish and Game, Fish and

Wildlife or any other State or Federal Agency) and the annexation to a new Zone in a landscaping and lighting assessment district, adequate funding is available to pay for all costs associated with the repair, maintenance and monitoring in perpetuity for the open space property and related improvements.

12. Bicycle/Pedestrian Trail in Open Space:

The developer shall construct a bicycle/pedestrian trail and landscaping (as described in Comment #7 above) along the Open Space (Lots B, G, J, M, O and P) as proposed under the North Vineyard Station Community Land Use Plan and as per District requirements for standards and location. Trail alignment shall meander throughout the corridor. Trail design guidelines shall be provided to Developer by District. Trail setback from the rear or side of residential property lines and streets shall be as far as possible. It is important that adequate space be provided in order to provide separation for bicycle, pedestrian and equestrian uses. Improvements along bike trail and open space corridors shall compliment the design planned in the North Vineyard Station Plan. Trail and Open space area shall be gift deeded to the Southgate Recreation and Park District with no Quimby credits given for this area. Developer shall enter into a Developer Requirement Agreement for these improvements and may be credited developer fees for all agreed to bike trail improvements.

13. Bicycle/Pedestrian Trail along Gerber Creek with Crosswalk at 2 Street:

The developer shall construct a bicycle/pedestrian trail and landscaping along Gerber Creek as required under the North Vineyard Station PFFP and as per District requirements for standards and location. The District has identified on the Drainage Corridor/Open space map the specific location of the trail, provided to MacKay and Soms in February 2004. For purposes of the North Vineyard Greens Unit #1 subdivision, the trail alignment and open space area reflects the District's requested placement and alignment. Trail alignment shall meander throughout the corridor. Trail design guidelines shall be provided to Developer by District. Typically, the trail shall not be closer than 20' from the top of bank along the creek and outside of any environmental constraints. Trail setback from the rear or side of residential property lines and streets shall be as far as possible, with a minimum distance of 50'. It is important that adequate space be provided in order to provide separation for bicycle, pedestrian and equestrian uses. The District requests paved points of connection from the trail to D Street in two separate locations to be determined by the District. The trails are part of the overall Gerber Creek and Elder Creek Open Space area as identified in the Sacramento County land use plan. Improvements along bike trail and open space corridors shall compliment the design planned in the North Vineyard Station Plan. Trail and Open space area shall be gift deeded to the Southgate Recreation and Park District with no Quimby credits given for this area. Developer shall enter into a Developer Requirement Agreement for these improvements and may be credited developer fees for all agreed to bike trail improvements.

**Bicycle/Pedestrian Crosswalk:** The District requests a bicycle/pedestrian crosswalk at the intersection of the Gerber Creek Trail and 2 Street, immediately north of D Street.

14. Lot A – Open Space/Detention Basin Use for Recreational Purposes

The District desires to work with the Developer and County Water Resources in identifying potential recreational uses of the 18.0± acre detention basin site. Basins shall be improved with landscaping, walking path, benches and security lighting at a minimum. In order to accommodate recreational uses an access point and possible parking area would need to be provided from the subdivision. This access point and parking area can be determined at a future point in time. The Developer shall construct a 6' high tubular steel fence for residential lots that border (back on or side on) on all open space/detention basin lots. The design for all tubular steel fencing shall be approved by the District.

15. Gerber Creek Channel Improvements and Parkway:

Improvements to the Gerber Creek channel and open space drainage corridor shall be consistent with the design planned for Gerber Creek in the North Vineyard Station Specific Plan Area.

16. Inclusion in Financing Districts

The Developer shall consent to the inclusion of this subdivision within the North Vineyard Station Financing District, which will be a Landscaping and Lighting Assessment District or a Mello Roos Community Facilities District, and the Southgate District-wide Landscaping and Lighting Assessment District. The Developer shall be responsible for notification to all subsequent purchasers of parcels of land of the inclusion within said financing districts. These financing districts will be established by the District for additional improvements and ongoing maintenance and operations.

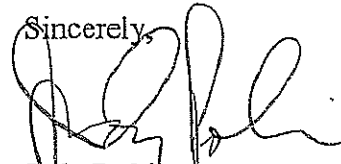
17. North Vineyard Station Public Facilities Financing Plan

As determined by the County Board of Supervisors, this subdivision will be included in the Southgate Recreation and Park District component of the North Vineyard Station Public Facilities Financing Plan. The District reserves the right to revise park land dedication requirements and financing mechanisms to adapt to changes resulting from modifications to the policy or the creation of a new Plan by the County of Sacramento.

18. Opportunities for Future Comment

The District would appreciate the opportunity to further comment on this map after the Public Facilities Financing Plan has been approved in order to make any necessary adjustments.

Thank you for your assistance. Should you have further questions please do not hesitate to contact me at 428-1171 ext. 14.

Sincerely,  


Judy Robinson  
Planning and Facilities Manager

Encl.

Cc: Ben French, MacKay & Somps



January 7, 2004

Nick Pascoe, Associate Planner  
County of Sacramento  
Planning & Community Development Department.  
827 – 7<sup>th</sup> Street, Rm. 230  
Sacramento, CA 95814

RE: Control No. 03-RZB-SVB-0141 North Vineyard Greens-Unit #3:  
Rezone and Vesting Tentative Subdivision Map (Revised 10-24-03)



Dear Nick;

*Sheldon*  
*Administrative Headquarters*  
6000 Orange Avenue  
Sacramento, CA 95823-3225  
Phone 916-428-1171  
Facsimile 916-428-7334  
[www.southgaterecandpark.net](http://www.southgaterecandpark.net)

Thank you for the opportunity to respond to the “North Vineyard Greens-Unit #3: Rezone and Vesting Tentative Subdivision Map (revised 10-24-03),” proposed at the north side of Gerber Road, 3,550 feet east of Elk Grove-Florin Road in the Vineyard Community Planning Area.

*Board of Directors*  
Rolfe P. Appel  
John E. Cockerham  
Edwin A. Smith  
Christine Thompson  
Shirley J. Wirth

Our Board previously commented on the original map on May 20, 2003 through Resolution 02-151. Please find attached Resolution 03-77, adopted by our Board of Directors at their January 6, 2004 meeting, with additional and more detailed comments. The District requests that the comments contained within the resolution be adopted by the County of Sacramento and included in the map requirements. Our comments are as follows:

*General Manager*  
Rod Cooper

*Assistant General Manager*  
Ward Winchell

1. Landscape Corridors on Gerber Road and Waterman Road

Landscape Corridor, a minimum of 25 feet wide with soundwall, along Gerber Road and Waterman Road will be accepted by the District (proposed Lots E, G, J, K, L, M, N, O). The Developer shall dedicate the landscape corridors to Southgate as a gift deed and be fully developed by the Developer with plans and specifications to be approved by the District. Corridor shall have a square curb and meandering pathway separated from traffic. With respect to Lot E, connection from F Street to the bike trail shall be provided per District specifications. At Lot E a separate water line and backflow prevention device shall also be installed along with an appropriate drainage inlet, for future drinking fountain connection. The District shall accept the completed landscape corridor after they have passed inspections and shall

maintain the landscape corridor through assessment district proceeds. It is understood that the District does not maintain subdivision signage.

2. Quimby Requirements/In-lieu Fees

The District will accept in-lieu fees for this subdivision pursuant to the requirements of the Subdivision Map Act.

3. The Developer will construct a 6' high Masonry Wall along Gerber Road and Waterman Road

The Developer shall install a 6' high masonry wall for lots that back up or side-on to the landscape corridors along Gerber Road and Waterman Road. The design for all masonry walls shall be treated with graffiti-resistant coating and the design approved by the District.

4. The Developer will construct a 6' high Tubular Steel Fence along Residential Lots that Border the Open space Lots

The Developer shall construct a 6' high tubular steel fence for residential lots that borders on the open space Lots. The design for all tubular steel fencing shall be approved by the District.

5. Open Space along Gerber Creek:

Open space area shall front on a public road per County of Sacramento General Plan requirements. Open space area shall comply with the North Vineyard Station Specific Plan Land Use Plan for open space, "... establishing a minimum open space width of 150 feet on each side of the drainage canal outside of easement and detention basins and between detention basins and roads." Although the open space corridor width is less than that specified in the adopted Specific Plan, the District finds that the portions fronting along the streets are good and acceptable as shown on the map.

On areas of Open Space that front on a public street, a "setback" area of approximately 10 feet (from back of sidewalk into Open Space area) shall be minimally landscaped by Developer (to District's specifications) to provide an aesthetic transition into the Open Space area. Any lots backing on to the open space areas shall have a 6' high tubular steel fence constructed by Developer, and approved by the District. Fencing belongs to and is the responsibility of the residential property owner. Open space will have post

and cable fencing along the back edge of the open space landscaped area, a vertical curb and connected 6-foot wide concrete sidewalk along Street fronting open space area. Irrigation system to be connected to the District's maxicom computerized irrigation system inclusive of: controller, phone line and electricity. Open Space shall be dedicated to the District as a gift with a clear title report, and be fully developed and improved by the developer with plans and specifications to be approved by the District. No Quimby credit or Developer Fee credit will be given for this open space or the improvements. Developer shall pay for these improvements. Location of improvements to be determined by District and Developer. The Developer shall install street lighting along streets fronting on all open space areas, on the open space side of the street. The District shall accept the completed open space area after they have passed inspections and received a clear title report. The Developer shall agree to the inclusion in an additional assessment zone, to go towards the maintenance of the trail and open space area. The District shall maintain the trails and open space areas through assessment district zone proceeds.

6. Bicycle/Pedestrian Trail along the South side of Gerber Creek:

The developer shall provide a bicycle/pedestrian trail and landscaping along Gerber Creek as required under the North Vineyard Station Specific Plan. The District requests that starting at Waterman Road and continuing to Passallis Lane, that the trail be constructed on the south side of the creek to provide improved public access from this subdivision. A paved access path shall be provided and connect the trail on the south to the homes on the north, with access from E Street to the Open space Lot . The trail shall be part of the overall Gerber Creek Open Space area as identified in the Sacramento County land use plan. Improvements along bike trail and open space corridor shall compliment the design planned for Gerber Creek in the North Vineyard Station Plan. Trail and Open space area shall be gift deeded to the Southgate Recreation and Park District with no Quimby credits given for this area. Developer shall enter into a Developer Requirement Agreement for these improvements and may be credited developer fees for all agreed to bike trail improvements. Due to the proximity of the creek to the subdivision the District requests a north and south public access point and connection from the subdivision to the Gerber Creek trail. Location of creek access to be mutually determined by the Developer and the District. At Lot E a water line and backflow prevention device shall also be installed along with an appropriate drainage inlet, for future drinking fountain connection. Transmission Tower shall be appropriately secured so as to prevent public access. The District does not maintain or insure for Transmission Towers.

#### 7. Trail Alignment

The District requires, within the open space corridor, that the trail alignment be placed as far away from homes and streets as possible. The trail shall be a minimum of 50' from the rear and side of home lots and the street. The trail is too close to the rear of lots 20-22. The trail shall not be closer than 20' from the top of bank along the creek and outside of any environmental constraints. The District requests to be notified of any environmental constraints affecting the alignment of the trail within this subdivision before approving a final trail alignment. It is important that adequate space be provided in order to provide separation for bicycle, pedestrian and equestrian uses.

#### 8. Inclusion in Financing Districts

The Developer shall consent to the inclusion of this subdivision within the North Vineyard Station Financing District, which will be a Landscaping and Lighting Assessment District or a Mello Roos Community Facilities District, and the Southgate District-wide Landscaping and Lighting Assessment District. The Developer shall be responsible for notification to all subsequent purchasers of parcels of land of the inclusion within said financing districts. These financing districts will be established by the District for additional improvements and ongoing maintenance and operations.

#### 9. Adequate funding for perpetual maintenance and monitoring of Open Space:

The District requests that through the provision of an adequate endowment (if necessary as required by the Army Corp of Engineers, Fish and Game, Fish and Wildlife or any other State or Federal Agency) and the annexation to a new Zone in a landscaping and lighting assessment district, adequate funding is available to pay for all costs associated with the repair, maintenance and monitoring in perpetuity for the open space property and related improvements.

#### 10. North Vineyard Station Public Facilities Financing Plan

As determined by the County Board of Supervisors, this subdivision will be included in the Southgate Recreation and Park District component of the North Vineyard Station Public Facilities Financing Plan. The District reserves the right to revise park land dedication requirements and financing mechanisms to adapt to changes resulting from modifications to the policy or the creation of a new Plan by the County of Sacramento.

11. Acceptance of Open Space Lots C, D & H

The District will accept Open space Lots C, D & H as identified on the Vesting Tentative Subdivision Map dated October 24, 2003. No Quimby credits will be given for this open space property. Developer shall provide minimal landscape improvements to street frontage of open space as described in #5 of this resolution.

12. Gerber Creek Channel Improvements and Parkway:

Improvements to Gerber Creek, the Channel and Parkway shall compliment the design planned for Gerber Creek in the North Vineyard Station Plan.

13. Infrastructure

The developer shall assure that the land to be dedicated: is appropriately graded to the District's specifications and pursuant to County standard; shall provide adjoining streets, sidewalks with vertical curbs; electrical, phone, storm drainage, sewer, and water stubs; connect to and provide water meter, reduced pressure backflow prevention device; street lights fronting on open space property; and pay all permit fees including building, sewer, water meter, water development and drainage fees for the landscape corridors and open space in order to allow for improvements to the open space frontage and landscape corridors within this subdivision. Rain Bird maxicom controllers, with telephone line and electricity shall be connected to the District's computerized irrigation system.

14. 10' Pedestrian Easement

It is understood that it is the responsibility of the property owner to care for and keep maintained the ten foot pedestrian easements, as shown on the Tentative subdivision map dated October 24, 2003.

15. Review and Acceptance of Army Corp of Engineer Comments and Requirements:

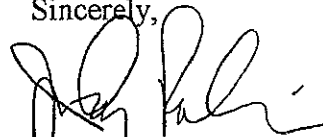
The District requests review of all Army Corp of Engineer, Fish and Game, Fish and Wildlife or any other State or Federal Agency comments and requirements as well as the final permit and conditions as they pertain to the open space property, and will then determine acceptance of the conditions and respective property.

16. Opportunities for Future Comment

The District would appreciate the opportunity to further comment on this map after the Public Facilities Financing Plan has been approved in order to make any necessary adjustments.

Thank you for your assistance. Should you have further questions please do not hesitate to contact me at 428-1171 ext. 14.

Sincerely,

A handwritten signature in black ink, appearing to read 'Judy Robinson', written over a faint, illegible background.

Judy Robinson  
Planning and Facilities Manager

Encl.

Cc: Jim Ray/Ben French-MacKay & Somps Engineering

April 20, 2005

RECEIVED

APR 22 2005

PLANNING DEPT.  
County of Sacramento

Corinna Sandmeier  
County of Sacramento  
Planning & Community Development Department  
827 - 7<sup>th</sup> Street, Rm. 230  
Sacramento, CA 95814



RE: Control No. 02-RZB-PMR-UPP-0660 Gosal Estates Rezone, Tentative Parcel Map and Use Permit

Dear Corinna;

Thank you for the opportunity to respond to the Gosal Estates Rezone, Tentative Parcel Map and Use Permit dated December 15, 2004 which includes the rezone and division of 10.1 acres zoned AR-10 to RD-20 and Open Space, into two (2) Lots; one (1) multi-family residential lot which is planned for a 124 unit condominium development of 3 to 6-plexes and One (1) open space lot which is planned for a stormwater detention facility. The project is located on the north side of Gerber Road, approximately 1,900 feet east of Elk Grove-Florin Road, in the Vineyard Community.

The District requests that the following comments, which were approved by the Southgate Board of Directors at their April 19, 2005 meeting, be adopted by the County of Sacramento and included in the map requirements. Our comments are as follows:

1. Quimby Requirements; Parkland Dedication/In-lieu Fees

Based on the 124 multi-family dwelling units proposed for this development, the required Quimby parkland dedication would be approximately 1.25 acres. The District shall accept in-lieu fees for this development pursuant to California's Subdivision Map Act.

2. Landscape Corridor along Gerber Road

There is a landscape corridor shown along the north side of Gerber Road which is consistent with the other landscape corridors in the area and with the District's desire to provide safe pedestrian access along Gerber Road. The District does not maintain landscape corridors on commercial or multi-family residential property. These landscape corridor sections will need to be maintained by the property owner or Homeowner's Association.

3. Stormwater Detention Basin (Open Space Parcel B)

The District will accept the Stormwater Detention Basin Open Space identified on this Tentative Parcel Map. No Quimby credit or Deed will be given for this open space property. Open Space shall be deeded to the District as a gift with a clear title report, and be fully developed and landscaped by the developer with plans and specifications to be approved by the District.

The District shall work with the Developer and County Water Resources Department providing a pedestrian/bicycle trail along the perimeter of the stormwater detention basin facility which is partially located on this project site (Parcel B). The trail need to be provided to the basin trail for all the residents of this project and be accessible to the general public. Detention basins shall be improved with a paved surface, landscaping, benches and security lighting at a minimum. The Developer shall provide for these improvements. Currently the map shows a pathway located on the western side of the basin with access from the sidewalk along the north end of Gerber Road. The District requests that an additional public access be provided from the north end of the development to this perimeter trail. The location and access points and widths shall be determined at a future point in time.

4. Six foot (6') high Tubular Steel Fence along the Open Space

The Developer shall construct a 6' high tubular steel fence along the perimeter of the condominium development area where it borders on the detention basin open space area, to ensure visibility into this public open space area and to protect the residents. The fence would be situated on the west side of the trail. The location and design of the tubular steel fencing shall be approved by the District.

5. Gerber Creek & Elder Creek Trail System/Regional Sewer Easement

The District has master planned a pedestrian/bicycle trail along Gerber Creek and Elder Creeks which is included in the North Vineyard Station Specific Plan. In certain instances, this trail lies within the Regional Sewer Easement Area. The Regional Sewer Easement Area runs through this development site. The District requests that public access be reserved through the Sewer Easement Area to provide a potential connection to any future trails that may be constructed near this development. Location of this reserve area within the easement shall be determined by the Developer and the District.

6. Inclusion in Financing Districts

The Developer shall consent to the inclusion of this subdivision within the North Vineyard Station Financing District which will be a Landscaping and Maintenance Assessment District or a Mello Roos Community Facilities District.



3. Stormwater Detention Basin (Open Space Parcel B)

The District will accept the Stormwater Detention Basin Open Space Parcel B as identified on this Tentative Parcel Map. No Quimby credit or Developer Fee credit will be given for this open space property. Open Space shall be dedicated to the District as a gift with a clear title report, and be fully developed and improved by the developer with plans and specifications to be approved by the District.

The District shall work with the Developer and County Water Resources in providing a pedestrian/bicycle trail along the perimeter of the stormwater detention basin facility which is partially located on this project site (Parcel B). Access points need to be provided to the basin trail for all the residents of this project, as well as, the general public. Detention basins shall be improved with a paved trail, as well as landscaping, benches and security lighting at a minimum. The Developer shall pay for these improvements. Currently the map shows a pathway located along the western side of the basin with access from the sidewalk along the north side of Gerber Road. The District requests that an additional public access point be provided from the north end of the development to this perimeter trail. The final access points and widths shall be determined at a future point in time.

4. Six foot (6') high Tubular Steel Fence along the Open Space Boundary

The Developer shall construct a 6' high tubular steel fence along the eastern side of the condominium development area where it borders on the detention basin open space area, to ensure visibility into this public open space area and safety for the residents. The fence would be situated on the west side of the trail. The final location and design of the tubular steel fencing shall be approved by the District.

5. Gerber Creek & Elder Creek Trail System/Regional Sewer Easement Area

The District has master planned a pedestrian/bicycle trail along Gerber and Elder Creeks which is included in the North Vineyard Station Specific Plan. In some instances, this trail lies within the Regional Sewer Easement Area. A portion of the Regional Sewer Easement Area runs through this development site. The District requests that public access be reserved through the Sewer Easement corridor for potential connection to any future trails that may be constructed north and south of this development. Location of this reserve area within the easement shall be determined by the Developer and the District.

6. Inclusion in Financing Districts

The Developer shall consent to the inclusion of this subdivision within the North Vineyard Station Financing District which will be a Landscaping and Lighting Assessment District or a Mello Roos Community Facilities District, and the

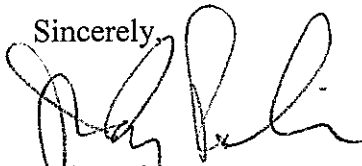
Southgate District-wide Landscaping and Lighting Assessment District. The Financing District shall also have a sub-zone for the maintenance of trails and open space available to this subdivision. The Developer shall be responsible for notification to all subsequent purchasers of parcels of land of the inclusion within said financing districts. These financing districts will be established by the District for additional improvements and ongoing maintenance and operations.

7. North Vineyard Station Public Facilities Financing Plan

This subdivision will be included in the Southgate Recreation and Park District component of the North Vineyard Station Public Facilities Financing Plan. The District reserves the right to revise parkland dedication requirements and financing mechanisms to adapt to changes resulting from modifications to the policy or the creation of a new Plan by the County of Sacramento.

Thank you for your assistance. Should you have further questions please do not hesitate to contact me at 428-1171 ext. 14.

Sincerely,

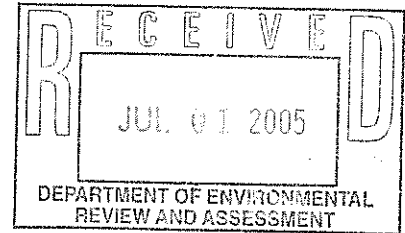
A handwritten signature in black ink, appearing to read 'Judy Robinson', written over the word 'Sincerely,'.

Judy Robinson  
Planning and Facilities Manager

cc. Gurmukh Gosal & KGD Trust  
MacKay & Soms Engineers

# **Appendix G**

## **Waterman Road Collector Road Access Study**



## TECHNICAL MEMORANDUM

---

**DATE:** May 6, 2005

**TO:** Peter Deru, J.A. Collins Properties, Inc.

**FROM:** Jeff Clark, Fehr & Peers

**RE:** Waterman Road Collector Road Access Study

SA05-0023

This memorandum examines the proposed change in the North Vineyard Station Specific Plan circulation plan to convert the four-leg signalized collector road intersection on Waterman Road, west of the Central California Traction Company (CCTC) railroad tracks, to two unsignalized tee intersections (see Figure 1 and Figure 2)).

The following sections are included in this memorandum:

- Existing North Vineyard Station Specific Plan – analysis of the existing specific plan circulation plan intersection
- Proposed Project Conditions – summary of traffic impacts with development of the proposed project
- Recommendations – description of improvements to mitigate identified traffic impacts associated with the proposed project

### EXISTING NORTH VINEYARD STATION SPECIFIC PLAN CONDITIONS

The approved North Vineyard Station Specific Plan circulation network includes a signalized four-leg intersection on Waterman Road, west of the CCTC railroad tracks, to serve the residential subdivisions northwest and southeast of Waterman Road. The proposed roadways included in the study are described below.

#### Waterman Road

Waterman Road is a planned four-lane north-south arterial that will extend from Gerber Road to Florin Road. Proposed land uses along Waterman Road are predominantly residential.

## 2 Street

2 Street is a proposed two-lane north-south collector that connects Gerber Road with Waterman Road. The planned land uses along 2 Street are generally residential.

### **Analysis Methodology**

Traffic operations at study intersections were analyzed in accordance with the Sacramento County *Traffic Impact Analysis Guidelines*, July 2004. Level of service (LOS) is a qualitative description of an intersections operation ranging from LOS A, or the free-flow conditions, to LOS F, or over-capacity conditions. LOS E represents at-capacity operations, and is the minimum acceptable operating level by the County of Sacramento for intersections in this area. The following summarizes the methodologies used for study intersections.

#### Signalized Intersections

Analysis of signalized intersections was completed using the methods described in *Interim Materials on Highway Capacity* (Circular No. 212, Transportation Research Board, January 1980) with adjustments for higher capacities as specified in the County's *Traffic Impact Analysis Guidelines*. The capacities used for signalized intersections in this study are presented below.

- Two-phase signal - 1650 critical movements per hour
- Three-phase signal - 1550 critical movements per hour
- Four or more phase signal - 1500 critical movements per hour

The characteristics of traffic operations for each LOS for signalized intersections are shown in Table 1. Corresponding to each LOS is a volume-to-capacity (V/C) ratio. This is the ratio of the existing or projected volume to the theoretical capacity of the intersection. An intersection is defined to be "at capacity" when the V/C ratio is 1.00.

#### Unsignalized Intersections

Intersections controlled by stop signs on the minor street approaches (two-way stop control) and on all four approaches (all-way stop control) were analyzed using the methods described in the *Highway Capacity Manual* (Transportation Research Board, 2000). This methodology computes the intersection LOS based on the control delay for each minor movement for minor-street stop controlled intersections and weighted average of control delay for all approaches for all-way stop controlled intersections. The LOS criteria at stop sign-controlled intersections are shown in Table 2.

In addition to the LOS analysis, estimated peak hour traffic volumes at unsignalized intersections were reviewed to determine if they satisfy peak hour volume warrants for traffic signal installation. The peak hour warrant analysis is intended to examine the general correlation between the planned level of future development and the need to install new traffic signals. The warrant analysis estimates

future development-generated traffic compared against a sub-set of the standard traffic signal warrants recommended in the Federal Highway Administration Manual on Uniform Traffic Control Devices and associated Caltrans guidelines. The warrant analysis results presented in this study should not serve as the only basis for deciding whether and when to install a signal. To reach such a decision, the full set of warrants should be investigated based on field-measured, rather than forecast, traffic data and a thorough study of traffic and roadway conditions by an experienced engineer. Furthermore, the decision to install a signal should not be based solely upon the warrants, since the installation of signals can lead to certain types of collisions. The responsible local agency should undertake regular monitoring of actual traffic conditions and accident data, and timely re-evaluation of the full set of warrants in order to prioritize and program intersections for signalization.

| TABLE 1<br>LEVEL OF SERVICE CRITERIA – SIGNALIZED INTERSECTIONS |  |                          |
|---|--|--------------------------|
| LOS   | Description  | Volume-to-Capacity Ratio |
| A   | Represents free flow. Individual users are virtually unaffected by others in the traffic stream.   | ≤ 0.60                   |
| B   | Stable flow, but the presence of other users in the traffic stream begins to be noticeable.  | 0.61 - 0.70              |
| C   | Stable flow, but the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream. | 0.71 - 0.80              |
| D   | Represents high-density, but stable flow.  | 0.81 - 0.90              |
| E   | Represents operating conditions at or near the capacity level.   | 0.91 - 1.00              |
| F   | Represents forced or breakdown flow.   | > 1.00                   |

Source: *Interim Materials on Highway Capacity* (Circular 212, Transportation Research Board, 1980).

| TABLE 2<br>LEVEL OF SERVICE CRITERIA - UNSIGNALIZED INTERSECTIONS |  |
|---|--|
| LOS   | Average Control Delay<br>[seconds/vehicle] |
| A   | ≤ 10                                       |
| B   | > 10 and ≤ 15                              |
| C   | > 15 and ≤ 25                              |
| D   | > 25 and ≤ 35                              |
| E   | > 35 and ≤ 50                              |
| F   | > 50                                       |

Source: *Highway Capacity Manual* (Transportation Research Board, 2000).

Traffic Volumes

Peak Hour traffic turning movement volumes at the study intersections were developed using the travel demand forecasting model developed for use in the North Vineyard Station Specific Plan Environmental Impact Report. The traffic on the collector street approaches was estimated using the number of dwelling units served by the collector roads. The number of dwelling units was acquired

from the Vineyard Creek subdivision map, North Vineyard Creek subdivision map, and the acreage of the multi-family site. Background traffic volumes on Waterman Road is for build-out of the North Vineyard Station Specific Plan. Figure 3 presents the weekday AM and PM peak hour traffic volumes at the study intersection.

### **Significance Criteria**

Consistent with the County's *Traffic Impact Guidelines*, the following thresholds of significance were used to determine if an impact was significant and required mitigation:

Roadways/Signalized Intersections: A project is considered to have a significant effect if it would:

- 1) Result in a roadway or signalized intersection operating at an acceptable LOS (LOS E or better) to deteriorate to LOS F
- 2) Increase the volume-to-capacity (V/C) ratio by more than 0.05 at a roadway or at a signalized intersection that is operating at LOS F without the project.

Unsignalized Intersections:

A project is considered to have a significant effect if it would:

- 1) Result in an unsignalized intersection movement/approach operating at an acceptable LOS (LOS E or better) to deteriorate to LOS F and also cause the intersection to meet a traffic signal warrant.
- 2) Increase the delay by more than 5 seconds at a movement/approach that is operating at LOS F without the project for an unsignalized intersection that meets a signal warrant.

Bicycle and Pedestrian Facilities:

A project is considered to have a significant effect if it would:

- 1) Eliminate or adversely affect an existing bikeway or pedestrian facility in a way that would discourage its use.
- 2) Interfere with the implementation of a planned bikeway as shown in the Bicycle Master Plan, or be in conflict with the Pedestrian Master Plan.

- 3) Result in unsafe conditions for bicyclists or pedestrians, including unsafe bicycle/pedestrian, bicycle/motor vehicle, or pedestrian/motor vehicle conflict.

**Safety:**

A project is considered to have a significant effect if it would:

- 1) Substantially increase hazards due to a design feature (e.g. sharp curves or non-standard intersections) or incompatible uses (e.g., farm equipment).

**Traffic Conditions**

Table 3 presents the results of the intersection LOS analysis. The study intersection would operate acceptably (LOS A) under cumulative conditions with the existing North Vineyard Station Specific Plan Roadway Network. The intersection would meet the peak hour warrant for the installation of a traffic signal.

| Table 3<br>Cumulative Condition - Existing North Vineyard Station Specific Plan Roadway Network |         |              |     |              |     |
|---|---------|--------------|-----|--------------|-----|
| Intersection  | Control | AM Peak      |     | PM Peak      |     |
|   |         | Delay or V/C | LOS | Delay or V/C | LOS |
| Waterman Rd/2 Street  | Signal  | 0.55         | A   | 0.54         | A   |
| Source: Fehr & Peers, 2005  |         |              |     |              |     |

**PROPOSED PROJECT CONDITIONS**

Figure 2 presents the proposed realignment of 2 Street. The existing alignment bisects the multi-family site. For the existing 2 Street alignment it was assumed that main access to the multi-family was off 2 Street and Waterman Road.

The proposed project would realign 2 Street to the north to create two unsignalized tee intersections. The traffic movements on Waterman Road at the intersections would be uncontrolled. The two intersections would be Waterman Road/Vineyard Creek North Access and Waterman Road/2 Street.

With the proposed realignment of 2 Street access to the multi-family site would need to be modified. This study evaluated the following three multi-family site access alternatives:

- Alternative 1: Access off Waterman Road only
- Alternative 2: Access off 2 Street and Waterman Road
- Alternative 3: Access off Waterman Road at the Vineyard Creek North Access/Waterman Road intersection



Figures 4, 5, and 6 present the AM and PM peak hour traffic volumes and the assumed intersection lane configurations and traffic control at each of the study intersections.

**Traffic Conditions**

Table 4 presents the results of the intersection level of service analysis. For each of the alternatives the Waterman Road/Vineyard Creek North Access would operate unacceptably (LOS F) during the PM peak hour. The intersection would also operate unacceptably (LOS F) during the AM peak hour with Alternative 3.

The intersection of Waterman Road/Vineyard Creek Access meets peak hour warrant for the installation of a traffic signal for all alternatives.

| Alternative | Intersection                      | Control           | AM Peak      |          | PM Peak      |          |
|-------------|-----------------------------------|-------------------|--------------|----------|--------------|----------|
|             |                                   |                   | Delay or V/C | LOS      | Delay or V/C | LOS      |
| 1           | Waterman Rd/2 Street              | TWSC <sup>1</sup> | 28.0         | D        | 31.6         | D        |
|             | Waterman Rd/Vineyard Creek Access | TWSC              | 42.4         | E        | 251.9        | <b>F</b> |
| 2           | Waterman Rd/2 Street              | TWSC              | 43.2         | E        | 45.2         | E        |
|             | Waterman Rd/Vineyard Creek Access | TWSC              | 40.4         | E        | 207.8        | <b>F</b> |
| 3           | Waterman Rd/2 Street              | TWSC              | 28.0         | D        | 31.6         | D        |
|             | Waterman Rd/Vineyard Creek Access | TWSC              | 90.6         | <b>F</b> | 651.0        | <b>F</b> |

Notes: <sup>1</sup> TWSC = Side street controlled by stops signs.  
 Bold and shaded = unacceptable LOS  
 Source: Fehr & Peers, 2005

**RECOMMENDATIONS**

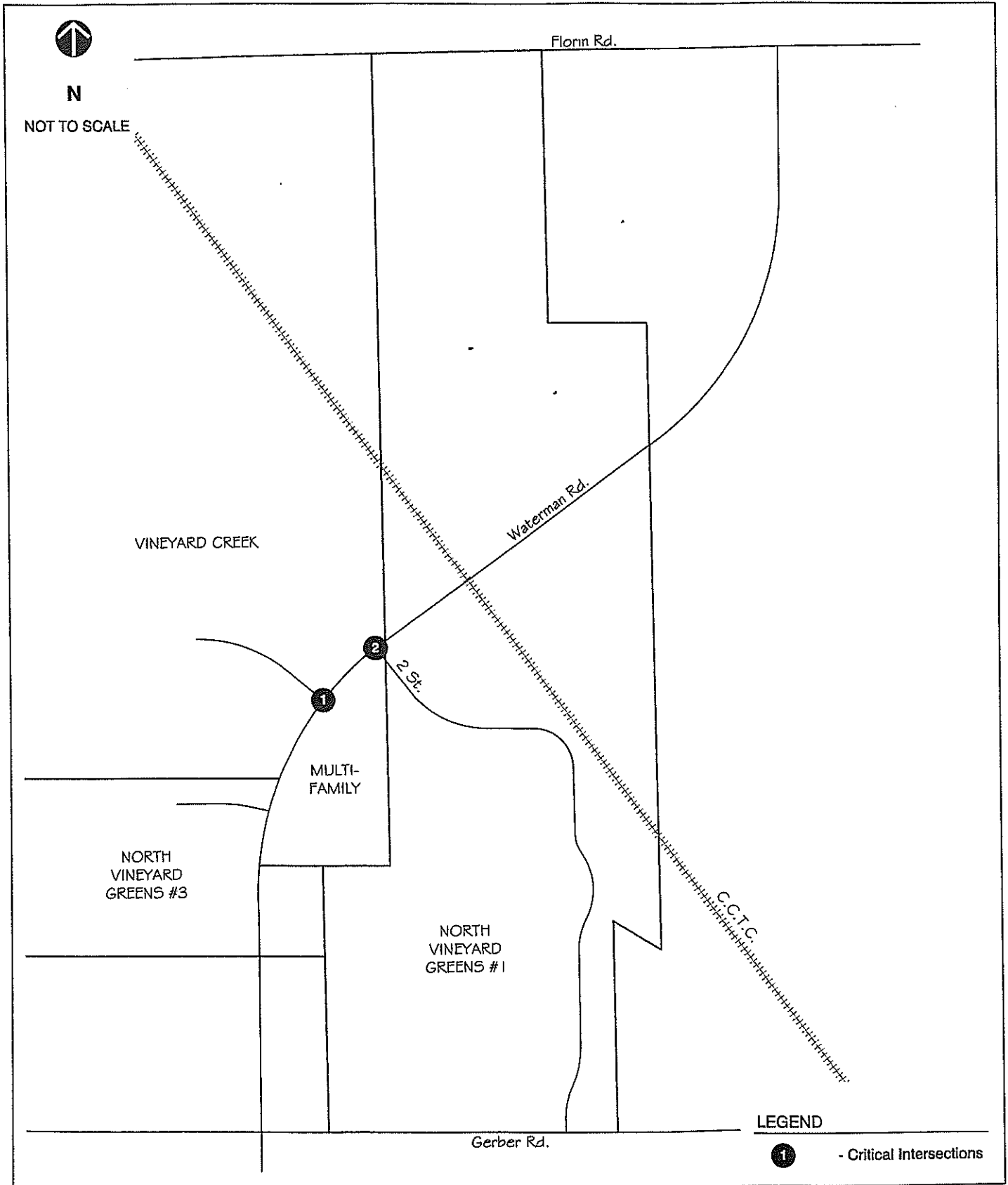
Traffic signal control is recommended to mitigate the unacceptable LOS at the Waterman Road/Vineyard Creek North Access intersection. Table 5 presents the results of the intersection LOS analysis with a traffic signal at the Waterman Road/Vineyard Creek North Access intersection. The main access to the multi-family site should be located across from the Vineyard Creek North Access, to create the fourth leg to the intersection.

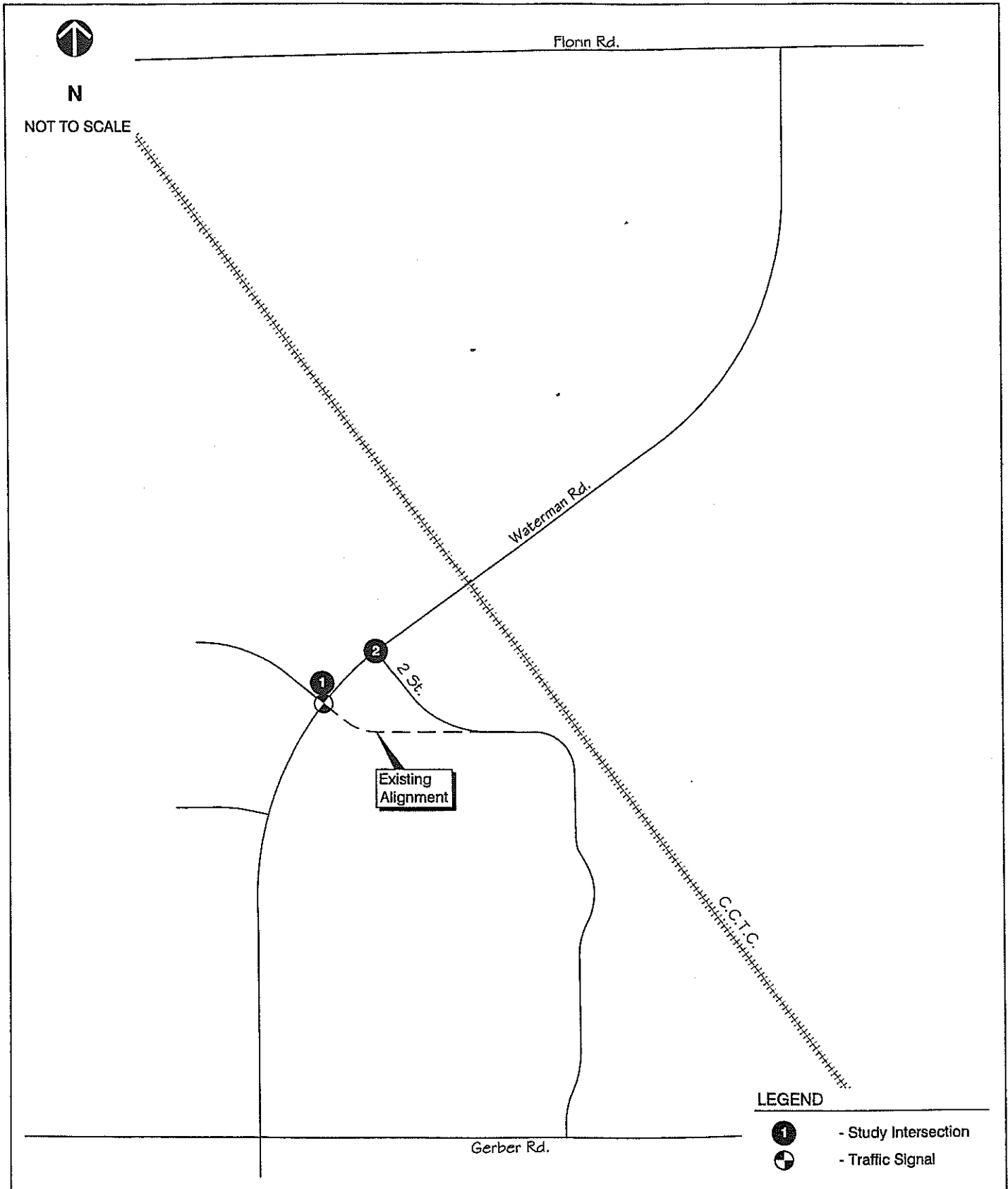
As proposed, the spacing between 2 Street and Vineyard Creek North Access is 375 feet, which meets County standards (*Improvement Standards*, June 1, 1999, County of Sacramento Public Works Agency) between offset intersections on an 84-foot street.

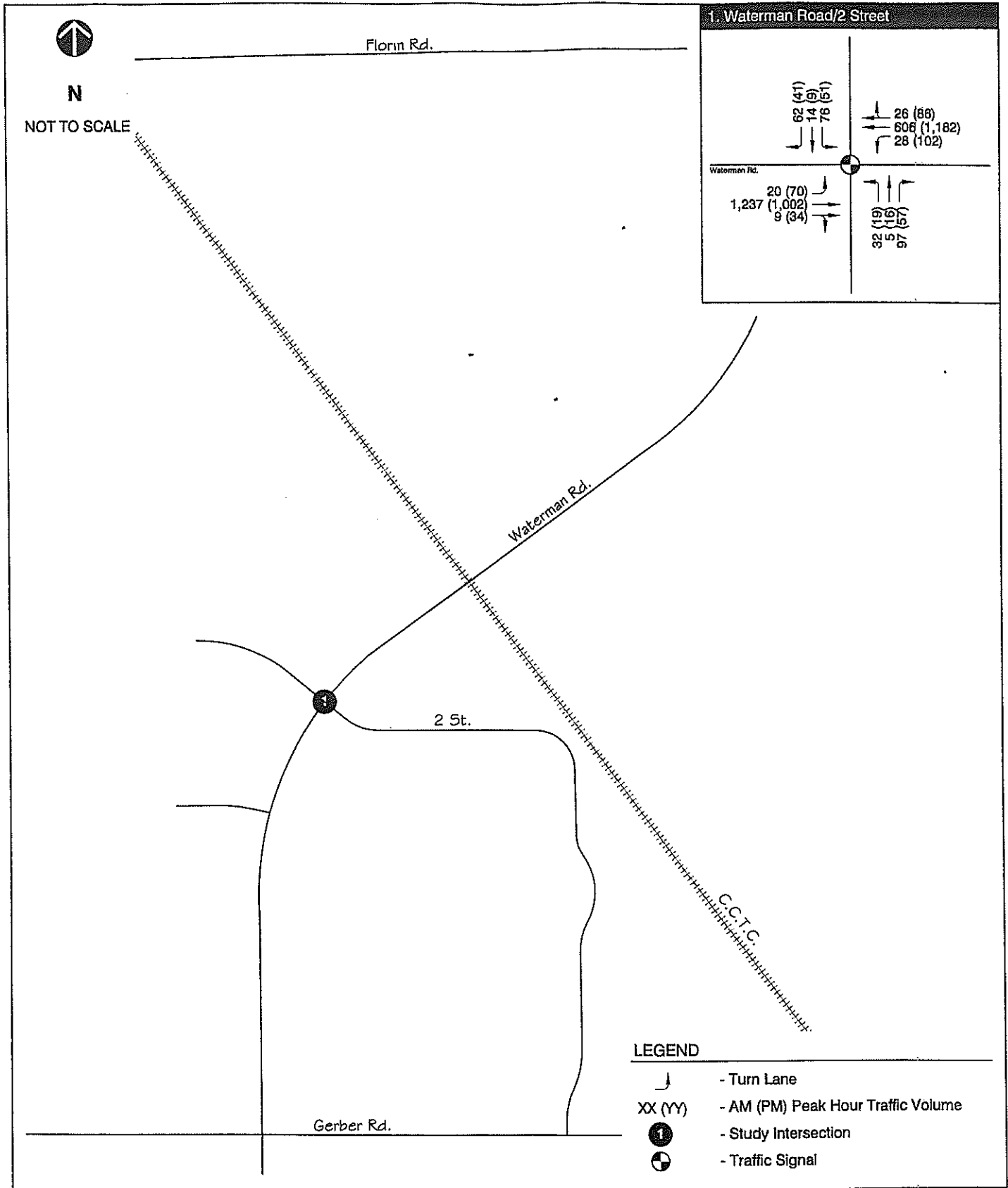
The intersection of 2 Street/Waterman Road should be designed to meet County 500-foot standard for intersection sight distance. The design should include all necessary visibility easements.

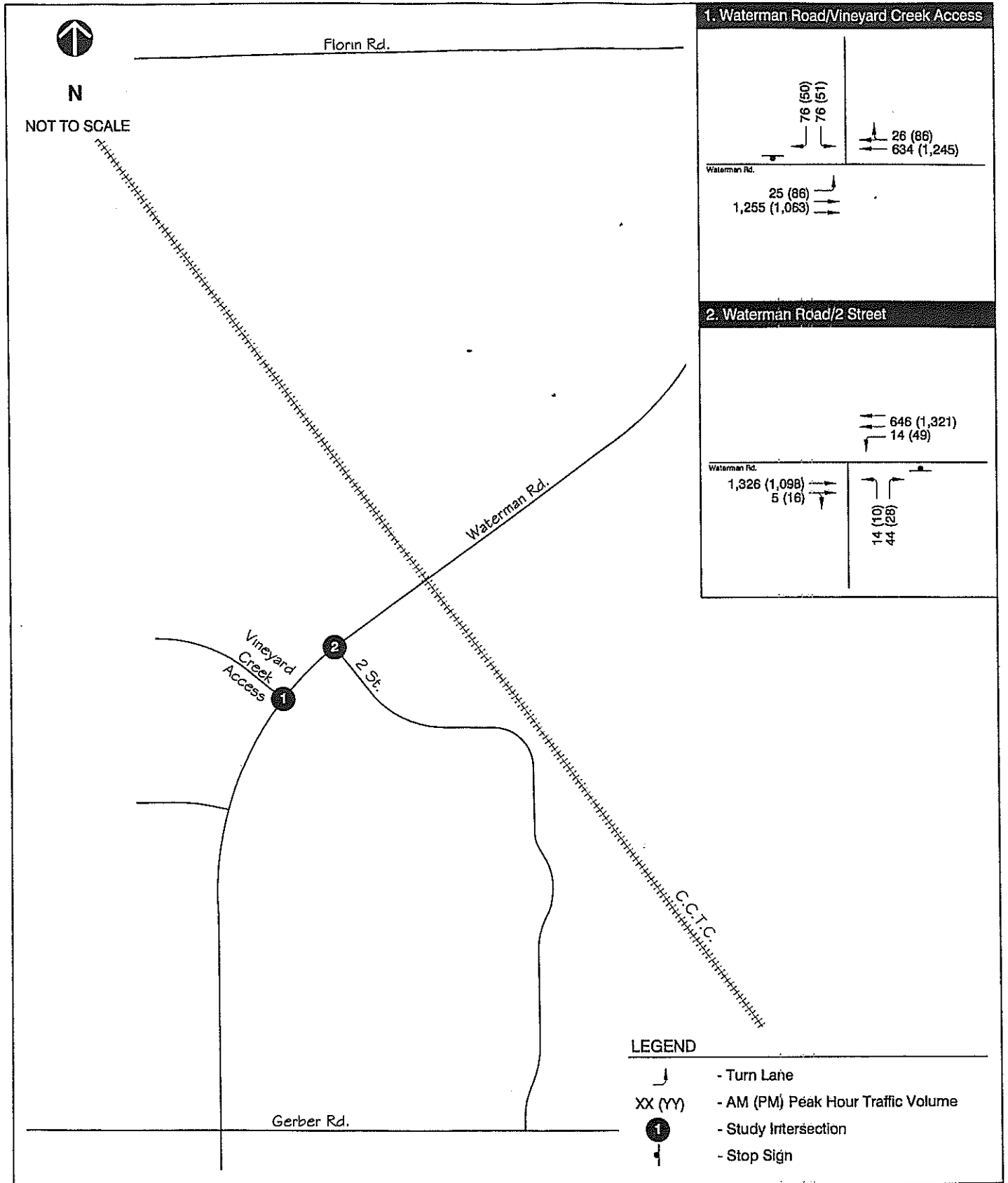
| Alternative | Intersection                      | Control           | AM Peak      |     | PM Peak      |     |
|-------------|-----------------------------------|-------------------|--------------|-----|--------------|-----|
|             |                                   |                   | Delay or V/C | LOS | Delay or V/C | LOS |
| 1           | Waterman Rd/2 Street              | TWSC <sup>1</sup> | 28.0         | D   | 31.6         | D   |
|             | Waterman Rd/Vineyard Creek Access | Signal            | 0.45         | A   | 0.52         | A   |
| 2           | Waterman Rd/2 Street              | TWSC              | 43.2         | E   | 45.2         | E   |
|             | Waterman Rd/Vineyard Creek Access | Signal            | 0.44         | A   | 0.50         | A   |
| 3           | Waterman Rd/2 Street              | TWSC              | 28.0         | D   | 31.6         | D   |
|             | Waterman Rd/Vineyard Creek Access | Signal            | 0.48         | A   | 0.52         | A   |

Notes: <sup>1</sup> TWSC = Side street controlled by stops signs.  
 Source: Fehr & Peers, 2005

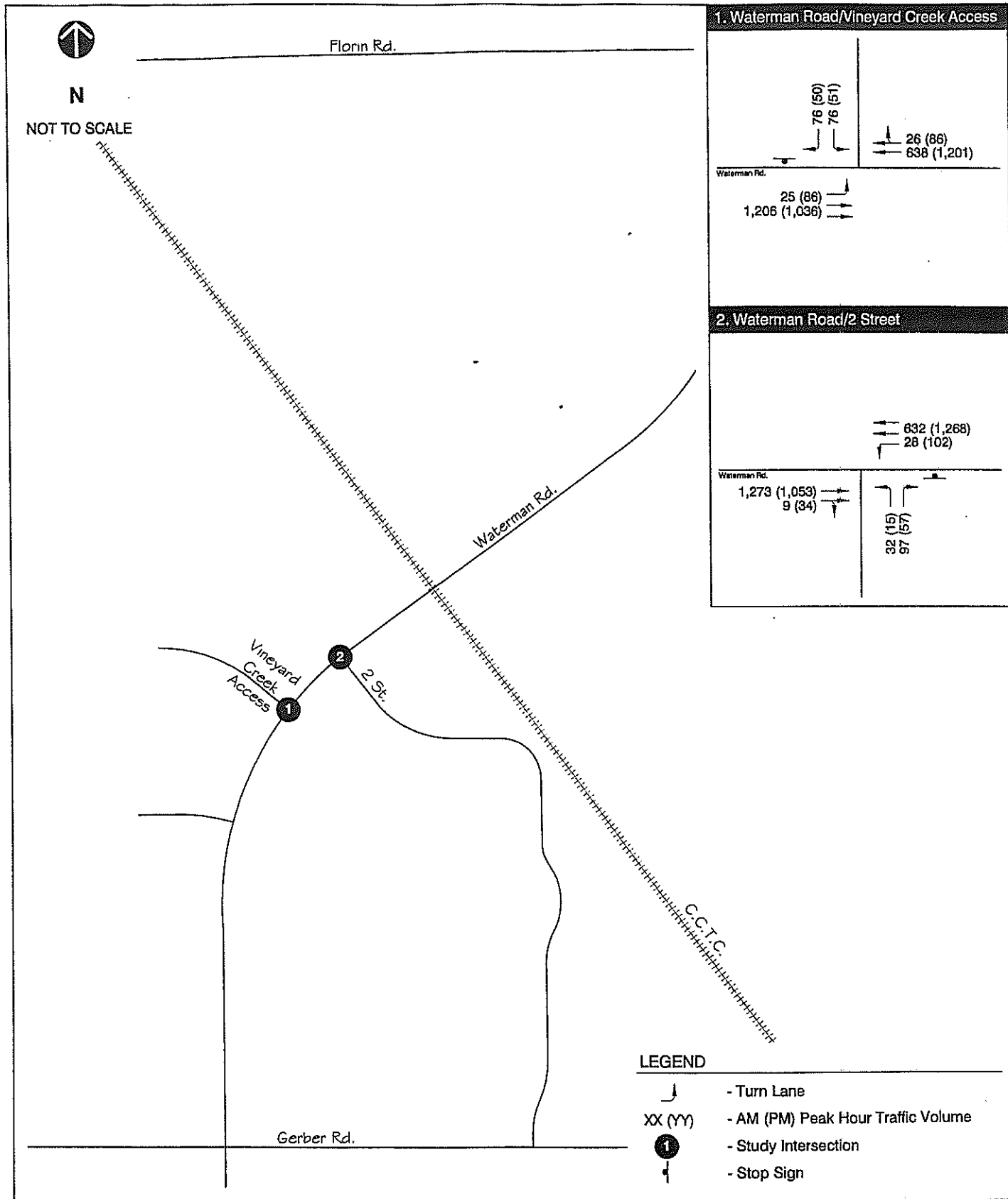




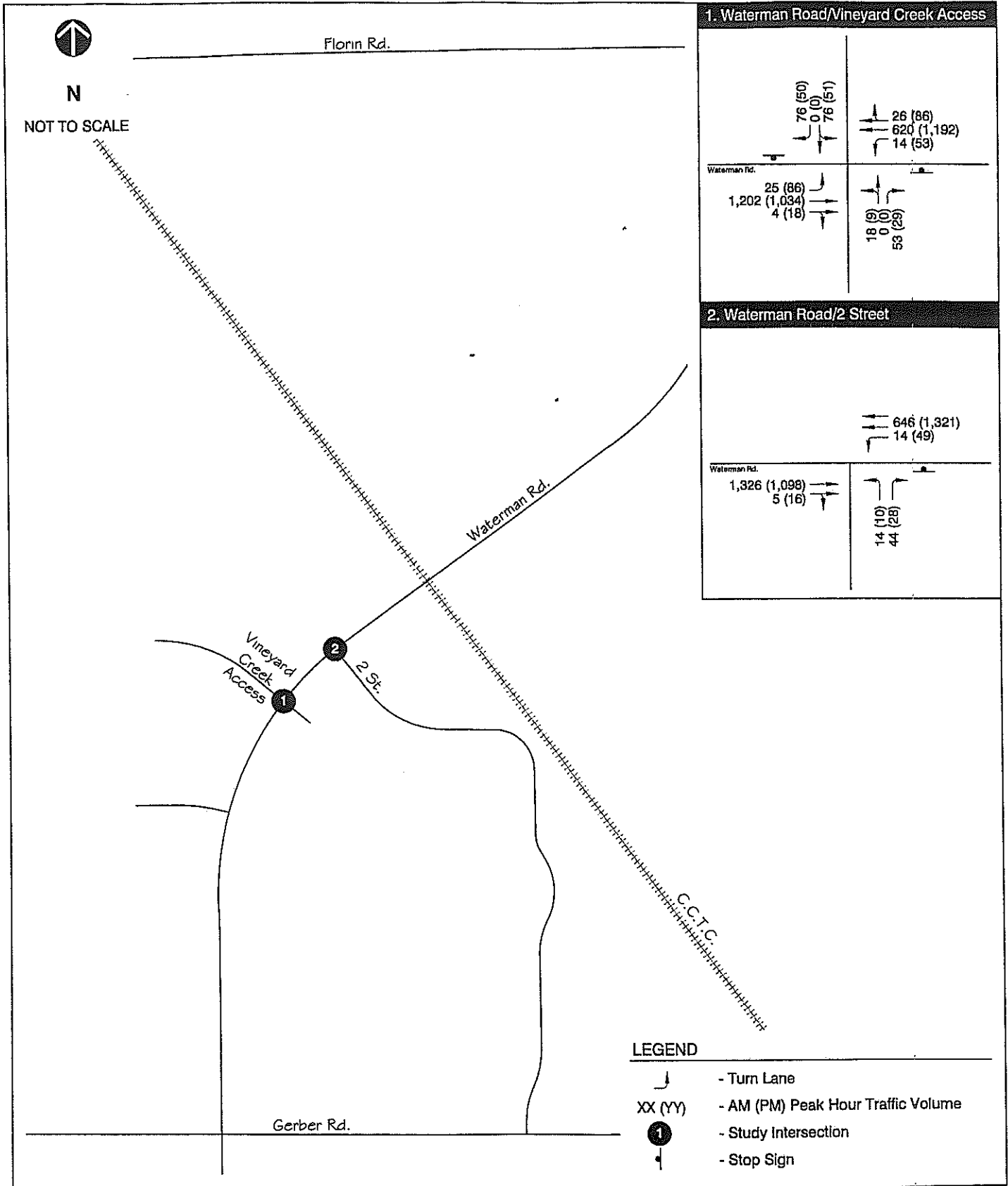




**PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE WITH PROJECT ALTERNATIVE 1 CONDITIONS**



**PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE WITH PROJECT ALTERNATIVE 2 CONDITIONS**



**PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE WITH PROJECT ALTERNATIVE 3 CONDITIONS**

**FIGURE 6**



# **Appendix H**

## **SMAQMD Comment Letter and District Rule 403**

April 21, 2003

RECEIVED

APR 23 2003

Mr. Nick Pascoe, Associate Planner  
South Area Team  
County of Sacramento  
Planning and Community Development Dept.  
827 Seventh Street, Room 230  
Sacramento, CA 95814

 PLANNING DEPT.  
County of Sacramento

RE: NORTH VINEYARD GREENS – UNITS 1 AND 3 (03-CZB-SVB-0099 and 03-RZB-SVB-0141)

Dear Mr. Pascoe:

Thank you for the opportunity to review and comment on these projects. Staff of the Sacramento Metropolitan Air Quality Management District (District) has the following comments for your consideration:

1. We recommend that all required street trees be a minimum 24-inch box size. Larger trees provide shade that not only reduce heat, but also are more attractive to pedestrians for short trips to parks and neighborhood facilities.
2. If gas appliances are to be installed in the residential units, District staff recommends the use of low NOx (Nitrogen Oxides) furnaces, water heaters, and cooking facilities.
3. We recommend that the developer install “Energy-Star” labeled roofing materials.
4. We recommend that the project comply with SMUD Advantage (Tier II or III) energy standards.
5. The requirements of District Rule 403 - FUGITIVE DUST will apply to any grading/clearing operations for these developments. This Rule is available at the District web site at [www.airquality.org](http://www.airquality.org).
6. Any architectural coatings used must comply with District Rule 442 – Architectural Coatings. The developer/contractor is required to use coatings that comply with the volatile organic compound content limits specified in Rule 442. Questions regarding Rule 442 should be directed to the District’s Compliance Assistance Hotline at (916) 874-4884. Rule 442 is also available at the District web site referred to above.
7. In order to reduce emissions from construction equipment, the District staff is recommending the following measures:

*Category 1: Reducing NOx emissions from off-road diesel powered equipment*

The project shall provide a plan for approval by the County of Sacramento and SMAQMD demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the

construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate reduction<sup>1</sup> compared to the most recent CARB fleet average; and

The project representative shall submit to the County of Sacramento and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine production year, and hours of use or fuel throughput for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. 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, and name and phone number of the project manager and on-site foreman.

*and:*

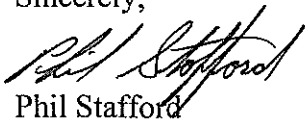
*Category 2: Controlling visible emissions from off-road diesel powered equipment*

The project shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity shall be repaired immediately, and the County of Sacramento and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this section shall supercede other SMAQMD or state rules or regulations.

<sup>1</sup> Acceptable options for reducing emissions may include use of late model vehicles, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.

Should you have any questions regarding these comments, please feel free to contact me at (916) 874-4885 or [pstafford@airquality.org](mailto:pstafford@airquality.org).

Sincerely,



Phil Stafford  
Associate Air Quality Planner

cc: Mr. Ron Maertz, SMAQMD  
Mr. Peter Daru, North Vineyard Greens, GP

NVSSP Supplemental EIR (control number 03-0082, 02-0532, 04-0144, 02-0293, 03-0385)  
Mitigation Measures AQ-1 through AQ-6

- AQ-1. The project shall provide a plan for approval by the County of Sacramento and SMAQMD demonstrating that the heavy-duty (>50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average; and
- AQ-2. The project representative shall submit to the County of Sacramento and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine production year, and hours of use or fuel throughput for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. 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, and name and phone number of the project manager and on-site foreman.
- AQ-3. The project shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity shall be repaired immediately, and the County of Sacramento and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this section shall supercede other SMAQMD or state rules or regulations.
- AQ-4. The following construction-related measures apply to construction activities within the Specific Plan area:
- a. Water exposed, graded surfaces at least two times per day and if possible, keep soil moist at all times.
  - b. Properly maintain diesel and/or gas fueled construction equipment.
  - c. Water haul roads at least two times per day
  - d. Use low VOC architectural coatings
- AQ-5. Comply with the adopted AQ-15 Plan.
- AQ-6. Individual development projects within the Specific Plan Area shall achieve an additional 2 percent reduction in combined operational and area source air quality emissions to ensure overall AQ-15 compliance.

**RULE 403 FUGITIVE DUST**  
**Adopted 8-3-77**

**INDEX**

|            |   |
|------------|---|
| <b>100</b> | <b>GENERAL</b>                                    |
|            | 101 PURPOSE                                       |
|            | 102 EXEMPTIONS                                    |
| <b>200</b> | <b>DEFINITIONS</b>                                |
|            | 201 FUGITIVE DUST                                 |
| <b>300</b> | <b>STANDARD</b>                                   |
|            | 301 LIMITATIONS                                   |
| <b>400</b> | <b>ADMINISTRATIVE REQUIREMENTS (NOT INCLUDED)</b> |
| <b>500</b> | <b>MONITORING AND RECORDS (NOT INCLUDED)</b>      |

**100 GENERAL**

- 101 **PURPOSE:** To reasonably regulate operations which periodically may cause fugitive dust emissions into the atmosphere.
- 102 **EXEMPTIONS:** The provisions of this rule shall not apply to emissions emanating from agricultural operations, currently unworked land designated as reclaimed for agriculture, or unpaved roads open to public travel (this exclusion shall not apply to industrial or commercial facilities).

**200 DEFINITIONS**

- 201 **FUGITIVE DUST:** Solid airborne matter emitted from any non-combustion sources.

**300 STANDARDS**

- 301 **LIMITATIONS:** A person shall take every reasonable precaution not to cause or allow the emissions of fugitive dust from being airborne beyond the property line from which the emission originates, from any construction, handling or storage activity, or any wrecking, excavation, grading, clearing of land or solid waste disposal operation. Reasonable precautions shall include, but are not limited to:
- 301.1 Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the construction of roadways or the clearing of land.
- 301.2 Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts;
- 301.3 Other means approved by the Air Pollution Control Officer.

# **Appendix I**

## **Air Quality Model**

URBEMIS 2002 For Windows 7.5.0

File Name: P:\2003\03-0099 N. Vineyard Greens Unit1\Env Docs\Doc\DEIR\Air Quality model\NVG SEIR AQ  
 Project Name: North Vineyard Greens SEIR  
 Project Location: Lower Sacramento Valley Air Basin  
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT  
 (Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

|                               | ROG   | NOx    | CO     | SO2  | PM10<br>TOTAL | PM10<br>EXHAUST | PM10<br>DUST |
|-------------------------------|-------|--------|--------|------|---------------|-----------------|--------------|
| *** 2006 ***                  |       |        |        |      |               |                 |              |
| TOTALS (lbs/day, unmitigated) | 30.30 | 189.86 | 243.79 | 0.05 | 338.27        | 8.26            | 330.01       |

|                               | ROG   | NOx    | CO     | SO2  | PM10<br>TOTAL | PM10<br>EXHAUST | PM10<br>DUST |
|-------------------------------|-------|--------|--------|------|---------------|-----------------|--------------|
| *** 2007 ***                  |       |        |        |      |               |                 |              |
| TOTALS (lbs/day, unmitigated) | 26.01 | 162.92 | 219.43 | 0.00 | 7.16          | 6.75            | 0.41         |

|                               | ROG   | NOx    | CO     | SO2  | PM10<br>TOTAL | PM10<br>EXHAUST | PM10<br>DUST |
|-------------------------------|-------|--------|--------|------|---------------|-----------------|--------------|
| *** 2008 ***                  |       |        |        |      |               |                 |              |
| TOTALS (lbs/day, unmitigated) | 25.79 | 157.01 | 220.38 | 0.00 | 6.57          | 6.16            | 0.41         |

|                               | ROG   | NOx    | CO     | SO2  | PM10<br>TOTAL | PM10<br>EXHAUST | PM10<br>DUST |
|-------------------------------|-------|--------|--------|------|---------------|-----------------|--------------|
| *** 2009 ***                  |       |        |        |      |               |                 |              |
| TOTALS (lbs/day, unmitigated) | 25.56 | 150.96 | 221.30 | 0.00 | 6.00          | 5.59            | 0.41         |

AREA SOURCE EMISSION ESTIMATES

|                               | ROG   | NOx   | CO    | SO2  | PM10 |
|-------------------------------|-------|-------|-------|------|------|
| TOTALS (lbs/day, unmitigated) | 37.49 | 13.69 | 10.70 | 0.14 | 0.03 |

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

|                               | ROG   | NOx   | CO     | SO2  | PM10  |
|-------------------------------|-------|-------|--------|------|-------|
| TOTALS (lbs/day, unmitigated) | 48.87 | 50.40 | 516.78 | 0.29 | 49.41 |

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

|                               | ROG   | NOx   | CO     | SO2  | PM10  |
|-------------------------------|-------|-------|--------|------|-------|
| TOTALS (lbs/day, unmitigated) | 86.37 | 64.09 | 527.48 | 0.43 | 49.44 |



## URBEMIS 2002 For Windows 7.5.0

File Name: P:\2003\03-0099 N. Vineyard Greens Unit1\Env Docs\Doc\DEIR\Air Quality model\NVG SEIR AQ  
 Project Name: North Vineyard Greens SEIR  
 Project Location: Lower Sacramento Valley Air Basin  
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT  
 (Pounds/Day - Summer)

Construction Start Month and Year: June, 2006  
 Construction Duration: 36  
 Total Land Use Area to be Developed: 132.2 acres  
 Maximum Acreage Disturbed Per Day: 33 acres  
 Single Family Units: 526 Multi-Family Units: 208  
 Retail/Office/Institutional/Industrial Square Footage: 0

## CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

| Source                           | ROG   | NOx    | CO     | SO2  | PM10<br>TOTAL | PM10<br>EXHAUST | PM10<br>DUST |
|----------------------------------|-------|--------|--------|------|---------------|-----------------|--------------|
| *** 2006***                      |       |        |        |      |               |                 |              |
| Phase 1 - Demolition Emissions   |       |        |        |      |               |                 |              |
| Fugitive Dust                    | -     | -      | -      | -    | 0.00          | -               | 0.00         |
| Off-Road Diesel                  | 0.00  | 0.00   | 0.00   | -    | 0.00          | 0.00            | 0.00         |
| On-Road Diesel                   | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Worker Trips                     | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Phase 2 - Site Grading Emissions |       |        |        |      |               |                 |              |
| Fugitive Dust                    | -     | -      | -      | -    | 330.00        | -               | 330.00       |
| Off-Road Diesel                  | 27.07 | 188.23 | 214.94 | -    | 8.25          | 8.25            | 0.00         |
| On-Road Diesel                   | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Worker Trips                     | 0.19  | 0.22   | 4.03   | 0.00 | 0.02          | 0.01            | 0.01         |
| Maximum lbs/day                  | 27.26 | 188.45 | 218.97 | 0.00 | 338.27        | 8.26            | 330.01       |
| Phase 3 - Building Construction  |       |        |        |      |               |                 |              |
| Bldg Const Off-Road Diesel       | 23.26 | 167.04 | 180.49 | -    | 7.42          | 7.42            | 0.00         |
| Bldg Const Worker Trips          | 2.97  | 1.78   | 37.72  | 0.00 | 0.44          | 0.03            | 0.41         |
| Arch Coatings Off-Gas            | 0.00  | -      | -      | -    | -             | -               | -            |
| Arch Coatings Worker Trips       | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Asphalt Off-Gas                  | 0.98  | -      | -      | -    | -             | -               | -            |
| Asphalt Off-Road Diesel          | 2.91  | 17.67  | 24.71  | -    | 0.64          | 0.64            | 0.00         |
| Asphalt On-Road Diesel           | 0.17  | 3.35   | 0.62   | 0.05 | 0.07          | 0.07            | 0.00         |
| Asphalt Worker Trips             | 0.02  | 0.01   | 0.25   | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 30.30 | 189.86 | 243.79 | 0.05 | 8.58          | 8.16            | 0.42         |
| Max lbs/day all phases           | 30.30 | 189.86 | 243.79 | 0.05 | 338.27        | 8.26            | 330.01       |
| *** 2007***                      |       |        |        |      |               |                 |              |
| Phase 1 - Demolition Emissions   |       |        |        |      |               |                 |              |
| Fugitive Dust                    | -     | -      | -      | -    | 0.00          | -               | 0.00         |
| Off-Road Diesel                  | 0.00  | 0.00   | 0.00   | -    | 0.00          | 0.00            | 0.00         |
| On-Road Diesel                   | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Worker Trips                     | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Phase 2 - Site Grading Emissions |       |        |        |      |               |                 |              |
| Fugitive Dust                    | -     | -      | -      | -    | 0.00          | -               | 0.00         |
| Off-Road Diesel                  | 0.00  | 0.00   | 0.00   | -    | 0.00          | 0.00            | 0.00         |
| On-Road Diesel                   | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Worker Trips                     | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Phase 3 - Building Construction  |       |        |        |      |               |                 |              |
| Bldg Const Off-Road Diesel       | 23.26 | 161.24 | 183.98 | -    | 6.72          | 6.72            | 0.00         |
| Bldg Const Worker Trips          | 2.76  | 1.68   | 35.45  | 0.00 | 0.44          | 0.03            | 0.41         |
| Arch Coatings Off-Gas            | 0.00  | -      | -      | -    | -             | -               | -            |
| Arch Coatings Worker Trips       | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Asphalt Off-Gas                  | 0.00  | -      | -      | -    | -             | -               | -            |
| Asphalt Off-Road Diesel          | 0.00  | 0.00   | 0.00   | -    | 0.00          | 0.00            | 0.00         |
| Asphalt On-Road Diesel           | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Asphalt Worker Trips             | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 26.01 | 162.92 | 219.43 | 0.00 | 7.16          | 6.75            | 0.41         |
| Max lbs/day all phases           | 26.01 | 162.92 | 219.43 | 0.00 | 7.16          | 6.75            | 0.41         |
| *** 2008***                      |       |        |        |      |               |                 |              |

Phase 1 - Demolition Emissions

|                 |      |      |      |      |      |      |      |
|-----------------|------|------|------|------|------|------|------|
| Fugitive Dust   | -    | -    | -    | -    | 0.00 | -    | 0.00 |
| Off-Road Diesel | 0.00 | 0.00 | 0.00 | -    | 0.00 | 0.00 | 0.00 |
| On-Road Diesel  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Worker Trips    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum lbs/day | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Phase 2 - Site Grading Emissions

|                 |      |      |      |      |      |      |      |
|-----------------|------|------|------|------|------|------|------|
| Fugitive Dust   | -    | -    | -    | -    | 0.00 | -    | 0.00 |
| Off-Road Diesel | 0.00 | 0.00 | 0.00 | -    | 0.00 | 0.00 | 0.00 |
| On-Road Diesel  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Worker Trips    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum lbs/day | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Phase 3 - Building Construction

|                            |       |        |        |      |      |      |      |
|----------------------------|-------|--------|--------|------|------|------|------|
| Bldg Const Off-Road Diesel | 23.26 | 155.45 | 187.34 | -    | 6.13 | 6.13 | 0.00 |
| Bldg Const Worker Trips    | 2.54  | 1.56   | 33.04  | 0.00 | 0.44 | 0.03 | 0.41 |
| Arch Coatings Off-Gas      | 0.00  | -      | -      | -    | -    | -    | -    |
| Arch Coatings Worker Trips | 0.00  | 0.00   | 0.00   | 0.00 | 0.00 | 0.00 | 0.00 |
| Asphalt Off-Gas            | 0.00  | -      | -      | -    | -    | -    | -    |
| Asphalt Off-Road Diesel    | 0.00  | 0.00   | 0.00   | -    | 0.00 | 0.00 | 0.00 |
| Asphalt On-Road Diesel     | 0.00  | 0.00   | 0.00   | 0.00 | 0.00 | 0.00 | 0.00 |
| Asphalt Worker Trips       | 0.00  | 0.00   | 0.00   | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum lbs/day            | 25.79 | 157.01 | 220.38 | 0.00 | 6.57 | 6.16 | 0.41 |

Max lbs/day all phases 25.79 157.01 220.38 0.00 6.57 6.16 0.41

\*\*\* 2009\*\*\*

Phase 1 - Demolition Emissions

|                 |      |      |      |      |      |      |      |
|-----------------|------|------|------|------|------|------|------|
| Fugitive Dust   | -    | -    | -    | -    | 0.00 | -    | 0.00 |
| Off-Road Diesel | 0.00 | 0.00 | 0.00 | -    | 0.00 | 0.00 | 0.00 |
| On-Road Diesel  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Worker Trips    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum lbs/day | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Phase 2 - Site Grading Emissions

|                 |      |      |      |      |      |      |      |
|-----------------|------|------|------|------|------|------|------|
| Fugitive Dust   | -    | -    | -    | -    | 0.00 | -    | 0.00 |
| Off-Road Diesel | 0.00 | 0.00 | 0.00 | -    | 0.00 | 0.00 | 0.00 |
| On-Road Diesel  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Worker Trips    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum lbs/day | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Phase 3 - Building Construction

|                            |       |        |        |      |      |      |      |
|----------------------------|-------|--------|--------|------|------|------|------|
| Bldg Const Off-Road Diesel | 23.26 | 149.53 | 190.83 | -    | 5.56 | 5.56 | 0.00 |
| Bldg Const Worker Trips    | 2.31  | 1.44   | 30.48  | 0.00 | 0.44 | 0.03 | 0.41 |
| Arch Coatings Off-Gas      | 0.00  | -      | -      | -    | -    | -    | -    |
| Arch Coatings Worker Trips | 0.00  | 0.00   | 0.00   | 0.00 | 0.00 | 0.00 | 0.00 |
| Asphalt Off-Gas            | 0.00  | -      | -      | -    | -    | -    | -    |
| Asphalt Off-Road Diesel    | 0.00  | 0.00   | 0.00   | -    | 0.00 | 0.00 | 0.00 |
| Asphalt On-Road Diesel     | 0.00  | 0.00   | 0.00   | 0.00 | 0.00 | 0.00 | 0.00 |
| Asphalt Worker Trips       | 0.00  | 0.00   | 0.00   | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum lbs/day            | 25.56 | 150.96 | 221.30 | 0.00 | 6.00 | 5.59 | 0.41 |

Max lbs/day all phases 25.56 150.96 221.30 0.00 6.00 5.59 0.41

Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions

Start Month/Year for Phase 2: Jun '06

Phase 2 Duration: 3 months

On-Road Truck Travel (VMT): 0

Off-Road Equipment

| No. | Type                | Horsepower | Load Factor | Hours/Day |
|-----|---------------------|------------|-------------|-----------|
| 3   | Graders             | 174        | 0.575       | 8.0       |
| 3   | Off Highway Trucks  | 417        | 0.490       | 8.0       |
| 3   | Rubber Tired Dozers | 352        | 0.590       | 8.0       |

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: Sep '06

Phase 3 Duration: 33 months

Start Month/Year for SubPhase Building: Oct '06

SubPhase Building Duration: 31.4 months

Off-Road Equipment

| No. | Type               | Horsepower | Load Factor | Hours/Day |
|-----|--------------------|------------|-------------|-----------|
| 3   | Off Highway Trucks | 417        | 0.490       | 8.0       |

6 Other Equipment 190 0.620 8.0  
SubPhase Architectural Coatings Turned OFF  
Start Month/Year for SubPhase Asphalt: Sep '06  
SubPhase Asphalt Duration: 1.6 months  
Acres to be Paved: 13.2  
Off-Road Equipment

| No. | Type    | Horsepower | Load Factor | Hours/Day |
|-----|---------|------------|-------------|-----------|
| 1   | Pavers  | 132        | 0.590       | 8.0       |
| 1   | Rollers | 114        | 0.430       | 8.0       |

| AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated) |       |       |       |      |      |
|---|-------|-------|-------|------|------|
| Source  | ROG   | NOx   | CO    | SO2  | PM10 |
| Natural Gas   | 1.05  | 13.60 | 5.79  | -    | 0.03 |
| Wood Stoves - No summer emissions                                   |       |       |       |      |      |
| Fireplaces - No summer emissions                                    |       |       |       |      |      |
| Landscaping   | 0.53  | 0.09  | 4.92  | 0.14 | 0.01 |
| Consumer Prdcts   | 35.91 | -     | -     | -    | -    |
| TOTALS (lbs/day, unmitigated)                                       | 37.49 | 13.69 | 10.70 | 0.14 | 0.03 |

## UNMITIGATED OPERATIONAL EMISSIONS

|                           | ROG   | NOx   | CO     | SO2  | PM10  |
|---------------------------|-------|-------|--------|------|-------|
| Single family housing     | 36.32 | 37.76 | 387.14 | 0.22 | 37.01 |
| Apartments low rise       | 6.15  | 6.47  | 66.32  | 0.04 | 6.34  |
| Condo/townhouse general   | 6.41  | 6.18  | 63.32  | 0.04 | 6.05  |
| TOTAL EMISSIONS (lbs/day) | 48.87 | 50.40 | 516.78 | 0.29 | 49.41 |

Includes correction for passby trips.  
Does not include double counting adjustment for internal trips.

## OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2008 Temperature (F): 85 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

## Summary of Land Uses:

| Unit Type               | Trip Rate                   | Size   | Total Trips |
|-------------------------|-----------------------------|--------|-------------|
| Single family housing   | 9.08 trips / dwelling units | 526.00 | 4,776.08    |
| Apartments low rise     | 9.74 trips / dwelling units | 84.00  | 818.16      |
| Condo/townhouse general | 6.30 trips / dwelling units | 124.00 | 781.20      |

## Vehicle Assumptions:

## Fleet Mix:

| Vehicle Type              | Percent Type | Non-Catalyst | Catalyst | Diesel |
|---------------------------|--------------|--------------|----------|--------|
| Light Auto                | 55.00        | 1.60         | 98.00    | 0.40   |
| Light Truck < 3,750 lbs   | 15.00        | 2.70         | 95.30    | 2.00   |
| Light Truck 3,751- 5,750  | 16.20        | 1.20         | 97.50    | 1.30   |
| Med Truck 5,751- 8,500    | 7.20         | 1.40         | 95.80    | 2.80   |
| Lite-Heavy 8,501-10,000   | 1.10         | 0.00         | 81.80    | 18.20  |
| Lite-Heavy 10,001-14,000  | 0.40         | 0.00         | 50.00    | 50.00  |
| Med-Heavy 14,001-33,000   | 1.00         | 0.00         | 20.00    | 80.00  |
| Heavy-Heavy 33,001-60,000 | 0.90         | 0.00         | 11.10    | 88.90  |
| Line Haul > 60,000 lbs    | 0.00         | 0.00         | 0.00     | 100.00 |
| Urban Bus                 | 0.20         | 0.00         | 50.00    | 50.00  |
| Motorcycle                | 1.70         | 76.50        | 23.50    | 0.00   |
| School Bus                | 0.10         | 0.00         | 0.00     | 100.00 |
| Motor Home                | 1.20         | 8.30         | 83.30    | 8.40   |

## Travel Conditions

|                           | Residential |           |            | Commercial |          |          |
|---------------------------|-------------|-----------|------------|------------|----------|----------|
|                           | Home-Work   | Home-Shop | Home-Other | Commute    | Non-Work | Customer |
| Urban Trip Length (miles) | 9.7         | 3.8       | 4.6        | 7.8        | 4.5      | 4.5      |
| Rural Trip Length (miles) | 16.8        | 7.1       | 7.9        | 14.7       | 6.6      | 6.6      |
| Trip Speeds (mph)         | 35.0        | 35.0      | 35.0       | 35.0       | 35.0     | 35.0     |
| % of Trips - Residential  | 27.3        | 21.2      | 51.5       |            |          |          |

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

Changes made to the default values for Area

The natural gas residential percentage changed from 60 to 100.  
The amount of wood burned per year changed from 1.48 to 0.  
The percentage of wood stoves changed from 35 to 0.  
The fireplace cords of wood burned changed from 1.48 to 0.  
The fireplace percentage of residential units changed from 10 to 0.  
The landscape year changed from 2004 to 2008.

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.  
The operational emission year changed from 2004 to 2008.  
The travel mode environment settings changed from both to: none

# **Appendix J**

## **Air Quality Mitigation Fee Calculation Worksheet**

### Construction Emissions Mitigation Fee Calculation

**PART 1: PROJECT INFORMATION**

|                               |   |  |       |
|-------------------------------|---|--|-------|
| Project Name:                 | North Vineyard Greens Unit 1, Unit 3, and Gosal Estates |  |       |
| Control/Application #:        | 03-0099, 03-0141, 02-0660, 03-0214                      |  |       |
| Single Family Dwelling Units: | 526   | <i>Note: Enter information only in blue bordered cells</i> |       |
| Multi Family Dwelling Units:  | 208   | Total Residential Acreage:                                 | 132.2 |
| Non-residential Square Feet:  |   | Total Non-residential Acreage:                             |       |

**PART 2: EMISSIONS INFORMATION**

|  | Activity Phase | NOx (lbs/day) unmitigated | NOx (lbs/day) mitigated* | NOx over threshold (lbs/day) | duration (days) | Total significant NOx (lbs) |
|--|----------------|---------------------------|--------------------------|------------------------------|-----------------|-----------------------------|
| Year 1   | Construction   | 189.86                    | 151.89                   | 66.89                        | 154             | 10300.75                    |
| Year 2   | Construction   | 169.92                    | 135.94                   | 50.94                        | 264             | 13447.10                    |
| Year 3   | Construction   | 157.01                    | 125.61                   | 40.61                        | 264             | 10720.51                    |
| Year 4   | Construction   | 150.96                    | 120.77                   | 35.77                        | 110             | 3934.48                     |
| <i>Total project Nox over threshold (lbs)</i>  |                |                           | 38402.85                 |                              |                 |                             |
| <i>Total project Nox over threshold (tons)</i> |                |                           | 19.20                    |                              |                 |                             |

**PART 3: MITIGATION FEE RESULTS**

|                                     |                   |  |
|-------------------------------------|-------------------|--|
| Total Mitigation fee (\$13,600/ton) | \$261,139         |  |
|                                     |                   |  |
| <b>Mitigation Fee (\$/acre)</b>     | <b>\$1,975.34</b> |  |
|                                     |                   |  |

\* assumes a construction mitigation plan which achieves a 20% reduction in NOx



# **Appendix K**

## **Traffic Noise Prediction Model – Gerber Road**

## Appendix K

**Appendix C  
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)  
Noise Prediction Worksheet**

**Project Information:**

Job Number: 03-0099  
Project Name: North Vineyard Greens Units 1, 3, and Gosal Estates  
Roadway Name: Gerber Road

**Traffic Data:**

Year: Future  
Average Daily Traffic Volume: 17,100  
Percent Daytime Traffic: 83  
Percent Nighttime Traffic: 17  
Percent Medium Trucks (2 axle): 3.5  
Percent Heavy Trucks (3+ axle): 2  
Assumed Vehicle Speed (mph): 45  
Intervening Ground Type (hard/soft): **Soft**

**Traffic Noise Levels:**

|           |                        |          |             | -----L <sub>dn</sub> , dB----- |               |              |       |
|-----------|------------------------|----------|-------------|--------------------------------|---------------|--------------|-------|
| Location: | Description            | Distance | Offset (dB) | Autos                          | Medium Trucks | Heavy Trucks | Total |
| 1         | Outdoor activity area  | 71       | 0           | 66                             | 60            | 62           | 68    |
| 2         | Building exterior-rear | 81       | 0           | 65                             | 59            | 61           | 68    |
| 3         | Building exterior-side | 66       | 0           | 67                             | 61            | 63           | 69    |

**Traffic Noise Contours (No Calibration Offset):**

| L <sub>dn</sub> Contour, dB | Distance from Centerline, (ft) |
|-----------------------------|--------------------------------|
| 75                          | 26                             |
| 70                          | 56                             |
| 65                          | 120                            |
| 60                          | 258                            |

**Notes:**

Appendix D  
**FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)**  
**Noise Barrier Effectiveness Prediction Worksheet**

**Project Information:** Job Number: 03-0099  
 Project Name: North Vineyard Greens Units 1, 3, and Gosal Estates  
 Roadway Name: Gerber Road  
 Location(s): 1

**Noise Level Data:** Year: Future  
 Auto  $L_{dn}$ , dB: 66  
 Medium Truck  $L_{dn}$ , dB: 60  
 Heavy Truck  $L_{dn}$ , dB: 62

**Site Geometry:** Receiver Description: Outdoor activity area  
 Centerline to Barrier Distance ( $C_1$ ): 61  
 Barrier to Receiver Distance ( $C_2$ ): 10  
 Automobile Elevation: 0  
 Medium Truck Elevation: 2  
 Heavy Truck Elevation: 8  
 Pad/Ground Elevation at Receiver: 0  
 Receiver Elevation<sup>1</sup>: 5  
 Base of Barrier Elevation: 0  
 Starting Barrier Height 6

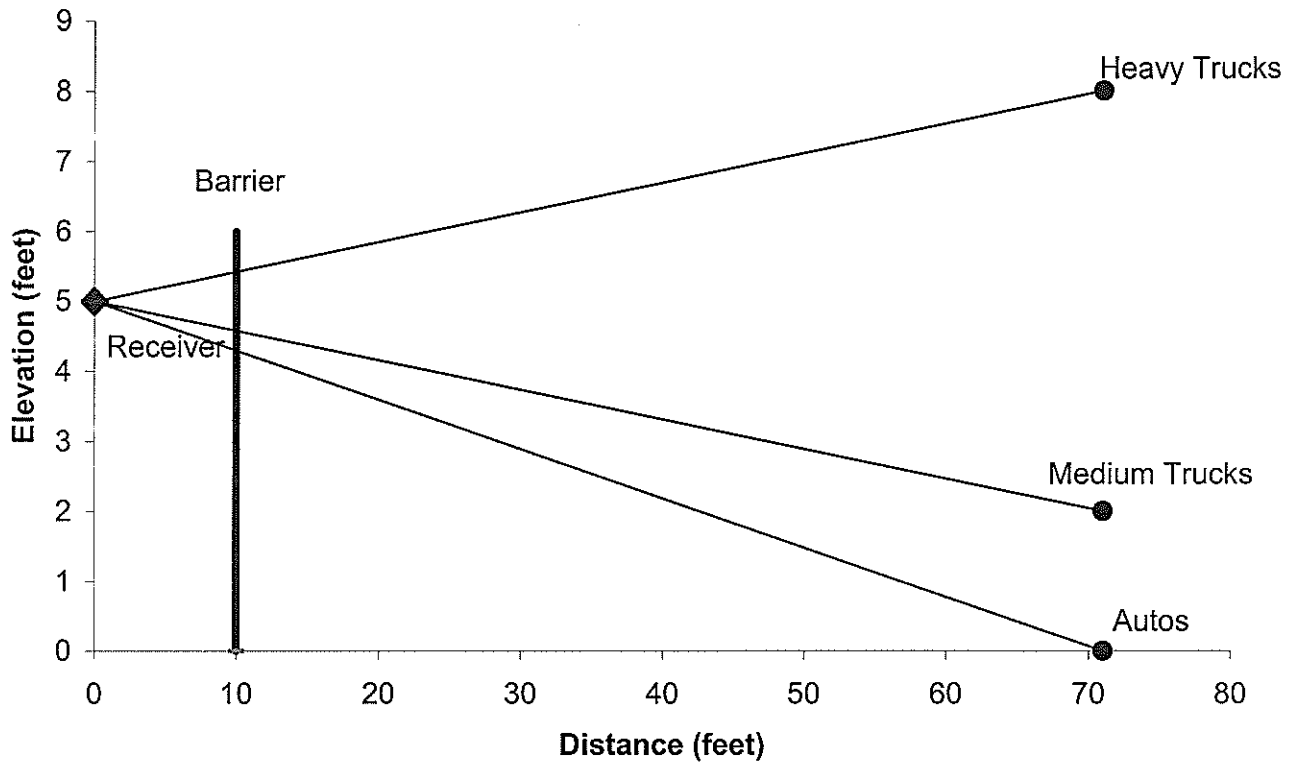
**Barrier Effectiveness:**

| Top of Barrier Elevation (ft) | Barrier Height <sup>2</sup> (ft) | ----- $L_{dn}$ , dB ----- |               |              |       | Barrier Breaks Line of Sight to... |                |               |
|-------------------------------|----------------------------------|---------------------------|---------------|--------------|-------|------------------------------------|----------------|---------------|
|                               |                                  | Autos                     | Medium Trucks | Heavy Trucks | Total | Autos?                             | Medium Trucks? | Heavy Trucks? |
| 6                             | 6                                | 60                        | 54            | 57           | 62    | Yes                                | Yes            | Yes           |
| 7                             | 7                                | 58                        | 53            | 56           | 61    | Yes                                | Yes            | Yes           |
| 8                             | 8                                | 57                        | 51            | 54           | 59    | Yes                                | Yes            | Yes           |
| 9                             | 9                                | 56                        | 50            | 53           | 58    | Yes                                | Yes            | Yes           |
| 10                            | 10                               | 55                        | 49            | 52           | 57    | Yes                                | Yes            | Yes           |
| 11                            | 11                               | 53                        | 48            | 51           | 56    | Yes                                | Yes            | Yes           |
| 12                            | 12                               | 53                        | 47            | 50           | 55    | Yes                                | Yes            | Yes           |
| 13                            | 13                               | 52                        | 46            | 49           | 54    | Yes                                | Yes            | Yes           |
| 14                            | 14                               | 52                        | 46            | 48           | 54    | Yes                                | Yes            | Yes           |

**Notes:** 1. Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

**Appendix E  
Barrier Insertion Graphic**

Job Number: 03-0099  
 Project Name: North Vineyard Greens Units 1, 3, and Gosal Estates  
 Roadway Name: Gerber Road  
 Location(s): 1



|   |    |
|---|----|
| Centerline to Barrier Distance ( $C_1$ ): | 61 |
| Barrier to Receiver Distance ( $C_2$ ):   | 10 |
| Automobile Elevation:                     | 0  |
| Medium Truck Elevation:                   | 2  |
| Heavy Truck Elevation:                    | 8  |
| Pad/Ground Elevation at Receiver:         | 0  |
| Receiver Elevation <sup>1</sup> :         | 5  |
| Base of Barrier Elevation:                | 0  |
| Barrier Height <sup>2</sup> :             | 6  |

Notes: 1. Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

Appendix D  
**FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)**  
**Noise Barrier Effectiveness Prediction Worksheet**

**Project Information:** Job Number: 03-0099  
 Project Name: North Vineyard Greens Units 1, 3, and Gosal Estates  
 Roadway Name: Gerber Road  
 Location(s): 2

**Noise Level Data:** Year: Future  
 Auto  $L_{dn}$ , dB: 65  
 Medium Truck  $L_{dn}$ , dB: 59  
 Heavy Truck  $L_{dn}$ , dB: 61

**Site Geometry:** Receiver Description: Building exterior-rear  
 Centerline to Barrier Distance ( $C_1$ ): 61  
 Barrier to Receiver Distance ( $C_2$ ): 20  
 Automobile Elevation: 0  
 Medium Truck Elevation: 2  
 Heavy Truck Elevation: 8  
 Pad/Ground Elevation at Receiver: 0  
 Receiver Elevation<sup>1</sup>: 5  
 Base of Barrier Elevation: 0  
 Starting Barrier Height 6

**Barrier Effectiveness:**

| Top of Barrier Elevation (ft) | Barrier Height <sup>2</sup> (ft) | ----- $L_{dn}$ , dB ----- |               |              |       | Barrier Breaks Line of Sight to... |                |               |
|-------------------------------|----------------------------------|---------------------------|---------------|--------------|-------|------------------------------------|----------------|---------------|
|                               |                                  | Autos                     | Medium Trucks | Heavy Trucks | Total | Autos?                             | Medium Trucks? | Heavy Trucks? |
| 6                             | 6                                | 59                        | 53            | 56           | 62    | Yes                                | Yes            | Yes           |
| 7                             | 7                                | 58                        | 52            | 56           | 61    | Yes                                | Yes            | Yes           |
| 8                             | 8                                | 57                        | 51            | 55           | 59    | Yes                                | Yes            | Yes           |
| 9                             | 9                                | 55                        | 50            | 54           | 58    | Yes                                | Yes            | Yes           |
| 10                            | 10                               | 55                        | 49            | 53           | 57    | Yes                                | Yes            | Yes           |
| 11                            | 11                               | 54                        | 48            | 51           | 57    | Yes                                | Yes            | Yes           |
| 12                            | 12                               | 53                        | 47            | 51           | 56    | Yes                                | Yes            | Yes           |
| 13                            | 13                               | 52                        | 46            | 50           | 55    | Yes                                | Yes            | Yes           |
| 14                            | 14                               | 52                        | 46            | 49           | 54    | Yes                                | Yes            | Yes           |

**Notes:** 1. Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

Appendix D  
**FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)**  
**Noise Barrier Effectiveness Prediction Worksheet**

**Project Information:** Job Number: 03-0099  
 Project Name: North Vineyard Greens Units 1, 3, and Gosal Estates  
 Roadway Name: Gerber Road  
 Location(s): 3

**Noise Level Data:** Year: Future  
 Auto  $L_{dn}$ , dB: 67  
 Medium Truck  $L_{dn}$ , dB: 61  
 Heavy Truck  $L_{dn}$ , dB: 63

**Site Geometry:** Receiver Description: Building exterior-side  
 Centerline to Barrier Distance ( $C_1$ ): 61  
 Barrier to Receiver Distance ( $C_2$ ): 5  
 Automobile Elevation: 0  
 Medium Truck Elevation: 2  
 Heavy Truck Elevation: 8  
 Pad/Ground Elevation at Receiver: 0  
 Receiver Elevation<sup>1</sup>: 5  
 Base of Barrier Elevation: 0  
 Starting Barrier Height 6

**Barrier Effectiveness:**

| Top of Barrier Elevation (ft) | Barrier Height <sup>2</sup> (ft) | ----- $L_{dn}$ , dB ----- |               |              |       | Barrier Breaks Line of Sight to... |                |               |
|-------------------------------|----------------------------------|---------------------------|---------------|--------------|-------|------------------------------------|----------------|---------------|
|                               |                                  | Autos                     | Medium Trucks | Heavy Trucks | Total | Autos?                             | Medium Trucks? | Heavy Trucks? |
| 6                             | 6                                | 60                        | 54            | 57           | 63    | Yes                                | Yes            | Yes           |
| 7                             | 7                                | 58                        | 52            | 55           | 60    | Yes                                | Yes            | Yes           |
| 8                             | 8                                | 56                        | 50            | 53           | 59    | Yes                                | Yes            | Yes           |
| 9                             | 9                                | 55                        | 49            | 52           | 57    | Yes                                | Yes            | Yes           |
| 10                            | 10                               | 54                        | 48            | 51           | 56    | Yes                                | Yes            | Yes           |
| 11                            | 11                               | 53                        | 47            | 49           | 55    | Yes                                | Yes            | Yes           |
| 12                            | 12                               | 52                        | 46            | 49           | 54    | Yes                                | Yes            | Yes           |
| 13                            | 13                               | 51                        | 45            | 48           | 54    | Yes                                | Yes            | Yes           |
| 14                            | 14                               | 51                        | 45            | 47           | 53    | Yes                                | Yes            | Yes           |

**Notes:** 1. Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

# **Appendix L**

## **Traffic Noise Prediction Model – Florin Road**

## Appendix L

### Appendix C FHWA Traffic Noise Prediction Model (FHWA-RD-77-108) Noise Prediction Worksheet

**Project Information:**

Job Number: 03-0099  
Project Name: North Vineyard Greens Units 1, 3, and Gosal Estates  
Roadway Name: Florin Road

**Traffic Data:**

Year: Future  
Average Daily Traffic Volume: 19,300  
Percent Daytime Traffic: 83  
Percent Nighttime Traffic: 17  
Percent Medium Trucks (2 axle): 3.5  
Percent Heavy Trucks (3+ axle): 2  
Assumed Vehicle Speed (mph): 45  
Intervening Ground Type (hard/soft): **Soft**

**Traffic Noise Levels:**

|           |                        |          |             | -----L <sub>dn</sub> , dB----- |               |              |       |
|-----------|------------------------|----------|-------------|--------------------------------|---------------|--------------|-------|
| Location: | Description            | Distance | Offset (dB) | Autos                          | Medium Trucks | Heavy Trucks | Total |
| 1         | Outdoor activity area  | 98       | 0           | 65                             | 59            | 61           | 67    |
| 3         | Building exterior-side | 86       | 0           | 66                             | 59            | 62           | 68    |

**Traffic Noise Contours (No Calibration Offset):**

| L <sub>dn</sub> Contour, dB | Distance from Centerline, (ft) |
|-----------------------------|--------------------------------|
| 75                          | 28                             |
| 70                          | 60                             |
| 65                          | 130                            |
| 60                          | 280                            |

**Notes:**



Appendix D  
**FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)**  
**Noise Barrier Effectiveness Prediction Worksheet**

**Project Information:** Job Number: 03-0099  
 Project Name: North Vineyard Greens Units 1, 3, and Gosal Estates  
 Roadway Name: Florin Road  
 Location(s): 1

**Noise Level Data:** Year: Future  
 Auto L<sub>dn</sub>, dB: 65  
 Medium Truck L<sub>dn</sub>, dB: 59  
 Heavy Truck L<sub>dn</sub>, dB: 61

**Site Geometry:** Receiver Description: Outdoor activity area  
 Centerline to Barrier Distance (C<sub>1</sub>): 73  
 Barrier to Receiver Distance (C<sub>2</sub>): 25  
 Automobile Elevation: 0  
 Medium Truck Elevation: 2  
 Heavy Truck Elevation: 8  
 Pad/Ground Elevation at Receiver: 0  
 Receiver Elevation<sup>1</sup>: 5  
 Base of Barrier Elevation: 0  
 Starting Barrier Height 6

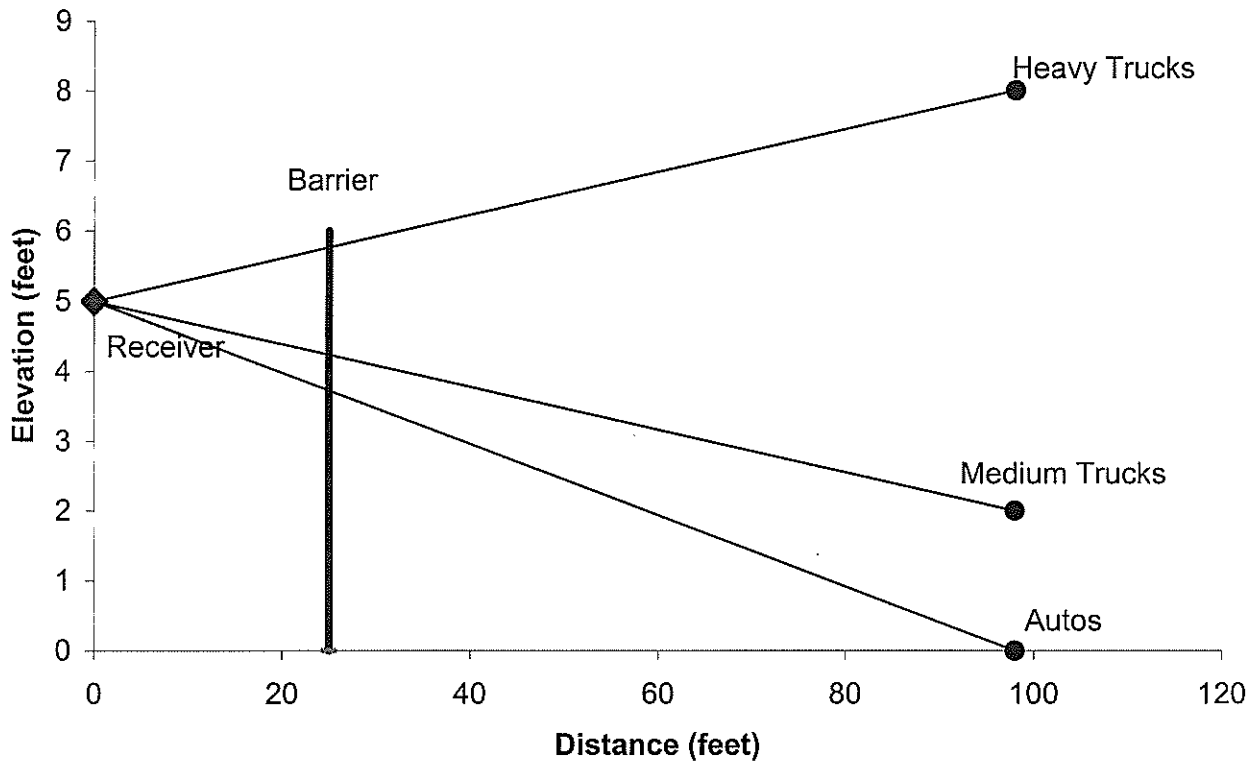
**Barrier Effectiveness:**

| Top of Barrier Elevation (ft) | Barrier Height <sup>2</sup> (ft) | ----- L <sub>dn</sub> , dB ----- |               |              |       | Barrier Breaks Line of Sight to... |                |               |
|-------------------------------|----------------------------------|----------------------------------|---------------|--------------|-------|------------------------------------|----------------|---------------|
|                               |                                  | Autos                            | Medium Trucks | Heavy Trucks | Total | Autos?                             | Medium Trucks? | Heavy Trucks? |
| 6                             | 6                                | 58                               | 53            | 56           | 61    | Yes                                | Yes            | Yes           |
| 7                             | 7                                | 57                               | 52            | 55           | 60    | Yes                                | Yes            | Yes           |
| 8                             | 8                                | 56                               | 51            | 54           | 59    | Yes                                | Yes            | Yes           |
| 9                             | 9                                | 55                               | 50            | 53           | 58    | Yes                                | Yes            | Yes           |
| 10                            | 10                               | 54                               | 49            | 52           | 57    | Yes                                | Yes            | Yes           |
| 11                            | 11                               | 54                               | 48            | 51           | 56    | Yes                                | Yes            | Yes           |
| 12                            | 12                               | 53                               | 47            | 50           | 56    | Yes                                | Yes            | Yes           |
| 13                            | 13                               | 52                               | 47            | 50           | 55    | Yes                                | Yes            | Yes           |
| 14                            | 14                               | 51                               | 46            | 49           | 54    | Yes                                | Yes            | Yes           |

**Notes:** 1. Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

Appendix E  
**Barrier Insertion Graphic**

Job Number: 03-0099  
 Project Name: North Vineyard Greens Units 1, 3, and Gosal Estates  
 Roadway Name: Florin Road  
 Location(s): 1



|   |    |
|---|----|
| Centerline to Barrier Distance ( $C_1$ ): | 73 |
| Barrier to Receiver Distance ( $C_2$ ):   | 25 |
| Automobile Elevation:                     | 0  |
| Medium Truck Elevation:                   | 2  |
| Heavy Truck Elevation:                    | 8  |
| Pad/Ground Elevation at Receiver:         | 0  |
| Receiver Elevation <sup>1</sup> :         | 5  |
| Base of Barrier Elevation:                | 0  |
| Barrier Height <sup>2</sup> :             | 6  |

Notes: 1. Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

Appendix D  
**FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)**  
**Noise Barrier Effectiveness Prediction Worksheet**

**Project Information:** Job Number: 03-0099  
 Project Name: North Vineyard Greens Units 1, 3, and Gosal Estates  
 Roadway Name: Florin Road  
 Location(s): 3

**Noise Level Data:** Year: Future  
 Auto  $L_{dn}$ , dB: 66  
 Medium Truck  $L_{dn}$ , dB: 59  
 Heavy Truck  $L_{dn}$ , dB: 62

**Site Geometry:** Receiver Description: Building exterior-side  
 Centerline to Barrier Distance ( $C_1$ ): 73  
 Barrier to Receiver Distance ( $C_2$ ): 12.5  
 Automobile Elevation: 0  
 Medium Truck Elevation: 2  
 Heavy Truck Elevation: 8  
 Pad/Ground Elevation at Receiver: 0  
 Receiver Elevation<sup>1</sup>: 5  
 Base of Barrier Elevation: 0  
 Starting Barrier Height 6

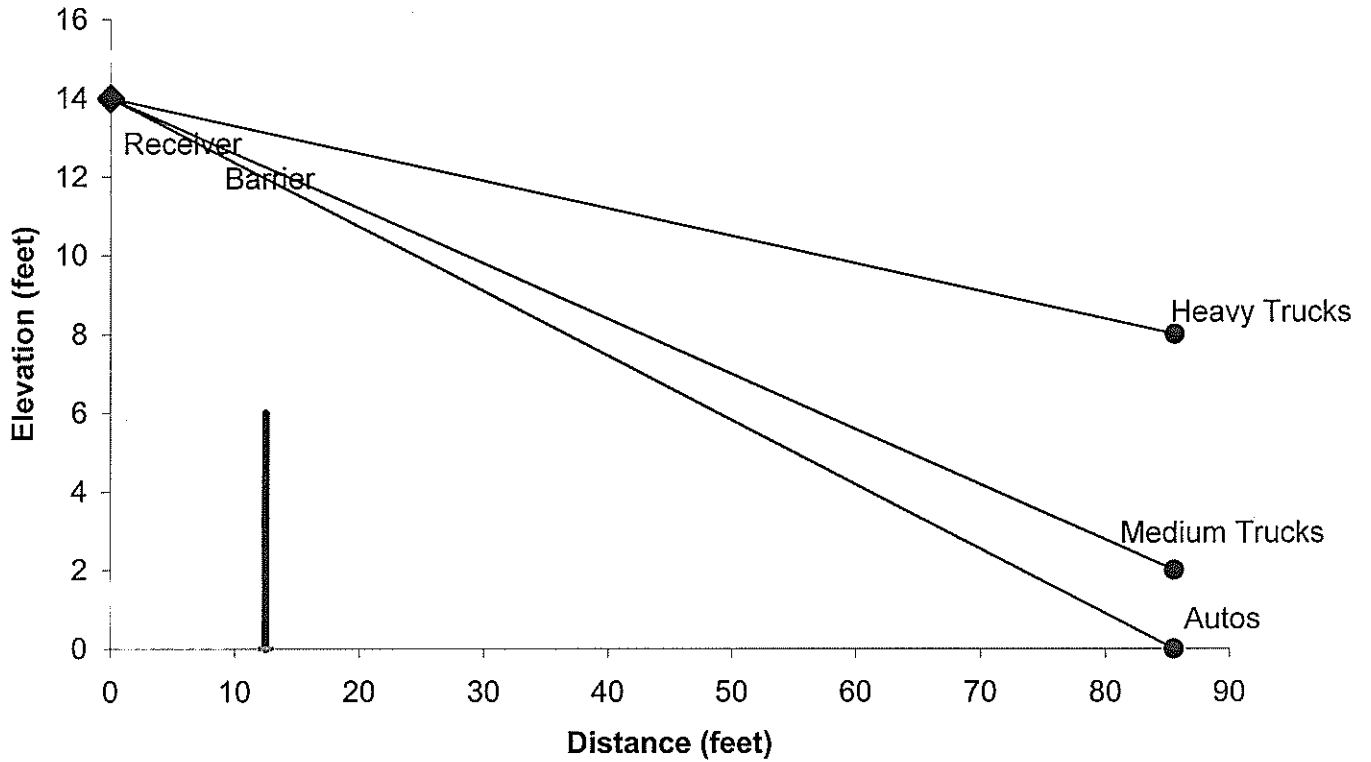
**Barrier Effectiveness:**

| Top of Barrier Elevation (ft) | Barrier Height <sup>2</sup> (ft) | ----- $L_{dn}$ , dB ----- |               |              |       | Barrier Breaks Line of Sight to... |                |               |
|-------------------------------|----------------------------------|---------------------------|---------------|--------------|-------|------------------------------------|----------------|---------------|
|                               |                                  | Autos                     | Medium Trucks | Heavy Trucks | Total | Autos?                             | Medium Trucks? | Heavy Trucks? |
| 6                             | 6                                | 59                        | 54            | 56           | 62    | Yes                                | Yes            | Yes           |
| 7                             | 7                                | 58                        | 52            | 56           | 61    | Yes                                | Yes            | Yes           |
| 8                             | 8                                | 56                        | 51            | 54           | 59    | Yes                                | Yes            | Yes           |
| 9                             | 9                                | 55                        | 50            | 53           | 58    | Yes                                | Yes            | Yes           |
| 10                            | 10                               | 54                        | 49            | 52           | 57    | Yes                                | Yes            | Yes           |
| 11                            | 11                               | 53                        | 48            | 51           | 56    | Yes                                | Yes            | Yes           |
| 12                            | 12                               | 52                        | 47            | 50           | 55    | Yes                                | Yes            | Yes           |
| 13                            | 13                               | 52                        | 46            | 49           | 54    | Yes                                | Yes            | Yes           |
| 14                            | 14                               | 51                        | 45            | 48           | 53    | Yes                                | Yes            | Yes           |

**Notes:** 1. Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

**Appendix E**  
**Barrier Insertion Graphic**

Job Number: 03-0099  
 Project Name: North Vineyard Greens Units 1, 3, and Gosal Estates  
 Roadway Name: Florin Road  
 Location(s): 1



|   |      |
|---|------|
| Centerline to Barrier Distance ( $C_1$ ): | 73   |
| Barrier to Receiver Distance ( $C_2$ ):   | 12.5 |
| Automobile Elevation:                     | 0    |
| Medium Truck Elevation:                   | 2    |
| Heavy Truck Elevation:                    | 8    |
| Pad/Ground Elevation at Receiver:         | 9    |
| Receiver Elevation <sup>1</sup> :         | 14   |
| Base of Barrier Elevation:                | 0    |
| Barrier Height <sup>2</sup> :             | 6    |

Notes: 1. Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

Appendix D  
**FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)**  
**Noise Barrier Effectiveness Prediction Worksheet**

**Project Information:** Job Number: 03-0099  
 Project Name: North Vineyard Greens Units 1, 3, and Gosal Estates  
 Roadway Name: Florin Road  
 Location(s): 3

**Noise Level Data:** Year: Future  
 Auto  $L_{dn}$ , dB: 66  
 Medium Truck  $L_{dn}$ , dB: 59  
 Heavy Truck  $L_{dn}$ , dB: 62

**Site Geometry:** Receiver Description: Building exterior-side 2nd story  
 Centerline to Barrier Distance ( $C_1$ ): 73  
 Barrier to Receiver Distance ( $C_2$ ): 12.5  
 Automobile Elevation: 0  
 Medium Truck Elevation: 2  
 Heavy Truck Elevation: 8  
 Pad/Ground Elevation at Receiver: 9  
 Receiver Elevation<sup>1</sup>: 14  
 Base of Barrier Elevation: 0  
 Starting Barrier Height 6

**Barrier Effectiveness:**

| Top of Barrier Elevation (ft) | Barrier Height <sup>2</sup> (ft) | ----- $L_{dn}$ , dB ----- |               |              |       | Barrier Breaks Line of Sight to... |                |               |
|-------------------------------|----------------------------------|---------------------------|---------------|--------------|-------|------------------------------------|----------------|---------------|
|                               |                                  | Autos                     | Medium Trucks | Heavy Trucks | Total | Autos?                             | Medium Trucks? | Heavy Trucks? |
| 6                             | 6                                | 66                        | 59            | 62           | 68    | No                                 | No             | No            |
| 7                             | 7                                | 66                        | 59            | 62           | 68    | No                                 | No             | No            |
| 8                             | 8                                | 65                        | 59            | 62           | 67    | No                                 | No             | No            |
| 9                             | 9                                | 65                        | 59            | 61           | 67    | No                                 | No             | No            |
| 10                            | 10                               | 63                        | 59            | 61           | 66    | No                                 | No             | No            |
| 11                            | 11                               | 61                        | 55            | 61           | 64    | No                                 | No             | No            |
| 12                            | 12                               | 61                        | 55            | 57           | 63    | Yes                                | No             | No            |
| 13                            | 13                               | 60                        | 54            | 57           | 62    | Yes                                | Yes            | No            |
| 14                            | 14                               | 59                        | 53            | 56           | 61    | Yes                                | Yes            | Yes           |

**Notes:** 1. Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

# **Appendix M**

## **Traffic Noise Prediction Model – Waterman Road**

## Appendix M

### Appendix D

## FHWA Traffic Noise Prediction Model (FHWA-RD-77-108) Noise Barrier Effectiveness Prediction Worksheet

**Project Information:**

Job Number: 03-0099  
Project Name: North Vineyard Greens Units 1, 3, and Gosal Estates  
Roadway Name: Waterman Road  
Location(s): 1

**Noise Level Data:**

Year: Future  
Auto  $L_{dn}$ , dB: 63  
Medium Truck  $L_{dn}$ , dB: 57  
Heavy Truck  $L_{dn}$ , dB: 59

**Site Geometry:**

Receiver Description: Outdoor activity area  
Centerline to Barrier Distance ( $C_1$ ): 61  
Barrier to Receiver Distance ( $C_2$ ): 10  
Automobile Elevation: 0  
Medium Truck Elevation: 2  
Heavy Truck Elevation: 8  
Pad/Ground Elevation at Receiver: 0  
Receiver Elevation<sup>1</sup>: 5  
Base of Barrier Elevation: 0  
Starting Barrier Height 6

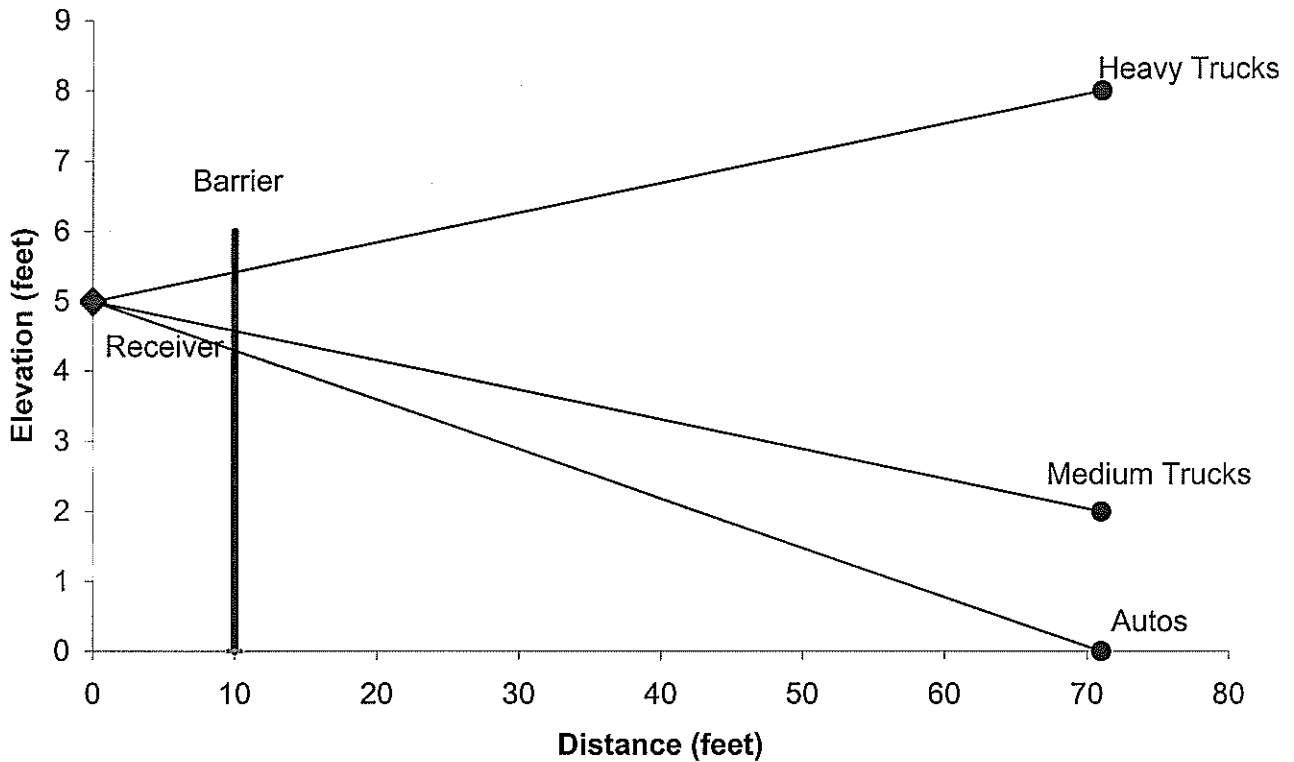
**Barrier Effectiveness:**

| Top of<br>Barrier<br>Elevation (ft) | Barrier<br>Height <sup>2</sup> (ft) | ----- $L_{dn}$ , dB ----- |                  |                 |       | Barrier Breaks Line of Sight to... |                   |                  |
|-------------------------------------|-------------------------------------|---------------------------|------------------|-----------------|-------|------------------------------------|-------------------|------------------|
|                                     |                                     | Autos                     | Medium<br>Trucks | Heavy<br>Trucks | Total | Autos?                             | Medium<br>Trucks? | Heavy<br>Trucks? |
| 6                                   | 6                                   | 57                        | 51               | 54              | 59    | Yes                                | Yes               | Yes              |
| 7                                   | 7                                   | 55                        | 50               | 53              | 58    | Yes                                | Yes               | Yes              |
| 8                                   | 8                                   | 54                        | 48               | 52              | 57    | Yes                                | Yes               | Yes              |
| 9                                   | 9                                   | 53                        | 47               | 50              | 55    | Yes                                | Yes               | Yes              |
| 10                                  | 10                                  | 52                        | 46               | 49              | 54    | Yes                                | Yes               | Yes              |
| 11                                  | 11                                  | 50                        | 45               | 48              | 53    | Yes                                | Yes               | Yes              |
| 12                                  | 12                                  | 50                        | 44               | 47              | 52    | Yes                                | Yes               | Yes              |
| 13                                  | 13                                  | 49                        | 43               | 46              | 51    | Yes                                | Yes               | Yes              |
| 14                                  | 14                                  | 49                        | 43               | 45              | 51    | Yes                                | Yes               | Yes              |

**Notes:** 1. Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

**Appendix E  
Barrier Insertion Graphic**

Job Number: 03-0099  
 Project Name: North Vineyard Greens Units 1, 3, and Gosal Estates  
 Roadway Name: Waterman Road  
 Location(s): 1



|   |    |
|---|----|
| Centerline to Barrier Distance ( $C_1$ ): | 61 |
| Barrier to Receiver Distance ( $C_2$ ):   | 10 |
| Automobile Elevation:                     | 0  |
| Medium Truck Elevation:                   | 2  |
| Heavy Truck Elevation:                    | 8  |
| Pad/Ground Elevation at Receiver:         | 0  |
| Receiver Elevation <sup>1</sup> :         | 5  |
| Base of Barrier Elevation:                | 0  |
| Barrier Height <sup>2</sup> :             | 6  |

Notes: 1. Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)



Appendix D  
**FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)**  
**Noise Barrier Effectiveness Prediction Worksheet**

**Project Information:** Job Number: 03-0099  
 Project Name: North Vineyard Greens Units 1, 3, and Gosal Estates  
 Roadway Name: Waterman Road  
 Location(s): 2

**Noise Level Data:** Year: Future  
 Auto  $L_{dn}$ , dB: 62  
 Medium Truck  $L_{dn}$ , dB: 56  
 Heavy Truck  $L_{dn}$ , dB: 58

**Site Geometry:** Receiver Description: Building exterior-rear  
 Centerline to Barrier Distance ( $C_1$ ): 61  
 Barrier to Receiver Distance ( $C_2$ ): 20  
 Automobile Elevation: 0  
 Medium Truck Elevation: 2  
 Heavy Truck Elevation: 8  
 Pad/Ground Elevation at Receiver: 0  
 Receiver Elevation<sup>1</sup>: 5  
 Base of Barrier Elevation: 0  
 Starting Barrier Height 6

**Barrier Effectiveness:**

| Top of Barrier Elevation (ft) | Barrier Height <sup>2</sup> (ft) | ----- $L_{dn}$ , dB ----- |               |              |       | Barrier Breaks Line of Sight to... |                |               |
|-------------------------------|----------------------------------|---------------------------|---------------|--------------|-------|------------------------------------|----------------|---------------|
|                               |                                  | Autos                     | Medium Trucks | Heavy Trucks | Total | Autos?                             | Medium Trucks? | Heavy Trucks? |
| 6                             | 6                                | 56                        | 50            | 53           | 59    | Yes                                | Yes            | Yes           |
| 7                             | 7                                | 55                        | 49            | 53           | 58    | Yes                                | Yes            | Yes           |
| 8                             | 8                                | 54                        | 48            | 52           | 57    | Yes                                | Yes            | Yes           |
| 9                             | 9                                | 53                        | 47            | 51           | 55    | Yes                                | Yes            | Yes           |
| 10                            | 10                               | 52                        | 46            | 50           | 55    | Yes                                | Yes            | Yes           |
| 11                            | 11                               | 51                        | 45            | 49           | 54    | Yes                                | Yes            | Yes           |
| 12                            | 12                               | 50                        | 44            | 48           | 53    | Yes                                | Yes            | Yes           |
| 13                            | 13                               | 49                        | 43            | 47           | 52    | Yes                                | Yes            | Yes           |
| 14                            | 14                               | 49                        | 43            | 46           | 51    | Yes                                | Yes            | Yes           |

**Notes:** 1. Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

Appendix D  
**FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)**  
**Noise Barrier Effectiveness Prediction Worksheet**

**Project Information:** Job Number: 03-0099  
 Project Name: North Vineyard Greens Units 1, 3, and Gosal Estates  
 Roadway Name: Waterman Road  
 Location(s): 3

**Noise Level Data:** Year: Future  
 Auto  $L_{dn}$ , dB: 64  
 Medium Truck  $L_{dn}$ , dB: 58  
 Heavy Truck  $L_{dn}$ , dB: 60

**Site Geometry:** Receiver Description: Building exterior-side (min.)  
 Centerline to Barrier Distance ( $C_1$ ): 61  
 Barrier to Receiver Distance ( $C_2$ ): 5  
 Automobile Elevation: 0  
 Medium Truck Elevation: 2  
 Heavy Truck Elevation: 8  
 Pad/Ground Elevation at Receiver: 0  
 Receiver Elevation<sup>1</sup>: 5  
 Base of Barrier Elevation: 0  
 Starting Barrier Height 6

**Barrier Effectiveness:**

| Top of Barrier Elevation (ft) | Barrier Height <sup>2</sup> (ft) | ----- $L_{dn}$ , dB ----- |               |              |       | Barrier Breaks Line of Sight to... |                |               |
|-------------------------------|----------------------------------|---------------------------|---------------|--------------|-------|------------------------------------|----------------|---------------|
|                               |                                  | Autos                     | Medium Trucks | Heavy Trucks | Total | Autos?                             | Medium Trucks? | Heavy Trucks? |
| 6                             | 6                                | 57                        | 51            | 54           | 60    | Yes                                | Yes            | Yes           |
| 7                             | 7                                | 55                        | 49            | 52           | 57    | Yes                                | Yes            | Yes           |
| 8                             | 8                                | 53                        | 47            | 50           | 56    | Yes                                | Yes            | Yes           |
| 9                             | 9                                | 52                        | 46            | 49           | 54    | Yes                                | Yes            | Yes           |
| 10                            | 10                               | 51                        | 45            | 48           | 53    | Yes                                | Yes            | Yes           |
| 11                            | 11                               | 50                        | 44            | 46           | 52    | Yes                                | Yes            | Yes           |
| 12                            | 12                               | 49                        | 43            | 46           | 51    | Yes                                | Yes            | Yes           |
| 13                            | 13                               | 48                        | 42            | 45           | 51    | Yes                                | Yes            | Yes           |
| 14                            | 14                               | 48                        | 42            | 44           | 50    | Yes                                | Yes            | Yes           |

**Notes:** 1. Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

Appendix D  
**FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)**  
**Noise Barrier Effectiveness Prediction Worksheet**

**Project Information:** Job Number: 03-0099  
 Project Name: North Vineyard Greens Units 1, 3, and Gosal Estates  
 Roadway Name: Waterman Road  
 Location(s): 4

**Noise Level Data:** Year: Future  
 Auto  $L_{dn}$ , dB: 63  
 Medium Truck  $L_{dn}$ , dB: 57  
 Heavy Truck  $L_{dn}$ , dB: 59

**Site Geometry:** Receiver Description: Building exterior-side (corner lot)  
 Centerline to Barrier Distance ( $C_1$ ): 61  
 Barrier to Receiver Distance ( $C_2$ ): 12.5  
 Automobile Elevation: 0  
 Medium Truck Elevation: 2  
 Heavy Truck Elevation: 8  
 Pad/Ground Elevation at Receiver: 0  
 Receiver Elevation<sup>1</sup>: 5  
 Base of Barrier Elevation: 0  
 Starting Barrier Height 6

**Barrier Effectiveness:**

| Top of<br>Barrier<br>Elevation (ft) | Barrier<br>Height <sup>2</sup> (ft) | ----- $L_{dn}$ , dB ----- |                  |                 |       | Barrier Breaks Line of Sight to... |                   |                  |
|-------------------------------------|-------------------------------------|---------------------------|------------------|-----------------|-------|------------------------------------|-------------------|------------------|
|                                     |                                     | Autos                     | Medium<br>Trucks | Heavy<br>Trucks | Total | Autos?                             | Medium<br>Trucks? | Heavy<br>Trucks? |
| 6                                   | 6                                   | 56                        | 51               | 54              | 59    | Yes                                | Yes               | Yes              |
| 7                                   | 7                                   | 55                        | 50               | 53              | 58    | Yes                                | Yes               | Yes              |
| 8                                   | 8                                   | 54                        | 48               | 52              | 57    | Yes                                | Yes               | Yes              |
| 9                                   | 9                                   | 53                        | 47               | 50              | 55    | Yes                                | Yes               | Yes              |
| 10                                  | 10                                  | 52                        | 46               | 49              | 54    | Yes                                | Yes               | Yes              |
| 11                                  | 11                                  | 51                        | 45               | 48              | 53    | Yes                                | Yes               | Yes              |
| 12                                  | 12                                  | 50                        | 44               | 47              | 52    | Yes                                | Yes               | Yes              |
| 13                                  | 13                                  | 49                        | 43               | 46              | 52    | Yes                                | Yes               | Yes              |
| 14                                  | 14                                  | 48                        | 43               | 45              | 51    | Yes                                | Yes               | Yes              |

**Notes:** 1. Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

Appendix D  
**FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)**  
**Noise Barrier Effectiveness Prediction Worksheet**

**Project Information:** Job Number: 03-0099  
 Project Name: North Vineyard Greens Units 1, 3, and Gosal Estates  
 Roadway Name: Waterman Road  
 Location(s): 3

**Noise Level Data:** Year: Future  
 Auto  $L_{dn}$ , dB: 64  
 Medium Truck  $L_{dn}$ , dB: 58  
 Heavy Truck  $L_{dn}$ , dB: 60

**Site Geometry:** Receiver Description: Building exterior-side (min.)  
 Centerline to Barrier Distance ( $C_1$ ): 61  
 Barrier to Receiver Distance ( $C_2$ ): 5  
 Automobile Elevation: 0  
 Medium Truck Elevation: 2  
 Heavy Truck Elevation: 8  
 Pad/Ground Elevation at Receiver: 9  
 Receiver Elevation<sup>1</sup>: 14  
 Base of Barrier Elevation: 0  
 Starting Barrier Height 6

**Barrier Effectiveness:**

| Top of Barrier Elevation (ft) | Barrier Height <sup>2</sup> (ft) | ----- $L_{dn}$ , dB ----- |               |              |           | Barrier Breaks Line of Sight to... |                |               |
|-------------------------------|----------------------------------|---------------------------|---------------|--------------|-----------|------------------------------------|----------------|---------------|
|                               |                                  | Autos                     | Medium Trucks | Heavy Trucks | Total     | Autos?                             | Medium Trucks? | Heavy Trucks? |
| 6                             | 6                                | 64                        | 58            | 60           | <b>66</b> | No                                 | No             | No            |
| 7                             | 7                                | 64                        | 58            | 60           | <b>66</b> | No                                 | No             | No            |
| 8                             | 8                                | 64                        | 58            | 60           | <b>66</b> | No                                 | No             | No            |
| 9                             | 9                                | 64                        | 58            | 60           | <b>66</b> | No                                 | No             | No            |
| 10                            | 10                               | 63                        | 57            | 60           | <b>66</b> | No                                 | No             | No            |
| 11                            | 11                               | 63                        | 57            | 59           | <b>65</b> | No                                 | No             | No            |
| 12                            | 12                               | 60                        | 54            | 59           | <b>63</b> | No                                 | No             | No            |
| 13                            | 13                               | 59                        | 53            | 55           | <b>61</b> | Yes                                | No             | No            |
| 14                            | 14                               | 58                        | 52            | 55           | <b>60</b> | Yes                                | Yes            | Yes           |

**Notes:** 1. Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

## **Appendix N-1**

# **Wetland Delineation Report – North Vineyard Greens Unit 1**

WETLAND DELINEATION  
FOR  
**NORTH VINEYARD GREENS UNIT #1**  
SACRAMENTO COUNTY, CALIFORNIA

March 31, 2004

*Prepared for:*  
**North Vineyard Greens General Partnership**



**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

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**NORTH VINEYARD GREENS UNIT #1**

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- Figure 3. Wetland Delineation

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- Attachment A – Wetland Delineation Data Sheets
- Attachment B – Plant List
- Attachment C – Wetland Delineation

## **INTRODUCTION**

On behalf of the North Vineyard Greens General Partnership, ECORP Consulting, Inc. has conducted a wetland delineation of the North Vineyard Greens Unit #1 site located in the North Vineyard Station Specific Plan Area, Sacramento County, California.

The ±146.7-acre subject property is located north of Gerber Road, west of Bradshaw Road, south of Florin Road, and east of Elk Grove Florin Road (Figure 1 – *Project Site and Vicinity*). The Central California Traction railroad alignment splits the subject property into two unequal sized halves. Undeveloped pasture, and rural residents surround the subject property. The site corresponds to a portion of section 6 of Township 7 North, and Range 6 East of the "Elk Grove, California" 7.5-minute quadrangle (U.S. Department of the Interior, Geological Survey, photorevised 1979).

### **APPLICANT:**

Attn: Mr. Peter Daru  
North Vineyard Greens G.P.  
720 Howe Avenue, Suite 103  
Sacramento, California 95825  
Phone: (916) 641-2081  
Fax: (916) 641-2233

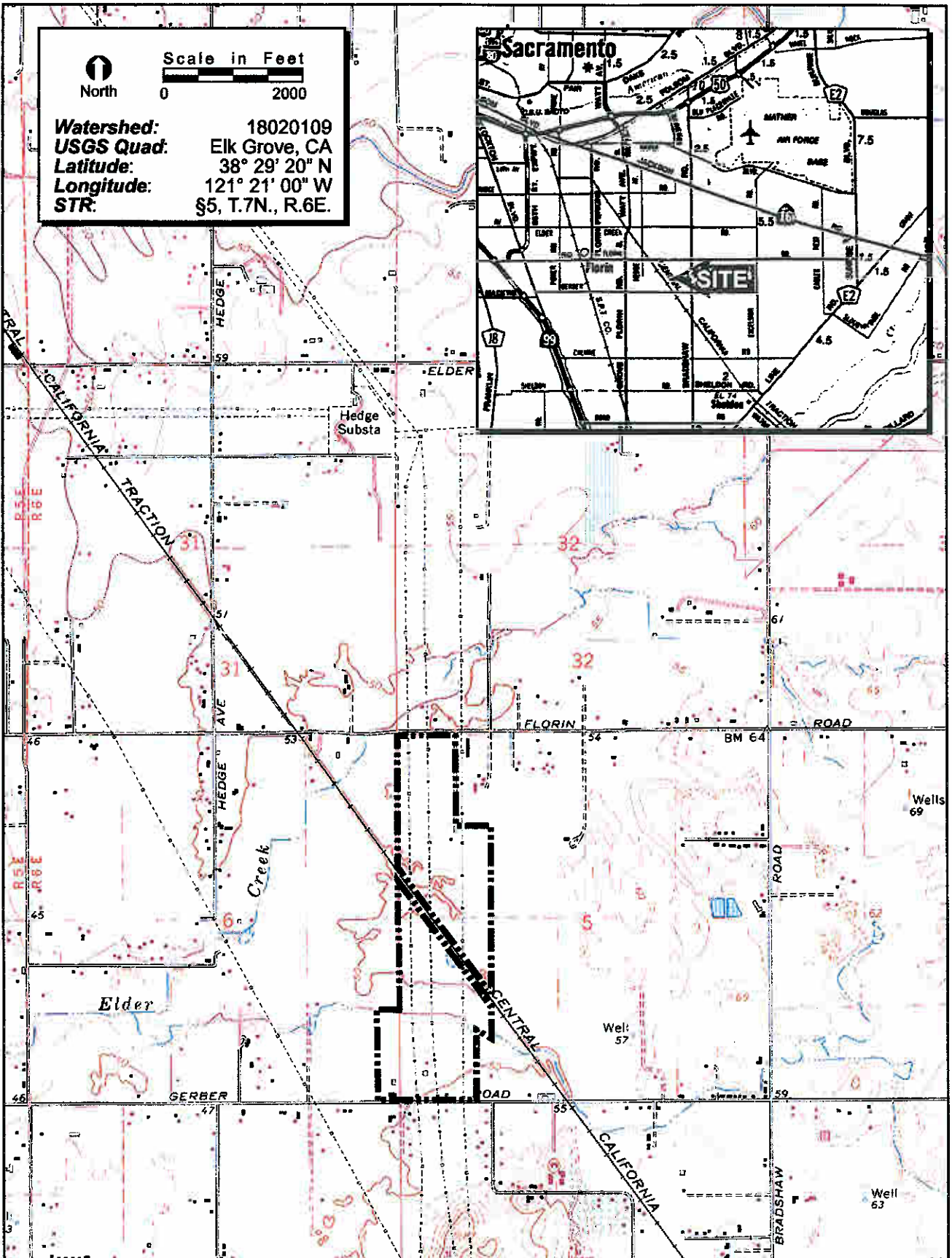
### **AGENT:**

Attn: Ms. Jinnah Hansen  
ECORP Consulting, Inc.  
2260 Douglas Boulevard, Suite 160  
Roseville, California 95661  
Phone: (916) 782-9100  
Fax: (916) 782-9134

## **SURVEY METHODOLOGY**

The wetland delineation was conducted during August 2002 by ECORP biologist Keith Kwan, and on July 10, 2003, and December 19, 2003, by biologist Jinnah Hansen. The entire site was walked and inspected for potential waters of the U.S. This wetland delineation was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987). A color aerial photograph (scale: 1"=100', date flown: March 30, 2002) was utilized to assist with mapping and ground-truthing. A *Munsell Soil Color Chart* (Kollmorgen Instruments Corp. 1990) was used to identify hydric soils in the field and the *Jepson Manual* (Hickman 1994) was used for plant identification.





**FIGURE 1. Project Site and Vicinity Map**

## **EXISTING SITE CONDITIONS**

### **Current Land Use**

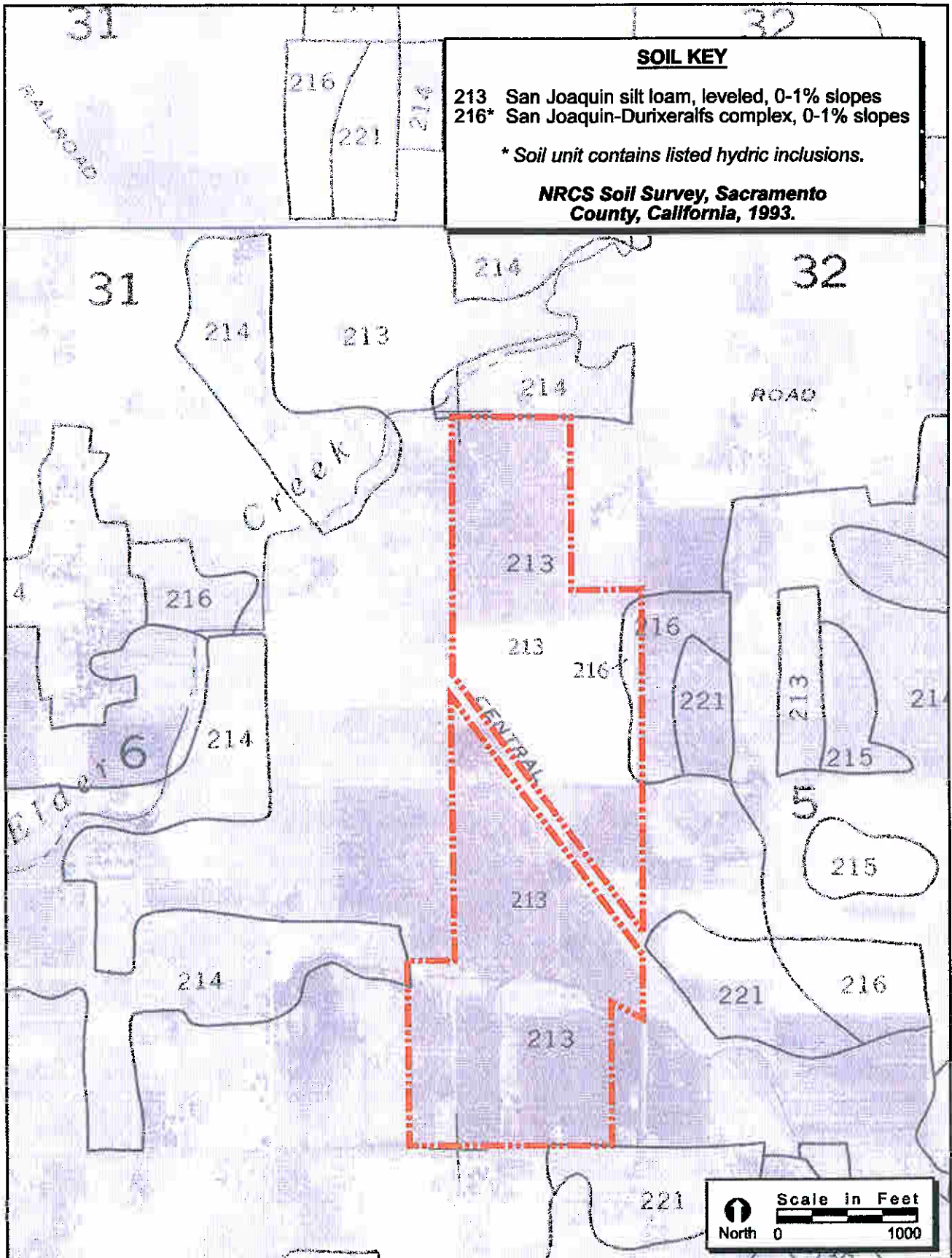
The site is situated at an elevation of approximately 50 feet above mean sea level. Much of the site is leveled pasture and is currently fallow but does appear to have been farmed and irrigated historically. Rural residences and plant nursery operations are located in the northern and southern portions of the site. The nurseries are currently active and several irrigation canals are located west of the northern nursery. The Central California Traction Railroad easement runs diagonally through the site, dividing it into two unequal halves. Gerber Creek meanders through the southern portion of the subject property. A man-made stock pond is situated in the southern half of the site. It has been constructed by excavation and placement of fill around the perimeter. The pond is filled by mechanical pump that draws ground water. It is surrounded by willows (*Salix* sp.), pampas grass (*Cortaderia selloana*), Fremont's cottonwood (*Populus fremontii*), grape (*Vitis* sp.), and date palm (*Phoenix* sp.). A second stock pond is situated in the southwestern corner of the site. Water does not appear to be actively pumped into this pond.

### **Soils**

According to the *Soil Survey of Sacramento County, California* (U.S. Department of Agriculture, Natural Resource Conservation Service 1993), two soil units, or types, have been mapped for the site (Figure 2 - *NRCS Soil Types*). These are: (213) San Joaquin silt loam, leveled, 0-1 percent slopes and (216) San Joaquin-Durixeralfs complex, 0-1 percent slopes. The San Joaquin-Durixeralfs complex is not considered to be a hydric soil; however, it does contain listed hydric inclusions.

### **Vegetation Community**

The primary vegetation community present on-site is annual grassland. Within the annual grassland are ephemeral features (i.e., seasonal wetlands and vernal pools). The annual



**FIGURE 2. NRCS Soil Types**

grassland community is comprised primarily of non-native naturalized Mediterranean grasses. These include ripgut brome (*Bromus diandrus*), soft brome (*Bromus hordeaceus*), wild oats (*Avena fatua*), ryegrass (*Lolium multiflorum*), Mediterranean barley (*Hordeum marinum*), and medusahead grass (*Taeniatherum caput-medusae*). Other non-native herbaceous species in this community include hairy hawk-bit (*Leontodon taraxacoides*), filaree (*Erodium botrys*), pineapple weed (*Chamomilla suaveolens*), and yellow-star thistle (*Centaurea solstitialis*).

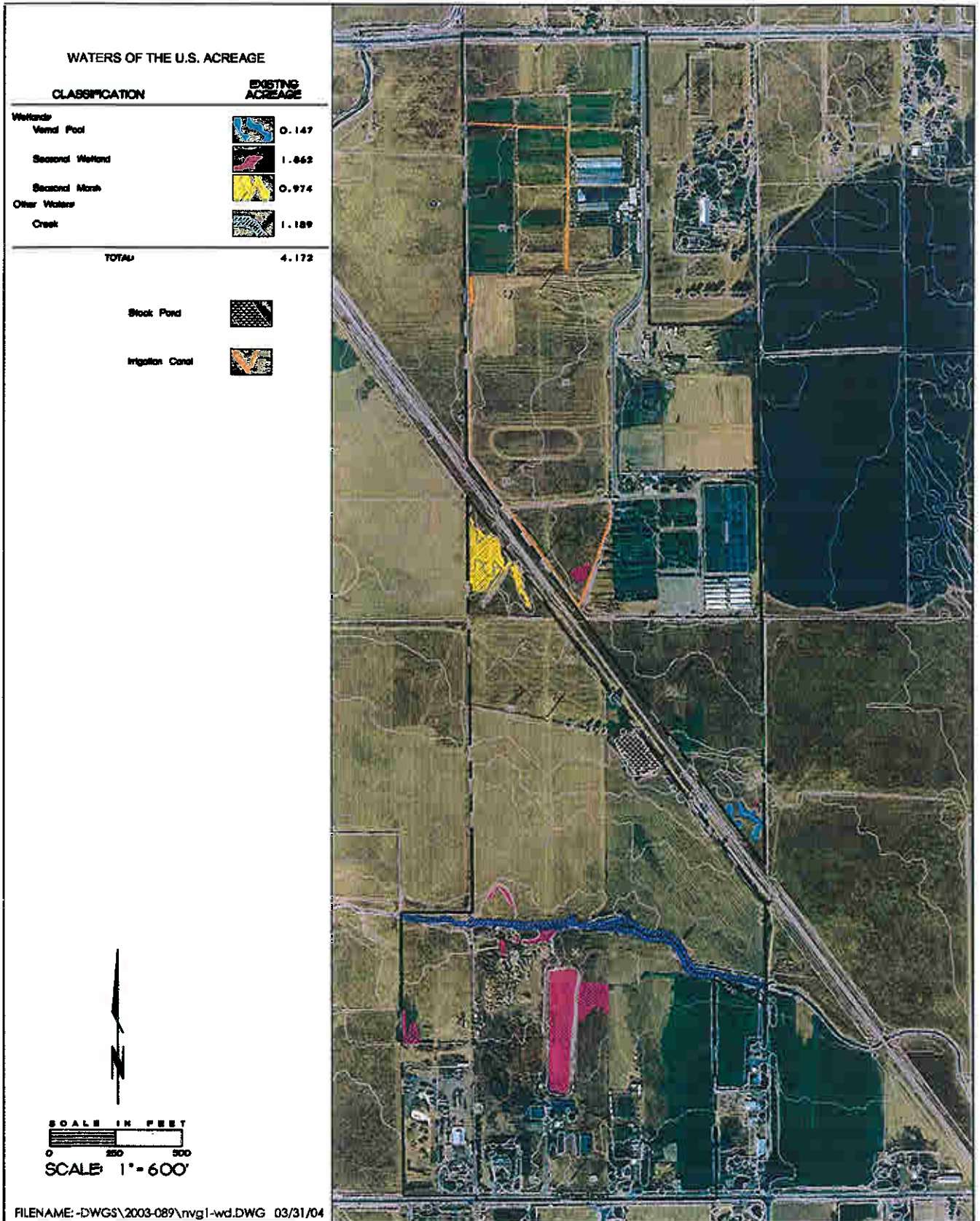
## **WATERS OF THE U.S.**

In accordance with the *Corps of Engineers Wetlands Delineation Manual*, several three-parameter data points were taken throughout the site to determine the extent of the wetlands. The data sheets are provided as Attachment A. A corresponding list of plants observed at those points is presented in Attachment B. Potentially jurisdictional waters of the U.S. mapped include wetlands and other waters. Wetlands consist of vernal pools (0.147 acre), seasonal wetlands (1.862 acre), and seasonal marsh (0.974 acre). Gerber Creek, totaling 1.189 acres, is mapped as other waters (Figure 3 and Attachment C). The stock pond situated near the center of the site, adjacent to the railroad, has not been included as a potential Waters of the U.S. An electrical pump drawing well water mechanically maintains its water level.

## **Wetlands**

Two vernal pools have been mapped within the non-irrigated pastures. Vernal pools are topographic basins within the grassland community and are underlain with an impermeable or semi-permeable hardpan or duripan layer. Vernal pools are inundated up to one foot through the wet season and are dry by late spring through the following wet season.

A total of 0.147 acre of vernal pools have been mapped within the site. The plant species composition within vernal pools is predominantly native annual species that include slender popcorn flower (*Plagiobothrys stipitatus*), bractless hedge hyssop (*Gratiola ebracteata*), annual hairgrass (*Deschampsia danthonioides*), dwarf wooly heads (*Psilocarphus brevissimus*), and Fremont's goldfields (*Lasthenia fremontii*).



**FIGURE 3. Wetland Delineation**

2003-089 North Vineyard Greens #1

Seasonal wetlands are ephemeral wet areas where surface runoff and rainwater accumulate within low-lying areas or adjacent to other larger creeks and streams. They tend to be dominated by mostly non-native annual, and sometimes perennial, hydrophytic species. Six seasonal wetland depressions, totaling 1.862 acre, have been mapped on site. The vegetative composition of the seasonal wetlands is primarily non-native wetland generalist plants and native annual species. These include Italian ryegrass (*Lolium multiflorum*), curly dock (*Rumex crispus*), soft brome (*Bromus hordaceus*), and manna grass (*Glyceria* sp.). The constructed stock pond in the southwestern portion of the site has been mapped as seasonal wetland habitat, SW-7. The plant community within the pond is similar to naturally occurring seasonal wetlands because water does not appear to be mechanically pumped into the pond during the dry season. SW-8 is made up of the criteria necessary to be considered a wetland. It appears to be largely the result of the construction of the stock pond, SW-7, which has restricted the natural overland flow of runoff.

The seasonal marsh totals 0.974 acre and is located just south of the Central California Traction Railroad Tracks. Plants within the seasonal marsh are typical seasonal wetland and moist soil species such as Baltic rush (*Juncus balticus*), broad-leaf cattail (*Typha latifolia*), rough cocklebur (*Xanthium strumarium*), and dotted smartweed (*Polygonum punctatum*). This marsh is situated in a low-lying area of the project vicinity and, in addition to the runoff during the wet season, may also receive periodic runoff from the nursery throughout the year.

## **Other Waters**

Gerber Creek, which flows in a westerly direction, has been mapped as a seasonal creek according to the "Elk Grove, California" 7.5-minute quadrangle and was dry during this field survey. In general, Gerber Creek exhibits bed-and-bank characteristics and is largely unvegetated due to its depth and the scouring effects of flowing water. However, some hydrophytic vegetation may be present along the upper edges, and in areas where sediment accumulations provide a substrate suitable for plant establishment and growth. Himalaya blackberry (*Rubus discolor*) thickets can be found along the banks at various reaches of the creek.

## **Interstate or Foreign Commerce Connection**

Gerber Creek flows westward into Elder Creek, which continues westward into Morrison Creek and ultimately to the Sacramento River, which is a documented navigable water of the U.S. Due to the topography of the site, rainwater collects within the vernal pool, seasonal wetland, and seasonal marsh features on-site and eventually flows into Gerber Creek, or northward into various irrigation canals that are tributary to Elder Creek. Consequently, Gerber Creek and the wetlands mapped on-site should be considered connected with and/or adjacent to a Waters of a U.S. and would therefore be subject to interstate and/or foreign commerce.

The irrigation canals and the constructed stock pond have not been mapped as potential waters of the U.S. features for the following reasons. The irrigation canals do not appear to be natural drainages that have been channelized and are relatively narrow, averaging 2-4 feet wide. They are actively maintained for water delivery and/or drainage. The stock pond has been constructed within one of the leveled fields on-site. It is filled via a mechanical pump from which well water is drawn and does not have an outfall structure that is directly or indirectly tributary to other waters of the U.S.

## **CONCLUSION**

Potentially jurisdictional waters of the U.S. mapped include wetlands and other waters. Wetlands consist of vernal pools (0.147 acre), seasonal wetlands (1.862 acre), and seasonal marsh (0.974 acre). Gerber Creek, totaling 1.189 acres, is mapped as other waters. Upon verification by the Army Corps of Engineers, any impact to these features would likely require permitting pursuant to Section 404 and 401 of the federal Clean Water Act, and/or Section 1600-1603 of the California Fish and Game Code (Lake and Streambed Alteration Agreement).

## **LIST OF ATTACHMENTS**

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Attachment A – Wetland Delineation Data Sheets

Attachment B – Plant List

Attachment C – Wetland Delineation



## ATTACHMENT A

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Wetland Delineation Data Sheets

# ECORP Consulting, Inc.

ENVIRONMENTAL CONSULTANTS

## ROUTINE WETLAND DELINEATION

Project/Site: NVS - County Flood Date: 8/13/02 Sample Point: 01  
 Applicant/Owner: APN-066-0070-020 Field Investigator(s): K. Kwan  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Elk Grove, CA Section/Township/Range: T. 7 N, R. 6 E, Sec 5  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: seasonally ponded

### VEGETATION

HYDROPHYTIC VEGETATION? Yes  No

| Dominant Species  | Ind. Status | Stratum      | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-------------------|-------------|--------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>Jun cal</u> | <u>FACW</u> | <u>herb.</u> | <u>100</u>   | 5) _____         | _____       | _____   | _____        |
| 2) _____          | _____       | _____        | _____        | 6) _____         | _____       | _____   | _____        |
| 3) _____          | _____       | _____        | _____        | 7) _____         | _____       | _____   | _____        |
| 4) _____          | _____       | _____        | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/1 = 100 %

Comments: \_\_\_\_\_

### HYDROLOGY

WETLAND HYDROLOGY? Yes  No

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetlands  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_

Comments: \_\_\_\_\_

### SOILS

HYDRIC SOILS? Yes  No

Series/Phase: Z13 San Joaquin silt loam, leveled 0-15% slopes Drainage Class: mod. well drained  
 Taxonomy [Subgroup]: fine, mixed, thermic Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concretions  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes  No

| Depth (in.) | Horizon | Matrix Color     | Mottle Color     | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|---------|------------------|------------------|------------------------------|---------------------------------|
| <u>0-5</u>  | _____   | <u>7.5YR 4/2</u> | <u>7.5YR 5/6</u> | _____                        | _____                           |
| _____       | _____   | _____            | _____            | _____                        | _____                           |
| _____       | _____   | _____            | _____            | _____                        | _____                           |

Comments: \_\_\_\_\_

### \* DECISION \*

WETLAND / WATERS DETERMINATION? Yes  No

Rationale: all criteria have been met  
 General comments: \_\_\_\_\_  
 Wetland Type: Seasonal marsh

## HERBACEOUS COVER / DOMINANCE WORK SHEET

| <u>Species Observed</u> | <u>Actual Cover</u> | <u>Relative Cover</u> |
|-------------------------|---------------------|-----------------------|
| <i>Jua bel</i>          | 100                 | 100                   |
| <i>Pod pun</i>          | <i>tr</i>           |                       |
| <i>Xen str</i>          | <i>tr</i>           |                       |
| <i>Typ Lt</i>           | <i>tr</i>           |                       |
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|                         |                     |                       |
| <b>TOTAL SUM (Σ) =</b>  | 100                 | 100%                  |

| <u>COVER:</u>  |             |
|----------------|-------------|
| Vegetation     | 100         |
| Bare Ground    | _____       |
| Rocks          | _____       |
| Other          | _____       |
| <b>TOTAL =</b> | <b>100%</b> |

| <u>Species (Descending Order)</u> | <u>Relative Cover</u> | <u>Cumulative Cover</u> | <u>Indicator Status</u> | <u>Dominants</u> |
|-----------------------------------|-----------------------|-------------------------|-------------------------|------------------|
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|                                   |                       |                         |                         |                  |
| <b>TOTAL SUM (Σ) =</b>            | <b>100%</b>           |                         |                         |                  |

**ECORP Consulting, Inc.**  
**ENVIRONMENTAL CONSULTANTS**

**ROUTINE WETLAND DELINEATION**

Project/Site: NVS - County Ford Date: 8/13/02 Sample Point: 02  
 Applicant/Owner: APN 066-0070-020 Field Investigator(s): K. Kugel  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Elk Grove Section/Township/Range: T. 7N, E. 6E, sec. 5  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: seasonally ponded

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes  No

| Dominant Species  | Ind. Status | Stratum      | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-------------------|-------------|--------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>Lol mnl</u> | <u>Fac</u>  | <u>herb.</u> | <u>50</u>    | 5) _____         | _____       | _____   | _____        |
| 2) <u>Ele mnl</u> | <u>Obl</u>  | <u>herb.</u> | <u>25</u>    | 6) _____         | _____       | _____   | _____        |
| 3) _____          | _____       | _____        | _____        | 7) _____         | _____       | _____   | _____        |
| 4) _____          | _____       | _____        | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 2/2 = 100 %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes  No

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: \_\_\_\_\_

**SOILS**

**HYDRIC SOILS?** Yes  No

Series/Phase: 213 San Joaquin silt loam, leveled, 0-1% slopes Drainage Class: mod. well drained  
 Taxonomy [Subgroup]: fine, mixed, thermic Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concretions  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon | Matrix Color    | Mottle Color    | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|---------|-----------------|-----------------|------------------------------|---------------------------------|
| <u>0-5</u>  | _____   | <u>7.5YR4/2</u> | <u>7.5YR5/6</u> | _____                        | _____                           |
| _____       | _____   | _____           | _____           | _____                        | _____                           |
| _____       | _____   | _____           | _____           | _____                        | _____                           |

  
 Comments: \_\_\_\_\_

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes  No

Rationale: all criteria have been met  
 General comments: \_\_\_\_\_  
 Wetland Type: seasonal marsh

# HERBACEOUS COVER / DOMINANCE WORK SHEET

| <u>Species Observed</u>                      | <u>Actual Cover</u> | <u>Relative Cover</u> | <u>COVER:</u>  |             |
|--|---------------------|-----------------------|----------------|-------------|
| <i>Lol mul</i>                               | 50                  | 50                    | Vegetation     | 95          |
| <i>Ele mac</i>                               | 25                  | 25                    | Bare Ground    |             |
| <i>Hor mar</i>                               | 15                  | 15                    | Rocks          |             |
| <i>Pum cri</i>                               | 5                   |                       | Other          |             |
| <i>Lac sen</i>                               | 6                   |                       | <b>TOTAL =</b> | <b>100%</b> |
| <i>Jun hal</i>                               | 5                   |                       |                |             |
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|  |                     |                       |                |             |
| <b>TOTAL SUM (<math>\Sigma</math>) =</b> 100 |                     |                       | 100%           |             |

| <u>Species (Descending Order)</u> | <u>Relative Cover</u> | <u>Cumulative Cover</u> | <u>Indicator Status</u> | <u>Dominants</u> |
|-----------------------------------|-----------------------|-------------------------|-------------------------|------------------|
|                                   |                       |                         |                         |                  |
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|                                   |                       |                         |                         |                  |

**TOTAL SUM ( $\Sigma$ ) = 100%**

ENVIRONMENTAL CONSULTANTS

Project/Site: NUS - County Flood Date: 8/13/02 Sample Point: 03N
Applicant/Owner: APN 066-0070-020 Field Investigator(s): K. Kwal
County: Sacramento State: CA Plant Community: Annual Grassland
Quad(s): Elk Grove, CA Section/Township/Range: T. 7N, R. 6E, sec. 5
Do normal environmental conditions exist site? Yes [X] No [ ] If no, explain:
Atypical Situation? Yes [ ] No [X] Explain:
Is this a potential Problem Area? Yes [ ] No [X] Explain:

VEGETATION

HYDROPHYTIC VEGETATION? Yes [ ] No [X]

Table with 8 columns: Dominant Species, Ind. Status, Stratum, Rel. % Cover, Dominant Species, Ind. Status, Stratum, Rel. % Cover. Row 1: Ave sat, N/L, herb, 71, 5) ...

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/1 = 0 %

Comments:

HYDROLOGY

WETLAND HYDROLOGY? Yes [ ] No [X]

Recorded Data: Yes [ ] No [X] If yes,
Depth of surface water: (in.) Depth to free water in pit: (in.) Depth to saturated soil: (in.)
Primary Indicators: [ ] Inundated [ ] Saturated in Upper 12 in. [ ] Water Marks [ ] Drift Lines [ ] Sediment Deposits [ ] Drainage Patterns in Wetland
Secondary Indicators (2 or more required):
[ ] Oxidized Root Channels in Upper 12 in. [ ] Water-stained Leaves [ ] Local Soil Survey Data [ ] FAC-Neutral Test [ ] Other
Comments:

SOILS

HYDRIC SOILS? Yes [ ] No [X]

Series/Phase: 213 San Joaquin silt loam, leveled, 0-10% slopes Drainage Class: mod. well drained
Taxonomy [Subgroup]: fine, mixed, thermic Abruptic Durixeralfs Confirm Map Type: Yes [ ] No [ ]
[ ] Histosol [ ] Histic Epipedon [ ] Sulfidic Odor [ ] Aquic Moisture Regime [ ] Reducing Conditions [ ] Gleyed/Low Chroma Colors [ ] Concretion
[ ] High Organic Content in Surface Layer in Sandy Soils [ ] Organic Streaking in Sandy Soils [ ] Listed on Hydric Soils List [ ] Other
Inclusions [Series/Phase]: On Hydric Soils List: Yes [ ] No [ ]

Table with 6 columns: Depth (in.), Horizon, Matrix Color, Mottle Color, Mottle (Abund/Contrast/Size), Texture, Concretions, Structure. Row 1: 0-6, 7.5YR 4/3, -

Comments: high chroma

\* DECISION \*

WETLAND / WATERS DETERMINATION? Yes [ ] No [X]

Rationale: all criteria have not been met
General comments: upland data pt.

Wetland Type:

# HERBACEOUS COVER / DOMINANCE WORK SHEET

| <u>Species Observed</u>  | <u>Actual Cover</u> | <u>Relative Cover</u> |
|--------------------------|---------------------|-----------------------|
| Ave sat                  | 75                  | 71                    |
| Bro hor                  | 15                  |                       |
| Lol uncl                 | 10                  |                       |
| Hol vir                  | 5                   |                       |
| Rum cri                  | 60                  |                       |
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| TOTAL SUM ( $\Sigma$ ) = | 105                 | 100%                  |

| <u>COVER:</u> |       |
|---------------|-------|
| Vegetation    | 95    |
| Bare Ground   | _____ |
| Rocks         | _____ |
| Other         | _____ |
| TOTAL =       | 100%  |

| <u>Species (Descending Order)</u> | <u>Relative Cover</u> | <u>Cumulative Cover</u> | <u>Indicator Status</u> | <u>Dominants</u> |
|-----------------------------------|-----------------------|-------------------------|-------------------------|------------------|
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|                                   |                       |                         |                         |                  |
| TOTAL SUM ( $\Sigma$ ) =          | 100%                  |                         |                         |                  |

# ECORP Consulting, Inc.

# ROUTINE WETLAND DELINEATION

## ENVIRONMENTAL CONSULTANTS

Project/Site: NVS - County Flood Date: 8/13/02 Sample Point: 04N  
 Applicant/Owner: APN 066-0070-020 Field Investigator(s): K. Kwan  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Elk Grove, CA Section/Township/Range: \_\_\_\_\_  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: \_\_\_\_\_

### VEGETATION

HYDROPHYTIC VEGETATION? Yes  No

| Dominant Species  | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>Hor nar</u> | <u>Fac</u>  | <u>herb</u> | <u>50</u>    | 5) _____         | _____       | _____   | _____        |
| 2) <u>Lol mnd</u> | <u>Fac</u>  | <u>herb</u> | <u>25</u>    | 6) _____         | _____       | _____   | _____        |
| 3) _____          | _____       | _____       | _____        | 7) _____         | _____       | _____   | _____        |
| 4) _____          | _____       | _____       | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 2/2 = 100 %

Comments: \_\_\_\_\_

### HYDROLOGY

WETLAND HYDROLOGY? Yes  No

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: shrub build-up but not matted; slight depression

### SOILS

HYDRIC SOILS? Yes  No

Series/Phase: 213 San Joaquin silt loam, leveled, 0-1% slopes Drainage Class: mod. well drained  
 Taxonomy [Subgroup]: fine, mixed, thermic Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concretion  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon | Matrix Color      | Mottle Color      | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|---------|-------------------|-------------------|------------------------------|---------------------------------|
| <u>0-6</u>  | _____   | <u>7.5 YR 4/3</u> | <u>7.5 YR 5/6</u> | _____                        | _____                           |
| _____       | _____   | _____             | _____             | _____                        | _____                           |
| _____       | _____   | _____             | _____             | _____                        | _____                           |

Comments: high chrome

### \* DECISION \*

WETLAND / WATERS DETERMINATION? Yes  No

Rationale: all criteria have been met  
 General comments: marginally wet area; no strong indicators present

Wetland Type: \_\_\_\_\_



# HERBACEOUS COVER / DOMINANCE WORK SHEET

| <u>Species Observed</u>                  | <u>Actual Cover</u> | <u>Relative Cover</u> |
|--|---------------------|-----------------------|
| Hor mar                                  | 30                  | 50                    |
| Bum cr.                                  | 5                   | 8                     |
| Lac sen                                  | 10                  | 17                    |
| Lol mnd                                  | 15                  | 25                    |
| Bro hor                                  | tr                  |                       |
| Ele mac                                  | tr                  |                       |
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| <b>TOTAL SUM (<math>\Sigma</math>) =</b> | <b>100%</b>         |                       |

| <u>COVER:</u>  |             |
|----------------|-------------|
| Vegetation     | 60          |
| Bare Ground    | _____       |
| Rocks          | _____       |
| Other _____    | _____       |
| <b>TOTAL =</b> | <b>100%</b> |

| <u>Species (Descending Order)</u>        | <u>Relative Cover</u> | <u>Cumulative Cover</u> | <u>Indicator Status</u> | <u>Dominants</u> |
|--|-----------------------|-------------------------|-------------------------|------------------|
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|  |                       |                         |                         |                  |
| <b>TOTAL SUM (<math>\Sigma</math>) =</b> | <b>100%</b>           |                         |                         |                  |

**ECORP Consulting, Inc.**  
**ENVIRONMENTAL CONSULTANTS**

**ROUTINE WETLAND DELINEATION**

Project/Site: NVS - County Flood Date: 8/13/02 Sample Point: 05  
 Applicant/Owner: APN 066 0080 010 Field Investigator(s): K. Kwan  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Elle Grove, CA Section/Township/Range: T.7N, R.6E, Sec. 5  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: Seasonally ponded

**HYDROPHYTIC VEGETATION? Yes  No**

**VEGETATION**

| Dominant Species  | Ind. Status | Stratum     | Rel. % Cover | Dominant Species  | Ind. Status | Stratum     | Rel. % Cover |
|-------------------|-------------|-------------|--------------|-------------------|-------------|-------------|--------------|
| 1) <u>Ps. bre</u> | <u>Obl</u>  | <u>herb</u> | <u>21</u>    | 5) <u>Hem fil</u> | <u>N/L</u>  | <u>herb</u> | <u>13</u>    |
| 2) <u>Nav leu</u> | <u>Obl</u>  | <u>herb</u> | <u>13</u>    | 6) _____          | _____       | _____       | _____        |
| 3) <u>Des dum</u> | <u>FACW</u> | <u>herb</u> | <u>13</u>    | 7) _____          | _____       | _____       | _____        |
| 4) <u>Ver per</u> | <u>Obl</u>  | <u>herb</u> | <u>13</u>    | 8) _____          | _____       | _____       | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 4/5 = 80 %

Comments: \_\_\_\_\_

**WETLAND HYDROLOGY? Yes  No**

**HYDROLOGY**

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other algal matting

Comments: \_\_\_\_\_

**HYDRIC SOILS? Yes  No**

**SOILS**

Series/Phase: 213 San Joaquin silt loam, leveled, 0-10% slopes Drainage Class: mod. well drained  
 Taxonomy [Subgroup]: fine, mixed, thermic Abruptic Duronalf Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concretion  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes  No

| Depth (in.) | Horizon | Matrix Color    | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|---------|-----------------|--------------|------------------------------|---------------------------------|
| <u>0-6</u>  | _____   | <u>7.5YR4/4</u> | <u>-</u>     | _____                        | _____                           |
| _____       | _____   | _____           | _____        | _____                        | _____                           |
| _____       | _____   | _____           | _____        | _____                        | _____                           |

Comments: high chroma; possibly fill soil for elevating Railroad

**WETLAND / WATERS DETERMINATION? Yes  No**

**\* DECISION \***

Rationale: dominance of OBL & FACW plants  
 General comments: VPI in Railroad Right-of-Way  
 Wetland Type: Wetland pool



**ECORP Consulting, Inc.**  
**ENVIRONMENTAL CONSULTANTS**

**ROUTINE WETLAND DELINEATION**

Project/Site: NVS- County Flood Date: 8/13/02 Sample Point: 06  
 Applicant/Owner: APN 066 0070 044 Field Investigator(s): K. Kwan  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Elk Grove, CA Section/Township/Range: T. 7 N. R. 6 E, sec. 5  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: seasonally ponding

**HYDROPHYTIC VEGETATION? Yes  No**

**VEGETATION**

| Dominant Species  | Ind. Status | Stratum      | Rel. % Cover | Dominant Species  | Ind. Status | Stratum      | Rel. % Cover |
|-------------------|-------------|--------------|--------------|-------------------|-------------|--------------|--------------|
| 1) <u>Lolium</u>  | <u>Fac</u>  | <u>herb.</u> | <u>29</u>    | 5) <u>Vul bro</u> | <u>FacW</u> | <u>herb.</u> | <u>12</u>    |
| 2) <u>Hor was</u> | <u>Fac</u>  | <u>herb.</u> | <u>12</u>    | 6) _____          | _____       | _____        | _____        |
| 3) <u>Ele mac</u> | <u>Obl</u>  | <u>herb.</u> | <u>12</u>    | 7) _____          | _____       | _____        | _____        |
| 4) <u>Des dan</u> | <u>FacW</u> | <u>herb.</u> | <u>12</u>    | 8) _____          | _____       | _____        | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 5/5 = 100 %

Comments: \_\_\_\_\_

**WETLAND HYDROLOGY? Yes  No**

**HYDROLOGY**

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other algal mat  
 Comments: well defined basin

**HYDRIC SOILS? Yes  No**

**SOILS**

Series/Phase: 213 San Joaquin silt Gray, leveled, 0-1% slopes Drainage Class: mod. well drained  
 Taxonomy [Subgroup]: fine, mixed, thermic Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concrete  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon | Matrix Color   | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|---------|----------------|--------------|------------------------------|---------------------------------|
| <u>0-4</u>  | _____   | <u>10YR3/3</u> | _____        | _____                        | _____                           |
| _____       | _____   | _____          | _____        | _____                        | _____                           |
| _____       | _____   | _____          | _____        | _____                        | _____                           |

Comments: \_\_\_\_\_

**WETLAND / WATERS DETERMINATION? Yes  No**

**\* DECISION \***

Rationale: all criteria have been met  
 General comments: \_\_\_\_\_

Wetland Type: seasonal wetland

HERBACEOUS COVER / DOMINANCE WORK SHEET

| Species Observed | Actual Cover | Relative Cover |
|------------------|--------------|----------------|
| Lol mml          | 25           | 29             |
| Hor mar          | 10           | 12             |
| Ele mac          | 10           | 12             |
| Hyp gla          | 15           | 18             |
| Des dan          | 10           | 12             |
| Pum ai           | 5            | 6              |
| Vul bro          | 10           | 12             |
|                  |              |                |
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|                  |              |                |
| TOTAL SUM (Σ) =  | 85           | 100%           |

COVER:  
 Vegetation 75  
 Bare Ground \_\_\_\_\_  
 Rocks \_\_\_\_\_  
 Other \_\_\_\_\_  
 TOTAL = 100%

| Species (Descending Order) | Relative Cover | Cumulative Cover | Indicator Status | Dominants |
|----------------------------|----------------|------------------|------------------|-----------|
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| _____                      | _____          | _____            | _____            | _____     |
| TOTAL SUM (Σ) =            | 100%           |                  |                  |           |

# ECORP Consulting, Inc.

## ROUTINE WETLAND DELINEATION

### ENVIRONMENTAL CONSULTANTS

Project/Site: NVS - County Flood Date: 8/13/02 Sample Point: 07 N  
 Applicant/Owner: APN 066 0070 044 Field Investigator(s): K. Karan  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Elk Grove, CA Section/Township/Range: T. 7 N. R. 6 E. Sec 5  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: \_\_\_\_\_

### VEGETATION

HYDROPHYTIC VEGETATION? Yes  No

|    | Dominant Species | Ind. Status | Stratum      | Rel. % Cover |    | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|----|------------------|-------------|--------------|--------------|----|------------------|-------------|---------|--------------|
| 1) | <u>Brodiaea</u>  | <u>FACU</u> | <u>herb.</u> | <u>45</u>    | 5) | _____            | _____       | _____   | _____        |
| 2) | <u>Lolium</u>    | <u>FAC</u>  | <u>herb</u>  | <u>23</u>    | 6) | _____            | _____       | _____   | _____        |
| 3) | _____            | _____       | _____        | _____        | 7) | _____            | _____       | _____   | _____        |
| 4) | _____            | _____       | _____        | _____        | 8) | _____            | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/2 = 50 %

Comments: \_\_\_\_\_

### HYDROLOGY

WETLAND HYDROLOGY? Yes  No

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: reference upland data pt.

### SOILS

HYDRIC SOILS? Yes  No

Series/Phase: Z13 San Joaquin silt loam, leveled, 0-170 s loam Drainage Class: mod. well drained  
 Taxonomy [Subgroup]: fine, mixed, thermic Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concrete  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon | Matrix Color   | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|---------|----------------|--------------|------------------------------|---------------------------------|
| <u>0-4</u>  | _____   | <u>10YR3/3</u> | _____        | _____                        | _____                           |
| _____       | _____   | _____          | _____        | _____                        | _____                           |
| _____       | _____   | _____          | _____        | _____                        | _____                           |

Comments: high chroma

### \* DECISION \*

WETLAND / WATERS DETERMINATION? Yes  No

Rationale: criteria have not been met  
 General comments: upland adjacent to #06

Wetland Type: \_\_\_\_\_

## HERBACEOUS COVER / DOMINANCE WORK SHEET

| <u>Species Observed</u> | <u>Actual Cover</u> | <u>Relative Cover</u> |
|-------------------------|---------------------|-----------------------|
| Bra hor                 | 50                  | 45                    |
| Bra dia                 | 10                  | 9                     |
| Ann cri                 | 5                   | 5                     |
| Lol uncl                | 25                  | 23                    |
| Ane fol                 | 10                  | 9                     |
| Ero hst                 | 5                   | 5                     |
| Lac ser                 | 5                   | 5                     |
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| TOTAL SUM (Σ) =         | <u>110</u>          | <u>100%</u>           |

COVER:

|             |             |
|-------------|-------------|
| Vegetation  | <u>100</u>  |
| Bare Ground | _____       |
| Rocks       | _____       |
| Other       | _____       |
| TOTAL =     | <u>100%</u> |

| <u>Species (Descending Order)</u> | <u>Relative Cover</u> | <u>Cumulative Cover</u> | <u>Indicator Status</u> | <u>Dominants</u> |
|-----------------------------------|-----------------------|-------------------------|-------------------------|------------------|
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| TOTAL SUM (Σ) =                   | <u>100%</u>           |                         |                         |                  |

Project/Site: NVS- County Flood Date: 8/14/02 Sample Point: 08  
 Applicant/Owner: APN 066 0080 001 Field Investigator(s): K. Kwan  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Elk Grove, CA Section/Township/Range: T. 7N, R. 6E, sec. 5

Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: field planted for oat hay; already harvested  
 Is this a potential Problem Area? Yes  No  Explain: seasonally ponded

**HYDROPHYTIC VEGETATION? Yes  No**

**VEGETATION**

|    | Dominant Species | Ind. Status | Stratum      | Rel. % Cover |    | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|----|------------------|-------------|--------------|--------------|----|------------------|-------------|---------|--------------|
| 1) | <u>Gly spe</u>   | <u>Obl</u>  | <u>herb.</u> | <u>45</u>    | 5) | _____            | _____       | _____   | _____        |
| 2) | <u>Pol mon</u>   | <u>FACW</u> | <u>herb</u>  | <u>36</u>    | 6) | _____            | _____       | _____   | _____        |
| 3) | _____            | _____       | _____        | _____        | 7) | _____            | _____       | _____   | _____        |
| 4) | _____            | _____       | _____        | _____        | 8) | _____            | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 2/2 = 100 %

Comments: \_\_\_\_\_

**WETLAND HYDROLOGY? Yes  No**

**HYDROLOGY**

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: well defined basin in leveled field

**HYDRIC SOILS? Yes  No**

**SOILS**

Series/Phase: 213 San Joaquin silt loam, leveled, 0-1% slopes Drainage Class: mod. well drain  
 Taxonomy [Subgroup]: fine, mixed, thermic Abrupt Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concrete  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes  No

| Depth (in.) | Horizon | Matrix Color    | Mottle Color     | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|---------|-----------------|------------------|------------------------------|---------------------------------|
| <u>0-8</u>  | _____   | <u>10YR 3/3</u> | <u>7.5YR 4/6</u> | _____                        | _____                           |
| _____       | _____   | _____           | _____            | _____                        | _____                           |
| _____       | _____   | _____           | _____            | _____                        | _____                           |

Comments: \_\_\_\_\_

**WETLAND / WATERS DETERMINATION? Yes  No**

**\* DECISION \***

Rationale: all criteria have been met  
 General comments: this was probably an overflow of the creek but has long since been isolated Wetland Type: seasonal wetland



## HERBACEOUS COVER / DOMINANCE WORK SHEET

| Species Observed         | Actual Cover | Relative Cover |
|--------------------------|--------------|----------------|
| Gly spe                  | 50           | 45             |
| Pol mon                  | 40           | 36             |
| Pla sti                  | 5            | 5              |
| Lol uncl                 | 10           | 9              |
| Rum pul                  | 5            | 5              |
|                          |              |                |
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|                          |              |                |
| TOTAL SUM ( $\Sigma$ ) = | 110          | 100%           |

**COVER:**

|                |             |
|----------------|-------------|
| Vegetation     | 100         |
| Bare Ground    | _____       |
| Rocks          | _____       |
| Other          | _____       |
| <b>TOTAL =</b> | <b>100%</b> |

| Species (Descending Order) | Relative Cover | Cumulative Cover | Indicator Status | Dominants |
|----------------------------|----------------|------------------|------------------|-----------|
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|                            |                |                  |                  |           |
| TOTAL SUM ( $\Sigma$ ) =   | 100%           |                  |                  |           |

TOTAL SUM ( $\Sigma$ ) = 100%

# ECORP Consulting, Inc.

# ROUTINE WETLAND DELINEATION

## ENVIRONMENTAL CONSULTANTS

Project/Site: NUS- County Flood Date: 8/14/02 Sample Point: 09 N  
 Applicant/Owner: APN 066 0070 001 Field Investigator(s): K. Kwan  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Ole Grove, CA Section/Township/Range: T. 7N. R. 6E. Sec 5

Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: field planted for hay and already harvested  
 Is this a potential Problem Area? Yes  No  Explain: \_\_\_\_\_

HYDROPHYTIC VEGETATION? Yes  No

### VEGETATION

|    | Dominant Species | Ind. Status | Stratum     | Rel. % Cover |    | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|----|------------------|-------------|-------------|--------------|----|------------------|-------------|---------|--------------|
| 1) | <u>Lolium</u>    | <u>Fac</u>  | <u>herb</u> | <u>78</u>    | 5) | _____            | _____       | _____   | _____        |
| 2) | _____            | _____       | _____       | _____        | 6) | _____            | _____       | _____   | _____        |
| 3) | _____            | _____       | _____       | _____        | 7) | _____            | _____       | _____   | _____        |
| 4) | _____            | _____       | _____       | _____        | 8) | _____            | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/1 = 100 %

Comments: field planted for hay

WETLAND HYDROLOGY? Yes  No

### HYDROLOGY

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: levelled

HYDRIC SOILS? Yes  No

### SOILS

Series/Phase: 213 San Joaquin silt loam, leveled, 0-10% slopes Drainage Class: mod. well drain  
 Taxonomy [Subgroup]: fine, mixed, thermic Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concrete  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon | Matrix Color    | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|---------|-----------------|--------------|------------------------------|---------------------------------|
| <u>0-5</u>  | _____   | <u>10YR 4/3</u> | <u>-</u>     | _____                        | _____                           |
| _____       | _____   | _____           | _____        | _____                        | _____                           |
| _____       | _____   | _____           | _____        | _____                        | _____                           |

Comments: \_\_\_\_\_

WETLAND / WATERS DETERMINATION? Yes  No

### \* DECISION \*

Rationale: criteria have not been met  
 General comments: upland area adjacent to #08

Wetland Type: \_\_\_\_\_

**HERBACEOUS COVER / DOMINANCE WORK SHEET**

| <u>Species Observed</u>           | <u>Actual Cover</u> | <u>Relative Cover</u> |
|-----------------------------------|---------------------|-----------------------|
| Lol mult                          | 20                  | 78                    |
| Cen sol                           | 5                   |                       |
| Hol vir                           | 5                   |                       |
| Hem fit                           | 5                   |                       |
| Con arv                           | 5                   |                       |
| Bro hor                           | 5                   |                       |
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| <b>TOTAL SUM (Σ) =</b> <u>115</u> |                     | <b>100%</b>           |

**COVER:**

|                |             |
|----------------|-------------|
| Vegetation     | <u>100</u>  |
| Bare Ground    | _____       |
| Rocks          | _____       |
| Other          | _____       |
| <b>TOTAL =</b> | <b>100%</b> |

| <u>Species (Descending Order)</u> | <u>Relative Cover</u> | <u>Cumulative Cover</u> | <u>Indicator Status</u> | <u>Dominants</u> |
|-----------------------------------|-----------------------|-------------------------|-------------------------|------------------|
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**TOTAL SUM (Σ) = 100%**

# ECORP Consulting, Inc.

# ROUTINE WETLAND DELINEATION

## ENVIRONMENTAL CONSULTANTS

Project/Site: NUS- County Flood Date: 8/14/02 Sample Point: 10  
 Applicant/Owner: APN 066 0070 001 Field Investigator(s): K. Kwan  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Elk Grove, CA Section/Township/Range: T. 7N. R. 6E. Sec 5  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: Seasonally ponded area

### VEGETATION

HYDROPHYTIC VEGETATION? Yes  No

|    | Dominant Species | Ind. Status | Stratum     | Rel. % Cover |    | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|----|------------------|-------------|-------------|--------------|----|------------------|-------------|---------|--------------|
| 1) | <u>Lolium</u>    | <u>FAC</u>  | <u>herb</u> | <u>48</u>    | 5) |                  |             |         |              |
| 2) | <u>Cynodon</u>   | <u>FAC</u>  | <u>herb</u> | <u>14</u>    | 6) |                  |             |         |              |
| 3) |                  |             |             |              | 7) |                  |             |         |              |
| 4) |                  |             |             |              | 8) |                  |             |         |              |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 2/2 = 100 %

Comments: \_\_\_\_\_

### HYDROLOGY

WETLAND HYDROLOGY? Yes  No

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: \_\_\_\_\_

### SOILS

HYDRIC SOILS? Yes  No

Series/Phase: 213 San Joaquin silt loam, leveled, 0-1% slopes Drainage Class: mod. well drained  
 Taxonomy [Subgroup]: fine, mixed, thermic Abrupt Durixerolls Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concretions  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon | Matrix Color    | Mottle Color     | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|---------|-----------------|------------------|------------------------------|---------------------------------|
| <u>0-6</u>  |         | <u>10YR 4/2</u> | <u>7.5YR 5/6</u> |                              |                                 |
|             |         |                 |                  |                              |                                 |
|             |         |                 |                  |                              |                                 |
|             |         |                 |                  |                              |                                 |

  
 Comments: \_\_\_\_\_

### \* DECISION \*

WETLAND / WATERS DETERMINATION? Yes  No

Rationale: all criteria have been met  
 General comments: SW adjacent to creek channel  
 Wetland Type: seasonal wetland



# ECORP Consulting, Inc.

## ROUTINE WETLAND DELINEATION

### ENVIRONMENTAL CONSULTANTS

Project/Site: NVS - County Flood Date: 8/14/02 Sample Point: 11 N  
 Applicant/Owner: APN 066 0080 001 Field Investigator(s): IL Kwan  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Elk Grove, CA Section/Township/Range: T. 7N. R. 6E, Sec 5  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: \_\_\_\_\_

HYDROPHYTIC VEGETATION? Yes  No

### VEGETATION

| Dominant Species  | Ind. Status | Stratum      | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-------------------|-------------|--------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>Ave sat</u> | <u>N/L</u>  | <u>herb.</u> | <u>50</u>    | 5) _____         | _____       | _____   | _____        |
| 2) <u>Bro wn</u>  | <u>FACW</u> | <u>herb</u>  | <u>20</u>    | 6) _____         | _____       | _____   | _____        |
| 3) _____          | _____       | _____        | _____        | 7) _____         | _____       | _____   | _____        |
| 4) _____          | _____       | _____        | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/2 = 0 %

Comments: \_\_\_\_\_

WETLAND HYDROLOGY? Yes  No

### HYDROLOGY

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: \_\_\_\_\_

HYDRIC SOILS? Yes  No

### SOILS

Series/Phase: 213 San Joaquin silt loam, 0-1% slopes Drainage Class: mod. well drained  
 Taxonomy [Subgroup]: fine, mixed, thermic Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concretion  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon | Matrix Color    | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|---------|-----------------|--------------|------------------------------|---------------------------------|
| <u>0-5</u>  | _____   | <u>10YR 3/3</u> | <u>-</u>     | _____                        | _____                           |
| _____       | _____   | _____           | _____        | _____                        | _____                           |
| _____       | _____   | _____           | _____        | _____                        | _____                           |

Comments: high chroma

WETLAND / WATERS DETERMINATION? Yes  No

### \* DECISION \*

Rationale: all criteria have not been met  
 General comments: upland pt. adjacent to #10  
 Wetland Type: \_\_\_\_\_

# HERBACEOUS COVER / DOMINANCE WORK SHEET

| <u>Species Observed</u> | <u>Actual Cover</u> | <u>Relative Cover</u> |
|-------------------------|---------------------|-----------------------|
| Ave fat                 | 50                  | 50                    |
| Luc sen                 | 5                   |                       |
| Lon an                  | 5                   |                       |
| Bro hor                 | 20                  | 20                    |
| Lol ann                 | 10                  | 10                    |
| Hor mur                 | 10                  | 10                    |
| Rap sat                 | tr                  |                       |
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| <b>TOTAL SUM (Σ) =</b>  | <u>100</u>          | 100%                  |

| <u>COVER:</u>  |             |
|----------------|-------------|
| Vegetation     | <u>100</u>  |
| Bare Ground    | _____       |
| Rocks          | _____       |
| Other          | _____       |
| <b>TOTAL =</b> | <b>100%</b> |

| <u>Species (Descending Order)</u> | <u>Relative Cover</u> | <u>Cumulative Cover</u> | <u>Indicator Status</u> | <u>Dominants</u> |
|-----------------------------------|-----------------------|-------------------------|-------------------------|------------------|
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|                                   |                       |                         |                         |                  |
| <b>TOTAL SUM (Σ) =</b>            | <b>100%</b>           |                         |                         |                  |

# ECORP Consulting, Inc.

## ROUTINE WETLAND DELINEATION

ENVIRONMENTAL CONSULTANTS

Project/Site: North Vineyard Greens #1 Date: 12-19-03 Sample Point: 12  
 Applicant/Owner: N. Vineyard Greens G.P. Field Investigator(s): J. Hansen  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): EIK Grove Section/Township/Range: S5, T.7N., R.6E  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: \_\_\_\_\_

### VEGETATION

HYDROPHYTIC VEGETATION? Yes  No

| Dominant Species  | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>HOR MUR</u> | <u>—</u>    | <u>Herb</u> | <u>50</u>    | 5) _____         | _____       | _____   | _____        |
| 2) <u>CEN SOL</u> | <u>—</u>    | <u>Herb</u> | <u>30</u>    | 6) _____         | _____       | _____   | _____        |
| 3) <u>GER MOL</u> | <u>—</u>    | <u>Herb</u> | <u>10</u>    | 7) _____         | _____       | _____   | _____        |
| 4) <u>CIC INT</u> | <u>—</u>    | <u>Herb</u> | <u>10</u>    | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/4 = 0 %

Comments: Does not meet criteria for wetland plants

### HYDROLOGY

WETLAND HYDROLOGY? Yes  No

Recorded Data: Yes  No  If yes, \_\_\_\_\_

Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)

Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_

Comments: Does not meet criteria for hydrology

### SOILS

HYDRIC SOILS? Yes  No

Series/Phase: 213 San Joaquin silt loam, leveled 0-1% slopes Drainage Class: well-drained

Taxonomy [Subgroup]: Fine, Abruptic Durixeralfs Confirm Map Type: Yes  No

Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concretions

High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_

Inclusions [Series/Phase]: None On Hydric Soils List: Yes  No

| Depth (in.) | Horizon  | Matrix Color     | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|----------|------------------|--------------|------------------------------|---------------------------------|
| <u>6"</u>   | <u>A</u> | <u>7.5YR 3/4</u> | <u>—</u>     | <u>—</u>                     | <u>Sandy loam</u>               |

Comments: Does not meet criteria for hydric soils

### DECISION

WETLAND / WATERS DETERMINATION? Yes  No

Rationale: Does not meet criteria for wetlands

General comments: \_\_\_\_\_ Wetland Type: Upland



# HERBACEOUS COVER / DOMINANCE WORK SHEET

| <u>Species Observed</u> | <u>Actual Cover</u> | <u>Relative Cover</u> |
|-------------------------|---------------------|-----------------------|
| CEN SOL                 | 30%                 |                       |
| Ch. Corn                | 10%                 |                       |
| GER MOL                 | 10%                 |                       |
| HOR MUR                 | 50%                 |                       |
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| TOTAL SUM (Σ) =         | 100%                | 100%                  |

COVER:

|             |       |
|-------------|-------|
| Vegetation  | 100%  |
| Bare Ground | _____ |
| Rocks       | _____ |
| Other       | _____ |
| TOTAL =     | 100%  |

| <u>Species (Descending Order)</u> | <u>Relative Cover</u> | <u>Cumulative Cover</u> | <u>Indicator Status</u> | <u>Dominants</u> |
|-----------------------------------|-----------------------|-------------------------|-------------------------|------------------|
| HOR MUR                           | 50%                   |                         |                         |                  |
| CEN SOL                           | 30%                   |                         |                         |                  |
| GER MOL                           | 10%                   |                         |                         |                  |
| CIC INT                           | 10%                   |                         |                         |                  |
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| TOTAL SUM (Σ) =                   | 100%                  |                         |                         |                  |

**ECORP Consulting, Inc.**  
**ENVIRONMENTAL CONSULTANTS**

**ROUTINE WETLAND DELINEATION**

Project/Site: North Vineyard Greens #1 Date: 12/19/03 Sample Point: 13  
 Applicant/Owner: N. Vineyard Greens G.P. Field Investigator(s): J. Hansen  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): E1K Grove Section/Township/Range: SS, T. 7 N., R. 6 E.  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION? Yes  No**

| Dominant Species  | Ind. Status | Stratum     | Rel. % Cover | Dominant Species  | Ind. Status | Stratum     | Rel. % Cover |
|-------------------|-------------|-------------|--------------|-------------------|-------------|-------------|--------------|
| 1) <u>CYPERA</u>  | <u>FACW</u> | <u>Herb</u> | <u>21%</u>   | 5) <u>RUM CRI</u> | <u>FACW</u> | <u>Herb</u> | <u>7%</u>    |
| 2) <u>MEN PUL</u> | <u>OBL</u>  | <u>Herb</u> | <u>7%</u>    | 6) _____          | _____       | _____       | _____        |
| 3) <u>PLA MAJ</u> | <u>FACW</u> | <u>Herb</u> | <u>7%</u>    | 7) _____          | _____       | _____       | _____        |
| 4) <u>RAN CAL</u> | <u>FAC</u>  | <u>Herb</u> | <u>7%</u>    | 8) _____          | _____       | _____       | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 3/5 = 60%

Comments: meets criteria for wetland plants

**HYDROLOGY**

**WETLAND HYDROLOGY? Yes  No**

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: 1" (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetlands  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: meets criteria for hydrology

**SOILS**

**HYDRIC SOILS? Yes  No**

Series/Phase: 213 San Joaquin silt loam, leveled 0-1% slopes Drainage Class: well-drained  
 Taxonomy [Subgroup]: Fine, Abrupt Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concretion  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: None On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon  | Matrix Color     | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|----------|------------------|--------------|------------------------------|---------------------------------|
| <u>13"</u>  | <u>A</u> | <u>7.5YR 3/6</u> | _____        | _____                        | <u>Sandy loam</u>               |
| _____       | _____    | _____            | _____        | _____                        | _____                           |
| _____       | _____    | _____            | _____        | _____                        | _____                           |
| _____       | _____    | _____            | _____        | _____                        | _____                           |

Comments: \_\_\_\_\_

**\* DECISION \*** **WETLAND / WATERS DETERMINATION? Yes  No**   
 Rationale: Meets all 3 criteria for wetland

General comments: \_\_\_\_\_

Wetland Type: Seasonal Wetland

# HERBACEOUS COVER / DOMINANCE WORK SHEET

| <u>Species Observed</u> | <u>Actual Cover</u> | <u>Relative Cover</u> |
|-------------------------|---------------------|-----------------------|
| CYP ERA                 | 50%                 |                       |
| MEN PUL                 | 5%                  |                       |
| PLA <sup>MAJ</sup>      | 5%                  |                       |
| RAN → CAL               | 5%                  |                       |
| RUM CRT                 | 5%                  |                       |
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| TOTAL SUM (Σ) =         | 70                  | 100%                  |

COVER:

|             |      |
|-------------|------|
| Vegetation  | 70%  |
| Bare Ground | 30%  |
| Rocks       | —    |
| Other       | —    |
| TOTAL =     | 100% |

| <u>Species (Descending Order)</u> | <u>Relative Cover</u> | <u>Cumulative Cover</u> | <u>Indicator Status</u> | <u>Dominants</u> |
|-----------------------------------|-----------------------|-------------------------|-------------------------|------------------|
| CYP ERA                           | 71%                   | 71%                     | FACW                    |                  |
| MEN PUL                           | 7%                    | 78%                     | OBL                     |                  |
| PLA MAJ                           | 7%                    | 85%                     | FACW-                   |                  |
| RAN CAL                           | 7%                    | 92%                     | FAC                     |                  |
| RUM CRT                           | 7%                    | 99%                     | FACW-                   |                  |
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| TOTAL SUM (Σ) =                   | 100%                  |                         |                         |                  |

Project/Site: NVS - County Flood Date: 9/4/02 Sample Point: 25  
 Applicant/Owner: APN: 066-0080-003 Field Investigator(s): K. Kwan  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Elk Grove Section/Township/Range: T7N/R6E  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: seasonal pooling

**HYDROPHYTIC VEGETATION?** Yes  No

**VEGETATION**

|    | Dominant Species | Ind. Status | Stratum     | Rel. % Cover |    | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|----|------------------|-------------|-------------|--------------|----|------------------|-------------|---------|--------------|
| 1) | <u>Horsetail</u> | <u>FAC</u>  | <u>herb</u> | <u>40</u>    | 5) |                  |             |         |              |
| 2) | <u>Palm</u>      | <u>FACW</u> | <u>herb</u> | <u>25</u>    | 6) |                  |             |         |              |
| 3) |                  |             |             |              | 7) |                  |             |         |              |
| 4) |                  |             |             |              | 8) |                  |             |         |              |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 2/2 = 100 %

Comments: \_\_\_\_\_

**WETLAND HYDROLOGY?** Yes  No

**HYDROLOGY**

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other algal mat  
 Comments: topographic basin

**HYDRIC SOILS?** Yes  No

**SOILS**

Series/Phase: Z13 San Joaquin silt loam, leveled, 0-1% slopes Drainage Class: mod. well drained  
 Taxonomy [Subgroup]: hco, mixed, thermic Abruptic Durixerults Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concretion  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes  No

| Depth (in.) | Horizon | Matrix Color    | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|---------|-----------------|--------------|------------------------------|---------------------------------|
| <u>0-4</u>  |         | <u>10YR 3/3</u> |              |                              |                                 |
|             |         |                 |              |                              |                                 |
|             |         |                 |              |                              |                                 |

Comments: high chroma

**WETLAND / WATERS DETERMINATION?** Yes  No

**\* DECISION \***

Rationale: strong evidence of seasonal pooling  
 General comments: \_\_\_\_\_  
 Wetland Type: seasonal wetland

# HERBACEOUS COVER / DOMINANCE WORK SHEET

| <u>Species Observed</u> | <u>Actual Cover</u> | <u>Relative Cover</u> |
|-------------------------|---------------------|-----------------------|
| <i>Hor mar</i>          | 40                  | 40                    |
| <i>Pol mon</i>          | 25                  | 25                    |
| <i>Rum cri</i>          | 5                   | 5                     |
| <i>Pla sti</i>          | 10                  | 10                    |
| <i>Las gla</i>          | 10                  | 10                    |
| <i>Col mond</i>         | 10                  | 10                    |
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| TOTAL SUM (Σ) =         | <u>100</u>          | 100%                  |

| <u>COVER:</u> |           |
|---------------|-----------|
| Vegetation    | <u>90</u> |
| Bare Ground   | _____     |
| Rocks         | _____     |
| Other         | _____     |
| TOTAL =       | 100%      |

| <u>Species (Descending Order)</u> | <u>Relative Cover</u> | <u>Cumulative Cover</u> | <u>Indicator Status</u> | <u>Dominants</u> |
|-----------------------------------|-----------------------|-------------------------|-------------------------|------------------|
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| TOTAL SUM (Σ) =                   | 100%                  |                         |                         |                  |

**ENVIRONMENTAL CONSULTANTS**

Project/Site: NVS - County Flood Date: 9/4/02 Sample Point: 26N  
 Applicant/Owner: APN: 066-0080-003 Field Investigator(s): K. Kwan  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Elk Grove Section/Township/Range: T7N / R6E  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes  No

| Dominant Species  | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>Bro lom</u> | <u>FACW</u> | <u>herb</u> | <u>40</u>    | 5) _____         | _____       | _____   | _____        |
| 2) <u>Hor man</u> | <u>FAC</u>  | <u>herb</u> | <u>25</u>    | 6) _____         | _____       | _____   | _____        |
| 3) _____          | _____       | _____       | _____        | 7) _____         | _____       | _____   | _____        |
| 4) _____          | _____       | _____       | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/2 = 50 %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes  No

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: \_\_\_\_\_

**SOILS**

**HYDRIC SOILS?** Yes  No

Series/Phase: Z13 San Joaquin silt loam, leveled, 0-1% slopes Drainage Class: mod. well drained  
 Taxonomy [Subgroup]: fine, mixed, thermic Abrupt/Duricalf Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concretion  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon | Matrix Color    | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|---------|-----------------|--------------|------------------------------|---------------------------------|
| <u>0-4</u>  | _____   | <u>10YR 4/3</u> | <u>-</u>     | _____                        | _____                           |
| _____       | _____   | _____           | _____        | _____                        | _____                           |
| _____       | _____   | _____           | _____        | _____                        | _____                           |

 Comments: high chroma

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes  No

Rationale: criteria have not been met  
 General comments: upland adjacent to #25 & #27

Wetland Type: \_\_\_\_\_

# HERBACEOUS COVER / DOMINANCE WORK SHEET

| <u>Species Observed</u> | <u>Actual Cover</u> | <u>Relative Cover</u> |
|-------------------------|---------------------|-----------------------|
| Bro hor                 | 40                  | 40                    |
| Hor wal                 | 25                  | 25                    |
| Rum cri                 | 5                   | 5                     |
| Lol mnt                 | 15                  | 15                    |
| Ave fat                 | 15                  | 15                    |
| tan col                 | tr                  |                       |
| Hol vir                 | tr                  |                       |
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| <b>TOTAL SUM (Σ) =</b>  | <u>100</u>          | <b>100%</b>           |

COVER:

|                |             |
|----------------|-------------|
| Vegetation     | <u>100</u>  |
| Bare Ground    | _____       |
| Rocks          | _____       |
| Other          | _____       |
| <b>TOTAL =</b> | <b>100%</b> |

| <u>Species (Descending Order)</u> | <u>Relative Cover</u> | <u>Cumulative Cover</u> | <u>Indicator Status</u> | <u>Dominants</u> |
|-----------------------------------|-----------------------|-------------------------|-------------------------|------------------|
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|                                   |                       |                         |                         |                  |
| <b>TOTAL SUM (Σ) =</b>            | <b>100%</b>           |                         |                         |                  |

ECORP Consulting, Inc.

ROUTINE WETLAND DELINEATION

ENVIRONMENTAL CONSULTANTS

Project/Site: NUS - County Flood Date: 9/4/02 Sample Point: 27

Applicant/Owner: APN: 066-0080-003 Field Investigator(s): K. Kwan

County: Sacramento State: CA Plant Community: Annual Grassland

Quad(s): Elk Grove Section/Township/Range: T7N/R6E

Do normal environmental conditions exist site? Yes [X] No [ ] If no, explain:

Atypical Situation? Yes [ ] No [X] Explain:

Is this a potential Problem Area? Yes [X] No [ ] Explain: seasonal pooling

VEGETATION

HYDROPHYTIC VEGETATION? Yes [X] No [ ]

Table with columns: Dominant Species, Ind. Status, Stratum, Rel. % Cover. Rows 1-8 with handwritten entries like 'L. sgl', 'Ele mac', 'Plasti'.

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 3/3 = 100 %

Comments:

HYDROLOGY

WETLAND HYDROLOGY? Yes [X] No [ ]

Recorded Data: Yes [ ] No [X] If yes,

Depth of surface water: (in.) Depth to free water in pit: (in.) Depth to saturated soil: (in.)

Primary Indicators: [ ] Inundated [ ] Saturated in Upper 12 in. [ ] Water Marks [ ] Drift Lines [ ] Sediment Deposits [X] Drainage Patterns in Wetland

Secondary Indicators (2 or more required):

[X] Oxidized Root Channels in Upper 12 in. [ ] Water-stained Leaves [ ] Local Soil Survey Data [ ] FAC-Neutral Test [X] Other: algal matting

Comments: well-defined basin

SOILS

HYDRIC SOILS? Yes [X] No [ ]

Series/Phase: 213 San Joaquin silt loam (areol, 0-1% slope) Drainage Class: mod well drained

Taxonomy [Subgroup]: fine, mixed, thermic Abruptic Durixeralf Confirm Map Type: Yes [ ] No [X]

[ ] Histosol [ ] Histic Epipedon [ ] Sulfidic Odor [ ] Aquic Moisture Regime [ ] Reducing Conditions [X] Gleyed/Low Chroma Colors [ ] Concretion

[ ] High Organic Content in Surface Layer in Sandy Soils [ ] Organic Streaking in Sandy Soils [ ] Listed on Hydric Soils List [ ] Other

Inclusions [Series/Phase]: On Hydric Soils List: Yes [ ] No [X]

Table with columns: Depth (in.), Horizon, Matrix Color, Mottle Color, Mottle (Abund/Contrast/Size), Texture, Concretions, Structure. Handwritten entries: 104R3/2, 7.54R4/6.

Comments:

\* DECISION \*

WETLAND / WATERS DETERMINATION? Yes [X] No [ ]

Rationale: all criteria have been met

General comments: Wetland Type: vernal pool



# HERBACEOUS COVER / DOMINANCE WORK SHEET

| Species Observed                         | Actual Cover | Relative Cover |
|--|--------------|----------------|
| Las gla                                  | 20           | 21             |
| Plu sti                                  | 15           | 16             |
| Ele mac                                  | 20           | 21             |
| Gly spe                                  | 10           | 11             |
| Hor mar                                  | 5            |                |
| Lol mul                                  | 10           | 11             |
| Ep: pyg                                  | 5            |                |
| Rum Cri                                  | 5            |                |
| Ece set                                  | 5            |                |
|  |              |                |
|  |              |                |
|  |              |                |
|  |              |                |
|  |              |                |
| <b>TOTAL SUM (<math>\Sigma</math>) =</b> | <u>95</u>    | <b>100%</b>    |

| <u>COVER:</u>  |                   |
|----------------|-------------------|
| Vegetation     | <u>90</u>         |
| Bare Ground    | <u>          </u> |
| Rocks          | <u>          </u> |
| Other          | <u>          </u> |
| <b>TOTAL =</b> | <b>100%</b>       |

| <u>Species (Descending Order)</u>        | <u>Relative Cover</u> | <u>Cumulative Cover</u> | <u>Indicator Status</u> | <u>Dominants</u> |
|--|-----------------------|-------------------------|-------------------------|------------------|
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|  |                       |                         |                         |                  |
| <b>TOTAL SUM (<math>\Sigma</math>) =</b> | <b>100%</b>           |                         |                         |                  |

**ATTACHMENT B**

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Plant List

**North Vineyard Greens Unit #1**  
**Wetland Delineation – Plants Observed at Data Points**

| <b>Abbr.</b> | <b>Scientific Name</b>           | <b>Common Name</b>       | <b>Indicator Status</b> |
|--------------|----------------------------------|--------------------------|-------------------------|
| AVE FAT      | <i>Avena fatua</i>               | Wild oat                 | N/L                     |
| BRO DIA      | <i>Bromus diandrus</i>           | Ripgut brome             | N/L                     |
| BRO HOR      | <i>Bromus hordeaceus</i>         | Soft brome               | FACU-                   |
| CEN SOL      | <i>Centaurea solstitialis</i>    | Yellow star-thistle      | N/L                     |
| CIC INT      | <i>Cichorium intybus</i>         | Chickory                 | --                      |
| CON ARV      | <i>Convolvulus arvensis</i>      | Morning glory            | N/L                     |
| CYN DAC      | <i>Cynodon dactylon</i>          | Bermuda grass            | FAC                     |
| CYP ERA      | <i>Cyperus eragrostis</i>        | Tall flatsedge           | FACW                    |
| DES DAN      | <i>Deschampsia danthonioides</i> | Annual hairgrass         | FACW                    |
| ELE MAC      | <i>Eleocharis macrostachya</i>   | Creeping spikerush       | OBL                     |
| EPI PYG      | <i>Epilobium pygmaeum</i>        | Smooth spike-primrose    | OBL                     |
| ERE SET      | <i>Eremocarpus setigerus</i>     | Turkey mullien           | N/L                     |
| ERY VAS      | <i>Eryngium vaseyi</i>           | Vasey's coyote-thistle   | FACW                    |
| GER MOL      | <i>Geranium molle</i>            | Crane's Bill Geranium    | --                      |
| GLY spe.     | <i>Glyceria species</i>          | Mannagrass               | OBL                     |
| HEM FIT      | <i>Hemizonia fitchii</i>         | Fitch's spikeweed        | FACU                    |
| HOL VIR      | <i>Holcarpha virgata</i>         | Sticky tarweed           | N/L                     |
| HOR MAR      | <i>Hordeum marinum</i>           | Mediterranean barley     | FAC                     |
| HOR MUR      | <i>Hordeum murinum</i>           | Barley                   | NI                      |
| HYP GLA      | <i>Hypochaeris glabra</i>        | Smooth cat's-ear         | N/L                     |
| JUN BAL      | <i>Juncus balticus</i>           | Baltic rush              | OBL                     |
| LAC SER      | <i>Lactuca serriola</i>          | Prickly lettuce          | FAC                     |
| LAS GLA      | <i>Lasthenia glaberrima</i>      | Smooth goldfields        | OBL                     |
| LOL MUL      | <i>Lolium multiflorum</i>        | Ryegrass                 | FAC*                    |
| LYT HYS      | <i>Lythrum hyssopifolium</i>     | Hyssop loosestrife       | FACW                    |
| MEN PUL      | <i>Mentha pulegium</i>           | Pennyroyal               | OBL                     |
| NAV LEU      | <i>Navarretia leucocephala</i>   | White-head navarretia    | OBL                     |
| PAS DIL      | <i>Paspalum dilatatum</i>        | Dallis grass             | FAC                     |
| PLA MAJ      | <i>Plantago Major</i>            | Common Plantain          | FACW-                   |
| PLA STI      | <i>Plagiobothrys stipitatus</i>  | Slender popcorn-flower   | OBL                     |
| POL PUN      | <i>Polygonum punctatum</i>       | Dotted smartweed         | OBL                     |
| POL MON      | <i>Polypogon monspeliensis</i>   | Annual rabbit-foot grass | FACW+                   |
| PSI BRE      | <i>Psilocarphus brevissimus</i>  | Dwarf woolly-heads       | OBL                     |
| RAN CAL      | <i>Ranunculus californicus</i>   | California butter-cup    | FAC                     |
| RAP SAT      | <i>Raphanus sativus</i>          | Purple wild radish       | UPL                     |
| RUM CRI      | <i>Rumex crispus</i>             | Curly dock               | FACW-                   |
| RUM PUL      | <i>Rumex pulcher</i>             | Fiddle dock              | FAC+                    |
| TYP LAT      | <i>Typha latifolia</i>           | Broad-leaf cattail       | OBL                     |
| VER PER      | <i>Veronica peregrina</i>        | Purslane speedwell       | OBL                     |
| VUL BRO      | <i>Vulpia bromoides</i>          | Vulpia                   | FACW                    |
| XAN STR      | <i>Xanthium strumarium</i>       | Rough cockle-bur         | FAC+                    |

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**Indicator Status Codes**

**OBL** = Obligate Wetland; occur almost always (estimated probability >99%) under natural conditions in wetlands.

**FACW** = Facultative Wetland; usually occur in wetlands (estimated probability 67%-99%) under natural conditions in wetlands.

**FAC** = Facultative; equally likely to occur in wetlands or non-wetlands (estimated probability 34%-66%).

**FACU** = Facultative Upland; usually occur in non-wetlands (estimated probability 67%-99%).

**UPL** = Obligate Upland; occur almost always (estimated probability >99%) in non-wetlands in the region specified.

**N/L** = Not Listed.

**NI** = No indicator was recorded for those species for which insufficient information was available to determine a status.

-- = May or may not occur in wetlands depending upon species.

A positive (+) sign indicates a frequency toward the higher (more frequently found in wetlands) end of the facultative categories.

A negative (-) sign indicates a frequency toward the lower (less frequently found in wetlands) end of the facultative categories.

An asterisk (\*) indicates a tentative assignment based upon limited information or conflicting review.

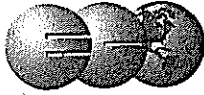
## **ATTACHMENT C**

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Wetland Delineation

## **Appendix N-2**

### **Revised Wetland Delineation Report – North Vineyard Greens Unit 1**



**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

November 3, 2004

Jonathan Foster  
U.S. Army Corps of Engineers, Sacramento District  
Regulatory Branch  
1325 J Street, 14th Floor  
Sacramento, CA 95814-2922

**Re: North Vineyard Greens Unit #1 (Reg. # 200400272) – Revised Wetland Delineation**

Dear Mr. Foster,

Please find enclosed the revised wetland delineation map for the North Vineyard Greens Unit One site located in Sacramento County, California. The subject property is north of Gerber Road, west of Bradshaw Road, south of Florin Road, and east of Elk Grove Florin Road. The Central California Traction railroad alignment splits the subject property into two unequal sized halves. The site corresponds to a portion of section 6 of Township 7 North, and Range 6 East of the "Elk Grove, California" 7.5-minute quadrangle (U.S. Department of the Interior, Geological Survey, photorevised 1979).

The changes to this delineation reflect those we discussed in the field during our field verification visit conducted on August 12, 2004. Thirteen additional data points have been taken as requested during the field verification visit (Attachment A). One vernal pool (#3, 0.003 acre) and one seasonal wetland swale (0.008 acre) have been added, and a non-jurisdictional irrigation canal has been extended. Consequently, the waters of the U.S. for this site total 4.183 acres. Wetlands consist of vernal pool (0.150 acre), seasonal wetland (1.862 acres), seasonal wetland swale (0.008 acre), and seasonal marsh (0.974 acre). Other waters are comprised of Gerber Creek (1.189 acres). The area that referred to as an "agricultural seep" during our site visit has been determined to be the result of a leaky well. The well is no longer in use and electricity to the well has been shut off, preventing any further "seepage" into the area. A map of these changes is included as Attachment B.

Please call me at (916) 782-9100 if you have any questions regarding this project.

Sincerely,

Jinnah Hansen  
Biologist

Attachment

cc: Peter Daru/NVG GP  
Ben French/MacKay & Somsps

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1

Project/Site: NV Greens #1 Date: 10/12/04 Sample Point: Ver 1

Applicant/Owner: North Vineyard Greens G.P. Field Investigator(s): J. Hansen

Country: Sacramento State: CA Plant Community: Annual Grassland

Quad(s): EIK Grove, CA Section/Township/Range: S 5, T. 7N., R. 6E

Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_

Atypical Situation? Yes  No  Explain: \_\_\_\_\_

Is this a potential Problem Area? Yes  No  Explain: Seasonally Inundated area

VEGETATION

HYDROPHYTIC VEGETATION? Yes  No

| Dominant Species  | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>HOR MAR</u> | <u>FAC</u>  | <u>Herb</u> | <u>80</u>    | 5) _____         | _____       | _____   | _____        |
| 2) _____          | _____       | _____       | _____        | 6) _____         | _____       | _____   | _____        |
| 3) _____          | _____       | _____       | _____        | 7) _____         | _____       | _____   | _____        |
| 4) _____          | _____       | _____       | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]; 1/100 = \_\_\_\_\_ %  
Comments: meets criteria for vegetation but there are some "drier" species that are not dominants

HYDROLOGY

WETLAND HYDROLOGY? Yes  No

Recorded Dam: Yes  No  If yes, \_\_\_\_\_

Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)

Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland

Secondary Indicators (2 or more required):

Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_

Comments: Slight depression; meets 1 secondary indicator

SOILS

HYDRIC SOILS? Yes  No

Series/Phase: 213 San Joaquin silt loam Drainage Class: mod. well-dra

Taxonomy [Subgroup]: Fine, Abruptic Durixeralfs Confirm Map Type: Yes  No

Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concrete

High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_

Inclusions [Series/Phase]: None On Hydric Soils List: Yes  No

| Depth (in.) | Horizon  | Matrix Color    | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|----------|-----------------|--------------|------------------------------|---------------------------------|
| <u>6"</u>   | <u>A</u> | <u>10YR 2/2</u> | <u>—</u>     | <u>—</u>                     | <u>Sandy loam</u>               |
| _____       | _____    | _____           | _____        | _____                        | _____                           |
| _____       | _____    | _____           | _____        | _____                        | _____                           |

Comments: Does not meet criteria for hydric soils

\* DECISION \*

WETLAND / WATERS DETERMINATION? Yes  No

Rationale: Does not meet 2 out of 3 criteria for wetlands

General comments: \_\_\_\_\_ Wetland Type: upland



# HERBACEOUS COVER / DOMINANCE WORK SHEET

| Species Observed | Actual Cover | Relative Cover |
|------------------|--------------|----------------|
| HOR MAR          | 85 %         | 80 %           |
| LOL MUL          | 10 %         | 10 %           |
| RUM CRT          | 5 %          | 5 %            |
| BRO HOR          | 5 %          | 5 %            |
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| TOTAL SUM (Σ) =  | 105          | 100%           |

**COVER:**

|             |      |
|-------------|------|
| Vegetation  | 100% |
| Bare Ground | —    |
| Rocks       | —    |
| Other       | —    |
| TOTAL =     | 100% |

| Species (Descending Order) | Relative Cover | Cumulative Cover | Indicator Status | Dominant |
|----------------------------|----------------|------------------|------------------|----------|
| HOR MAR                    | 80 %           | 80 %             | FAC              | ✓        |
| LOL MUL                    | 10 %           | 90 %             | FAC*             |          |
| RUM CRT                    | 5 %            | 95 %             | FACW-            |          |
| BRO HOR                    | 5 %            | 100 %            | FACU-            |          |
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| TOTAL SUM (Σ) =            | 100%           |                  |                  |          |

Project/Site: NV Greens #1 Date: 10/12/04 Sample Point: Ver 2  
 Applicant/Owner: North Vineyard Greens G.P. Field Investigator(s): J. Hansen  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): EIK Grove Section/Township/Range: S 5, T. 7N, R. 6E  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: Seasonally inundated area

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes  No

| Dominant Species  | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>BRO HOR</u> | <u>FACU</u> | <u>Herb</u> | <u>58</u>    | 5) _____         | _____       | _____   | _____        |
| 2) <u>HOR MAR</u> | <u>FAC</u>  | <u>Herb</u> | <u>35</u>    | 6) _____         | _____       | _____   | _____        |
| 3) _____          | _____       | _____       | _____        | 7) _____         | _____       | _____   | _____        |
| 4) _____          | _____       | _____       | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/2 = 50%  
 Comments: Does not meet criteria for hydrophytic vegetation. Some non-dominates are more hydrophytic.

**HYDROLOGY**

WETLAND HYDROLOGY? Yes  No

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: very slight depression; has 1 secondary indicator

**SOILS**

HYDRIC SOILS? Yes  No

Series/Phase: 213 San Joaquin silt loam Drainage Class: mod. well-drain  
 Taxonomy [Subgroup]: Fine, Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concrete  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: None On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon  | Matrix Color     | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|----------|------------------|--------------|------------------------------|---------------------------------|
| <u>6"</u>   | <u>A</u> | <u>7.5YR 3/3</u> | _____        | _____                        | <u>Sandy loam</u>               |
| _____       | _____    | _____            | _____        | _____                        | _____                           |
| _____       | _____    | _____            | _____        | _____                        | _____                           |

Comments: Does not meet criteria for hydric soils

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes  No

Rationale: Does not meet any of the 3 criteria for wetlands  
 General comments: \_\_\_\_\_

Wetland Type: upland

# HERBACEOUS COVER / DOMINANCE WORK SHEET

| Species Observed         | Actual Cover | Relative Cover |
|--------------------------|--------------|----------------|
| BRO HOR                  | 75%          | 58%            |
| HOR MAR                  | 45%          | 35%            |
| LOL MUL                  | 5%           | 4%             |
| Epilobium sp.            | 5%           | 4%             |
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| TOTAL SUM ( $\Sigma$ ) = | 130%         | 100%           |

COVER:  
 Vegetation 100%  
 Bare Ground \_\_\_\_\_  
 Rocks \_\_\_\_\_  
 Other \_\_\_\_\_  
 TOTAL = 100%

| Species (Descending Order) | Relative Cover | Cumulative Cover | Indicator Status | Dominants |
|----------------------------|----------------|------------------|------------------|-----------|
| BRO HOR                    | 58%            | 58%              | FACU-            | ✓         |
| HOR MAR                    | 35%            | 93%              | FAC              | ✓         |
| LOL MUL                    | 4%             | 97%              | FAC*             |           |
| Epilobium sp.              | 4%             | 101%             | FACW             |           |
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TOTAL SUM ( $\Sigma$ ) = 100%

Project/Site: NV Greens #1 Date: 10/12/04 Sample Point: Ver 3  
 Applicant/Owner: N. Vineyard Greens G.P. Field Investigator(s): J. Hansen  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Elk Grove Section/Township/Range: S5, T. 7N, R. 6E  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: Seasonally inundated area

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes  No

| Dominant Species  | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>HOR MAR</u> | <u>FAC</u>  | <u>Herb</u> | <u>53%</u>   | 5) _____         | _____       | _____   | _____        |
| 2) <u>BRO HOR</u> | <u>FACU</u> | <u>Herb</u> | <u>35%</u>   | 6) _____         | _____       | _____   | _____        |
| 3) _____          | _____       | _____       | _____        | 7) _____         | _____       | _____   | _____        |
| 4) _____          | _____       | _____       | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/2 = 50%

Comments: Does not meet criteria for hydrophytic vegetation.

**HYDROLOGY**

WETLAND HYDROLOGY? Yes  No

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: slight depression; has 1 secondary indicator

**SOILS**

HYDRIC SOILS? Yes  No

Series/Phase: 213 San Joaquin silt loam Drainage Class: mod. well-drai  
 Taxonomy [Subgroup]: Fine, Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concrete  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: None On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon  | Matrix Color    | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|----------|-----------------|--------------|------------------------------|---------------------------------|
| <u>6"</u>   | <u>A</u> | <u>10YR 3/2</u> | _____        | _____                        | <u>Sandy loam</u>               |
| _____       | _____    | _____           | _____        | _____                        | _____                           |
| _____       | _____    | _____           | _____        | _____                        | _____                           |

Comments: Does not meet criteria for hydric soils

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes  No

Rationale: Does not meet any of the 3 criteria for wetlands

General comments: \_\_\_\_\_

Wetland Type: upland

# HERBACEOUS COVER / DOMINANCE WORK SHEET

| Species Observed | Actual Cover | Relative Cover |
|------------------|--------------|----------------|
| HOR MAR          | 45%          | 53%            |
| Epilobium sp.    | 5%           | 6%             |
| BRO HOR          | 30%          | 35%            |
| RUM CRE          | 5%           | 6%             |
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| TOTAL SUM (Σ) =  | 85%          | 100%           |

| <u>COVER:</u>       |      |
|---------------------|------|
| Vegetation          | 95   |
| Bare Ground         | —    |
| Rocks               | —    |
| Other <i>thatch</i> | 5    |
| TOTAL =             | 100% |

| Species (Descending Order) | Relative Cover | Cumulative Cover | Indicator Status | Dominants |
|----------------------------|----------------|------------------|------------------|-----------|
| HOR MAR                    | 53%            | 53%              | FAC              | ✓         |
| BRO HOR                    | 35%            | 88%              | FACH-            | ✓         |
| Epilobium Sp.              | 6%             | 94%              | FACW             |           |
| RUM CRE                    | 6%             | 100%             | FACW-            |           |
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|                            |                |                  |                  |           |
| TOTAL SUM (Σ) =            | 100%           |                  |                  |           |

Project/Site: NV Greens #1 Date: 10/12/04 Sample Point: Ver 4  
 Applicant/Owner: N. Vineyard Greens G.P. Field Investigator(s): S. Hansen  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): EIK Grove Section/Township/Range: S5, T. 7N, R. 6E  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: Seasonally inundated area

**VEGETATION**

**HYDROPHYTIC VEGETATION? Yes  No**

| Dominant Species  | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>ELE MAC</u> | <u>OBL</u>  | <u>Herb</u> | <u>76%</u>   | 5) _____         | _____       | _____   | _____        |
| 2) _____          | _____       | _____       | _____        | 6) _____         | _____       | _____   | _____        |
| 3) _____          | _____       | _____       | _____        | 7) _____         | _____       | _____   | _____        |
| 4) _____          | _____       | _____       | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/1 = 100%

Comments: Meets criteria for hydrophytic vegetation

**HYDROLOGY**

**WETLAND HYDROLOGY? Yes  No**

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: Meets criteria for hydrology

**SOILS**

**HYDRIC SOILS? Yes  No**

Series/Phase: 213 San Joaquin silt loam Drainage Class: well drained  
 Taxonomy [Subgroup]: Fine, Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concrete  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: None On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon  | Matrix Color    | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|----------|-----------------|--------------|------------------------------|---------------------------------|
| <u>0"</u>   | <u>A</u> | <u>10YR 3/2</u> | <u>—</u>     | <u>—</u>                     | <u>Sandy loam</u>               |
| _____       | _____    | _____           | _____        | _____                        | _____                           |
| _____       | _____    | _____           | _____        | _____                        | _____                           |

Comments: Does not meet criteria for hydric soils

**\* DECISION \***

**WETLAND / WATERS DETERMINATION? Yes  No**

Rationale: meets 2 out of 3 criteria for wetlands; vegetation is 100%  
 General comments: hydrophytic

Wetland Type: Vernal pool



ENVIRONMENTAL CONSULTANTS

Project/Site: NU Greens #1 Date: 10/12/04 Sample Point: Ver 5  
 Applicant/Owner: N. Vineyard Greens G.P. Field Investigator(s): J. Hansen  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): ELK Grove Section/Township/Range: S 5, T. 7N, R. 6E  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: Seasonally inundated area

VEGETATION

HYDROPHYTIC VEGETATION? Yes  No

| Dominant Species  | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>LOL MUL</u> | <u>FAC*</u> | <u>Herb</u> | <u>67%</u>   | 5) _____         | _____       | _____   | _____        |
| 2) _____          | _____       | _____       | _____        | 6) _____         | _____       | _____   | _____        |
| 3) _____          | _____       | _____       | _____        | 7) _____         | _____       | _____   | _____        |
| 4) _____          | _____       | _____       | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/1 = 100%

Comments: meets criteria for hydrophytic vegetation

HYDROLOGY

WETLAND HYDROLOGY? Yes  No

Recorded Data: Yes  No  if yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC Neutral Test  Other \_\_\_\_\_  
 Comments: slight depression; meets criteria for hydrology

SOILS

HYDRIC SOILS? Yes  No

Series/Phase: 213 San Joaquin silt loam Drainage Class: mod. well drain  
 Taxonomy [Subgroup]: Fine Abruptic Durixeralls Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concrete  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: None On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon  | Matrix Color    | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|----------|-----------------|--------------|------------------------------|---------------------------------|
| <u>0-4</u>  | <u>A</u> | <u>10YR 3/3</u> | _____        | _____                        | <u>Sandy loam</u>               |
| _____       | _____    | _____           | _____        | _____                        | _____                           |
| _____       | _____    | _____           | _____        | _____                        | _____                           |

Comments: Does not meet criteria for hydric soils

\* DECISION \*

WETLAND / WATERS DETERMINATION? Yes  No

Rationale: meets 2 out of 3 criteria for wetlands; vegetation is cov.

General comments: hydrophytic

Wetland Type: Seasonal wetland sump





Project/Site: NV Greens #1 Date: 10/12/04 Sample Point: Ver 6  
 Applicant/Owner: N. Vineyard Greens G.P. Field Investigator(s): S. Hansen  
 Country: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): EIK Grove Section/Township/Range: S 5, T. 7N, R. 6E  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: Seasonally inundated area

VEGETATION

HYDROPHYTIC VEGETATION? Yes  No

| Dominant Species  | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>HOR MAR</u> | <u>FAC</u>  | <u>Herb</u> | <u>41%</u>   | 5) _____         | _____       | _____   | _____        |
| 2) <u>LOL MIL</u> | <u>FAC*</u> | <u>Herb</u> | <u>24%</u>   | 6) _____         | _____       | _____   | _____        |
| 3) _____          | _____       | _____       | _____        | 7) _____         | _____       | _____   | _____        |
| 4) _____          | _____       | _____       | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]; 2/2 = 100%

Comments: meets criteria for hydrophytic vegetation

HYDROLOGY

WETLAND HYDROLOGY? Yes  No

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: Slight depression

SOILS

HYDRIC SOILS? Yes  No

Series/Phase: 213 San Joaquin silt loam Drainage Class: mod. well-dra.  
 Taxonomy [Subgroup]: Fine Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concrete  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: None On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon  | Matrix Color    | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|----------|-----------------|--------------|------------------------------|---------------------------------|
| <u>6"</u>   | <u>A</u> | <u>10YR 3/2</u> | _____        | _____                        | <u>Sandy loam</u>               |

Comments: Does not meet criteria for hydric soils

DECISION

WETLAND / WATERS DETERMINATION? Yes  No

Rationale: meets 2 out of 3 criteria for wetlands; vegetation is 100%  
 General comments: hydrophytic  
 Wetland Type: Seasonal wetland shrub

## HERBACEOUS COVER / DOMINANCE WORK SHEET

| Species Observed       | Actual Cover      | Relative Cover |
|------------------------|-------------------|----------------|
| <u>LOL MUC</u>         | <u>20%</u>        | <u>24%</u>     |
| <u>HOR MAR</u>         | <u>35%</u>        | <u>41%</u>     |
| <u>Epilobium sp.</u>   | <u>15%</u>        | <u>18%</u>     |
| <u>BRO HOR</u>         | <u>15%</u>        | <u>18%</u>     |
|                        |                   |                |
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|                        |                   |                |
| <b>TOTAL SUM (Σ) =</b> | <b><u>85%</u></b> | <b>100%</b>    |

|                     |             |
|---------------------|-------------|
| <u>COVER:</u>       |             |
| Vegetation          | <u>85%</u>  |
| Bare Ground         | _____       |
| Rocks               | _____       |
| Other <u>thatch</u> | <u>15%</u>  |
| <b>TOTAL =</b>      | <b>100%</b> |

| Species (Descending Order) | Relative Cover | Cumulative Cover | Indicator Status | Dominance |
|----------------------------|----------------|------------------|------------------|-----------|
| <u>HOR MAR</u>             | <u>41%</u>     | <u>41%</u>       | <u>FAC</u>       | <u>✓</u>  |
| <u>LOL MUC</u>             | <u>24%</u>     | <u>65%</u>       | <u>FACU-</u>     | <u>✓</u>  |
| <u>BRO HOR</u>             | <u>18%</u>     | <u>83%</u>       | <u>FAC*</u>      | _____     |
| <u>Epilobium sp.</u>       | <u>18%</u>     | <u>101%</u>      | <u>FACW</u>      | _____     |
|                            |                |                  |                  |           |
|                            |                |                  |                  |           |
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|                            |                |                  |                  |           |
|                            |                |                  |                  |           |
| <b>TOTAL SUM (Σ) =</b>     | <b>100%</b>    |                  |                  |           |

TOTAL SUM (Σ) = 100%

**ENVIRONMENTAL CONSULTANTS**

Project/Site: N.V. Greens #1 Date: 10/12/04 Sample Point: Ver 7  
 Applicant/Owner: N. Vineyard Greens G.P. Field Investigator(s): J. Hansen  
 Country: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): EIK Grove Section/Township/Range: S5, T. 7N, R. 6E  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: Seasonally inundated area

**VEGETATION**

**HYDROPHYTIC VEGETATION? Yes  No**

| Dominant Species        | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-------------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>Epilobium sp.</u> | <u>FACW</u> | <u>herb</u> | <u>31%</u>   | 5) _____         | _____       | _____   | _____        |
| 2) <u>Cyperus sp.</u>   | <u>FACT</u> | <u>herb</u> | <u>24%</u>   | 6) _____         | _____       | _____   | _____        |
| 3) <u>RUB DLS</u>       | <u>FACT</u> | <u>herb</u> | <u>17%</u>   | 7) _____         | _____       | _____   | _____        |
| 4) _____                | _____       | _____       | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 3/3 = 100%

Comments: meets criteria for hydrophytic vegetation

**HYDROLOGY**

**WETLAND HYDROLOGY? Yes  No**

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetlands  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: No depression! Possibly caused by a man-made seep? Meets criteria!

**SOILS**

**HYDRIC SOILS? Yes  No**

Series/Phase: 213 - San Joaquin silt loam Drainage Class: Mod. well-drain  
 Taxonomy [Subgroup]: Fine, Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concrete  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: None On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon  | Matrix Color    | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|----------|-----------------|--------------|------------------------------|---------------------------------|
| <u>6"</u>   | <u>A</u> | <u>10YR 3/2</u> | _____        | _____                        | <u>Sandy loam</u>               |
| _____       | _____    | _____           | _____        | _____                        | _____                           |
| _____       | _____    | _____           | _____        | _____                        | _____                           |

Comments: Does not meet criteria for hydric soils

**\* DECISION \***

**WETLAND / WATERS DETERMINATION? Yes  No**

Rationale: Meets 2 out of 3 criteria for wetlands. Vegetation is  
 General comments: 100% hydrophytic!  
 Wetland Type: Seasonal Seep

# HERBACEOUS COVER / DOMINANCE WORK SHEET

| <u>Species Observed</u> | <u>Actual Cover</u> | <u>Relative Cover</u> |
|-------------------------|---------------------|-----------------------|
| RUB DIS                 | 25%                 | 17%                   |
| Cyperus sp.             | 35%                 | 24%                   |
| Epilobium sp.           | 45%                 | 31%                   |
| LAC SER                 | 5%                  | 3%                    |
| BRI MIN                 | 10%                 | 7%                    |
| BRO HOR                 | 5%                  | 3%                    |
| POL MON                 | 5%                  | 3%                    |
| ELE MAC                 | 5%                  | 3%                    |
| PAS DIL                 | 10%                 | 7%                    |
|                         |                     |                       |
|                         |                     |                       |
|                         |                     |                       |
|                         |                     |                       |
|                         |                     |                       |
|                         |                     |                       |
|                         |                     |                       |
|                         |                     |                       |
| TOTAL SUM (Σ) =         | 145%                | 100%                  |

COVER:

|             |      |
|-------------|------|
| Vegetation  | 100% |
| Bare Ground | —    |
| Rocks       | —    |
| Other       | —    |
| TOTAL =     | 100% |

| <u>Species (Descending Order)</u> | <u>Relative Cover</u> | <u>Cumulative Cover</u> | <u>Indicator Status</u> | <u>Dominants</u> |
|-----------------------------------|-----------------------|-------------------------|-------------------------|------------------|
| Epilobium sp.                     | 31%                   | 31%                     | FACW                    | ✓                |
| Cyperus sp.                       | 24%                   | 55%                     | FAC+                    | ✓                |
| RUB DIS                           | 17%                   | 72%                     | FAC+                    | ✓                |
| BRI MIN                           | 7%                    | 79%                     | FACU                    |                  |
| PAS DIL                           | 7%                    | 86%                     | FAC                     |                  |
| LAC SER                           | 3%                    | 89%                     | FAC                     |                  |
| BRO HOR                           | 3%                    | 92%                     | FACU-                   |                  |
| POL MON                           | 3%                    | 95%                     | FACW+                   |                  |
| ELE MAC                           | 3%                    | 98%                     | OBL                     |                  |
|                                   |                       |                         |                         |                  |
|                                   |                       |                         |                         |                  |
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|                                   |                       |                         |                         |                  |
|                                   |                       |                         |                         |                  |
|                                   |                       |                         |                         |                  |
| TOTAL SUM (Σ) =                   | 100%                  |                         |                         |                  |

Project/Site: NV Greens #1 Date: 10/12/04 Sample Point: Ver 8  
 Applicant/Owner: N. Vineyard Greens B.P. Field Investigator(s): J. Hansen  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): EIK Grove Section/Township/Range: S5, T. 7N, R. 6E  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: Seasonally inundated area

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes  No

| Dominant Species  | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>BRO HOR</u> | <u>44%</u>  | <u>Herb</u> | <u>FACU-</u> | 5) _____         | _____       | _____   | _____        |
| 2) <u>HOR MAR</u> | <u>25%</u>  | <u>Herb</u> | <u>FAC</u>   | 6) _____         | _____       | _____   | _____        |
| 3) _____          | _____       | _____       | _____        | 7) _____         | _____       | _____   | _____        |
| 4) _____          | _____       | _____       | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/2 = 50%  
 Comments: Does not meet criteria for hydrophytic vegetation

**HYDROLOGY**

WETLAND HYDROLOGY? Yes  No

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: No depression; does not meet criteria for hydrology

**SOILS**

HYDRIC SOILS? Yes  No

Series/Phase: 213 San Joaquin silt loam Drainage Class: mod. Well-drain  
 Taxonomy [Subgroup]: Fine, Abrupt, Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concrete  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon  | Matrix Color     | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|----------|------------------|--------------|------------------------------|---------------------------------|
| <u>6"</u>   | <u>A</u> | <u>7.5YR 7/3</u> | _____        | _____                        | <u>Sandy loam</u>               |

Comments: Does not meet criteria for hydric soils

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes  No

Rationale: Does not meet any of the 3 criteria for wetlands  
 General comments: \_\_\_\_\_

Wetland Type: Upland point

HERBACEOUS COVER / DOMINANCE WORK SHEET

| Species Observed | Actual Cover | Relative Cover |
|------------------|--------------|----------------|
| BRO HOR          | 35%          | 44%            |
| LOL MUL          | 5%           | 6%             |
| HOR MAR          | 20%          | 25%            |
| RUM CRI          | 5%           | 6%             |
| Epilobium sp.    | 15%          | 19%            |
|                  |              |                |
|                  |              |                |
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|                  |              |                |
|                  |              |                |
| TOTAL SUM (Σ) =  | 80%          | 100%           |

**COVER:**

|                     |      |
|---------------------|------|
| Vegetation          | 80%  |
| Bare Ground         | —    |
| Rocks               | —    |
| Other <u>thatch</u> | 20%  |
| TOTAL =             | 100% |

| Species (Descending Order) | Relative Cover | Cumulative Cover | Indicator Status | Dominants |
|----------------------------|----------------|------------------|------------------|-----------|
| BRO HOR                    | 44%            | 44%              | FACU-            | ✓         |
| HOR MAR                    | 25%            | 69%              | FAC              | ✓         |
| Epilobium sp.              | 19%            | 88%              | FACW             |           |
| LOL MUL                    | 6%             | 94%              | FAC*             |           |
| RUM CRI                    | 6%             | 100%             | FACW-            |           |
|                            |                |                  |                  |           |
|                            |                |                  |                  |           |
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|                            |                |                  |                  |           |
|                            |                |                  |                  |           |
| TOTAL SUM (Σ) =            | 100%           |                  |                  |           |

Project/Site: NV Greens #1 Date: 10/12/04 Sample Point: Ver 9  
 Applicant/Owner: N. Vineyard Greens G.P. Field Investigator(s): J. Hansen  
 Country: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): ELK Grove Section/Township/Range: S 5, T. 7N, R. 6E  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: man-made track (depression)  
 Is this a potential Problem Area? Yes  No  Explain: Seasonally inundated area

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes  No

| Dominant Species  | Ind. Status  | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-------------------|--------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>POL MON</u> | <u>FACW*</u> | <u>Herb</u> | <u>19%</u>   | 5) _____         | _____       | _____   | _____        |
| 2) <u>LYT HYS</u> | <u>FACW</u>  | <u>Herb</u> | <u>13%</u>   | 6) _____         | _____       | _____   | _____        |
| 3) <u>LOL MUL</u> | <u>FAC*</u>  | <u>Herb</u> | <u>13%</u>   | 7) _____         | _____       | _____   | _____        |
| 4) _____          | _____        | _____       | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 3/3 = 100%

Comments: Meets criteria for hydrophytic vegetation

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes  No

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: Man-made track (depression)

**SOILS**

**HYDRIC SOILS?** Yes  No

Series/Phase: 213 San Joaquin silt loam Drainage Class: mod. well-drain  
 Taxonomy [Subgroup]: Fine, Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concrete  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: None On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon  | Matrix Color     | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|----------|------------------|--------------|------------------------------|---------------------------------|
| <u>8"</u>   | <u>A</u> | <u>7.5YR 3/4</u> | _____        | _____                        | <u>Sandy loam</u>               |
| _____       | _____    | _____            | _____        | _____                        | _____                           |
| _____       | _____    | _____            | _____        | _____                        | _____                           |

  
 Comments: Does not meet criteria for hydric soils

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes  No

Rationale: Does not meet 2 out of 3 criteria for wetlands.

General comments: \_\_\_\_\_

Wetland Type: well-drained



# HERBACEOUS COVER / DOMINANCE WORK SHEET

| <u>Species Observed</u> | <u>Actual Cover</u> | <u>Relative Cover</u> |
|-------------------------|---------------------|-----------------------|
| POL MON                 | 15%                 | 19%                   |
| HOL VID                 | 5%                  | 6%                    |
| LYT HYS                 | 10%                 | 13%                   |
| HEM FIT                 | 5%                  | 6%                    |
| RUM CRT                 | 5%                  | 6%                    |
| Canex sp.               | 5%                  | 6%                    |
| LOL MUL                 | 10%                 | 13%                   |
| PLA GRE                 | 5%                  | 6%                    |
| HOR MAR                 | 10%                 | 13%                   |
| CIC QUA                 | 5%                  | 6%                    |
| VER PER                 | 5%                  | 6%                    |
|                         |                     |                       |
|                         |                     |                       |
|                         |                     |                       |
|                         |                     |                       |
|                         |                     |                       |
|                         |                     |                       |
| TOTAL SUM (Σ) =         | 80%                 | 100%                  |

**COVER:**

|             |      |
|-------------|------|
| Vegetation  | 80%  |
| Bare Ground | 20%  |
| Rocks       | —    |
| Other       | —    |
| TOTAL =     | 100% |

| <u>Species (Descending Order)</u> | <u>Relative Cover</u> | <u>Cumulative Cover</u> | <u>Indicator Status</u> | <u>Dominants</u> |
|-----------------------------------|-----------------------|-------------------------|-------------------------|------------------|
| POL MON                           | 19%                   | 19%                     | FACW+                   | ✓                |
| LYT HYS                           | 13%                   | 32%                     | FACW                    | ✓                |
| LOL MUL                           | 13%                   | 48%                     | FAC*                    | ✓                |
| HOR MAR                           | 13%                   | 61%                     | FAC                     | ✓                |
| HOL VID                           | 6%                    | 67%                     | FACW                    |                  |
| HEM FIT                           | 6%                    | 73%                     | FACW                    |                  |
| RUM CRT                           | 6%                    | 79%                     | FACW-                   |                  |
| Canex sp.                         | 6%                    | 85%                     | FACW+                   |                  |
| PLA GRE                           | 6%                    | 91%                     | FACW                    |                  |
| CIC QUA                           | 6%                    | 97%                     | N/L                     |                  |
| VER PER                           | 6%                    | 103%                    | N/L                     |                  |
|                                   |                       |                         |                         |                  |
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|                                   |                       |                         |                         |                  |
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|                                   |                       |                         |                         |                  |
| TOTAL SUM (Σ) =                   | 100%                  |                         |                         |                  |

Project/Site: NV Greens #1 Date: 10/12/04 Sample Point: Ver 10  
 Applicant/Owner: N. Vineyard Greens Field Investigator(s): J. Hansen  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): EIK Grove Section/Township/Range: S5, T. 7N, R. 6E  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: Seasonally inundated area

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes  No

| Dominant Species  | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>HOR MAR</u> | <u>FAC</u>  | <u>Herb</u> | <u>38%</u>   | 5) _____         | _____       | _____   | _____        |
| 2) <u>BRO HOR</u> | <u>FACU</u> | <u>Herb</u> | <u>23%</u>   | 6) _____         | _____       | _____   | _____        |
| 3) _____          | _____       | _____       | _____        | 7) _____         | _____       | _____   | _____        |
| 4) _____          | _____       | _____       | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/2 = 50%  
 Comments: Does not meet criteria for hydrophytic vegetation

**HYDROLOGY**

WETLAND HYDROLOGY? Yes  No

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetl.  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: Slight depression; Does not meet criteria for hydrology

**SOILS**

HYDRIC SOILS? Yes  No

Series/Phase: 213 San Joaquin silt loam Drainage Class: mod. well-dr.  
 Taxonomy [Subgroup]: Fine, Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concrete  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon  | Matrix Color    | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|----------|-----------------|--------------|------------------------------|---------------------------------|
| <u>8"</u>   | <u>A</u> | <u>10YR 3/3</u> | _____        | _____                        | <u>Sandy loam</u>               |

Comments: Does not meet criteria for hydric soils

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes  No

Rationale: Does not meet any of the 3 criteria for wetlands

General comments: \_\_\_\_\_

Wetland Type: Upland point

## HERBACEOUS COVER / DOMINANCE WORK SHEET

| <u>Species Observed</u> | <u>Actual Cover</u> | <u>Relative Cover</u> |
|-------------------------|---------------------|-----------------------|
| HYP GLA                 | 5%                  | 8%                    |
| LAC SER                 | 5%                  | 8%                    |
| HOR MAR                 | 25%                 | 38%                   |
| BRO HOR                 | 15%                 | 23%                   |
| RUM CRT                 | 5%                  | 8%                    |
| LOL MUL                 | 10%                 | 15%                   |
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| <b>TOTAL SUM (Σ) =</b>  | <b>65%</b>          | <b>100%</b>           |

| <u>COVER:</u>       |             |
|---------------------|-------------|
| Vegetation          | 65%         |
| Bare Ground         | —           |
| Rocks               | —           |
| Other <u>thatch</u> | 35%         |
| <b>TOTAL =</b>      | <b>100%</b> |

| <u>Species (Descending Order)</u> | <u>Relative Cover</u> | <u>Cumulative Cover</u> | <u>Indicator Status</u> | <u>Dominants</u> |
|-----------------------------------|-----------------------|-------------------------|-------------------------|------------------|
| HOR MAR                           | 38%                   | 38%                     | FAC                     | ✓                |
| BRO HOR                           | 23%                   | 61%                     | FACW-                   | ✓                |
| LOL MUL                           | 15%                   | 76%                     | FAC*                    |                  |
| HYP GLA                           | 8%                    | 84%                     | N/L                     |                  |
| LAC SER                           | 8%                    | 92%                     | FAC                     |                  |
| RUM CRT                           | 8%                    | 100%                    | FACW-                   |                  |
|                                   |                       |                         |                         |                  |
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|                                   |                       |                         |                         |                  |
| <b>TOTAL SUM (Σ) =</b>            | <b>100%</b>           |                         |                         |                  |

TOTAL SUM (Σ) = 100%

Project/Site: NU Greens #1 Date: 10/12/04 Sample Point: Ver 11  
 Applicant/Owner: North Vineyard Greens G.P. Field Investigator(s): J. Hansen  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): EIK Grove Section/Township/Range: SS, T. 7N, R. 6E  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes  No

| Dominant Species  | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>LOL MUL</u> | <u>FAC*</u> | <u>Herb</u> | <u>40%</u>   | 5) _____         | _____       | _____   | _____        |
| 2) <u>HOR MAR</u> | <u>FAC</u>  | <u>Herb</u> | <u>20%</u>   | 6) _____         | _____       | _____   | _____        |
| 3) <u>RUM CRI</u> | <u>FACW</u> | <u>Herb</u> | <u>20%</u>   | 7) _____         | _____       | _____   | _____        |
| 4) <u>CHI INT</u> | <u>---</u>  | <u>Herb</u> | <u>20%</u>   | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 2/3 = 50%  
 Comments: Does not meet criteria for hydrophytic vegetation

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes  No

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetla  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: Slight depression caused by beam for irrigation ditch; Does not meet G

**SOILS**

**HYDRIC SOILS?** Yes  No

Series/Phase: ZB San Joaquin silt loam Drainage Class: mod. well-drai  
 Taxonomy [Subgroup]: Fine, Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concrete  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: None On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon  | Matrix Color     | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|----------|------------------|--------------|------------------------------|---------------------------------|
| <u>8"</u>   | <u>A</u> | <u>7.5YR 3/3</u> | _____        | _____                        | <u>Sandy loam</u>               |

Comments: Does not meet criteria for hydric soils

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes  No

Rationale: Does not meet any of the 3 criteria for wetlands  
 General comments: \_\_\_\_\_  
 Wetland Type: Upland point

# HERBACEOUS COVER / DOMINANCE WORK SHEET

| <u>Species Observed</u>             | <u>Actual Cover</u> | <u>Relative Cover</u> |
|-------------------------------------|---------------------|-----------------------|
| HOR MAR                             | 5%                  | 20%                   |
| LOL MUL                             | 10%                 | 40%                   |
| RUM CRT                             | 5%                  | 20%                   |
| Chicory                             | 5%                  | 20%                   |
| LAC SER                             | +                   |                       |
|                                     |                     |                       |
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|                                     |                     |                       |
| TOTAL SUM ( $\Sigma$ ) = <u>25%</u> |                     | 100%                  |

COVER:

|                     |            |
|---------------------|------------|
| Vegetation          | <u>25%</u> |
| Bare Ground         | <u>—</u>   |
| Rocks               | <u>—</u>   |
| Other <i>thatch</i> | <u>75%</u> |
| TOTAL =             | 100%       |

| <u>Species (Descending Order)</u> | <u>Relative Cover</u> | <u>Cumulative Cover</u> | <u>Indicator Status</u> | <u>Dominance</u> |
|-----------------------------------|-----------------------|-------------------------|-------------------------|------------------|
| LOL MUL                           | 40%                   | 40%                     | FAC*                    | ✓                |
| HOR MAR                           | 20%                   | 60%                     | FAC                     | ✓                |
| RUM CRT                           | 20%                   | 80%                     | FACW-                   | ✓                |
| CHI INT                           | 20%                   | 100%                    | --                      | ✓                |
|                                   |                       |                         |                         |                  |
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|                                   |                       |                         |                         |                  |
|                                   |                       |                         |                         |                  |
| TOTAL SUM ( $\Sigma$ ) =          |                       | 100%                    |                         |                  |

Project/Site: NV Greens #1 Date: 10/12/04 Sample Point: Ver 12  
 Applicant/Owner: North Vineyard Greens G.P. Field Investigator(s): J. Hansen  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Elk Grove Section/Township/Range: SS., T. 7N, R. 6E  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: old ag. field or nursery? → troughs & berms  
 Is this a potential Problem Area? Yes  No  Explain: Man-made depression

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes  No

| Dominant Species  | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>BRO HOR</u> | <u>FACU</u> | <u>Herb</u> | <u>26</u>    | 5) _____         | _____       | _____   | _____        |
| 2) <u>BRI MIN</u> | <u>FACU</u> | <u>Herb</u> | <u>21</u>    | 6) _____         | _____       | _____   | _____        |
| 3) <u>LOL MUL</u> | <u>FACU</u> | <u>Herb</u> | <u>16</u>    | 7) _____         | _____       | _____   | _____        |
| 4) _____          | _____       | _____       | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/3 = 33%  
 Comments: Does not meet criteria for hydrophytic vegetation

**HYDROLOGY**

WETLAND HYDROLOGY? Yes  No

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: Depression caused by berms; Does not meet criteria for hydrology

**SOILS**

HYDRIC SOILS? Yes  No

Series/Phase: 213 San Joaquin silt loam Drainage Class: mid. well-dra  
 Taxonomy [Subgroup]: Fine, Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concrete  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: None On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon  | Matrix Color    | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|----------|-----------------|--------------|------------------------------|---------------------------------|
| <u>6"</u>   | <u>A</u> | <u>7.5YR3/4</u> | _____        | _____                        | <u>Sandy loam</u>               |
| _____       | _____    | _____           | _____        | _____                        | _____                           |
| _____       | _____    | _____           | _____        | _____                        | _____                           |

Comments: Does not meet criteria for hydric soils

**DECISION**

WETLAND / WATERS DETERMINATION? Yes  No

Rationale: Does not meet any of the 3 criteria for wetlands

General comments: \_\_\_\_\_

Wetland Type: Upland point

## HERBACEOUS COVER / DOMINANCE WORK SHEET

| <u>Species Observed</u>  | <u>Actual Cover</u> | <u>Relative Cover</u> |
|--------------------------|---------------------|-----------------------|
| BRO HOR                  | 25%                 | 26%                   |
| LOL MUL                  | 15%                 | 16%                   |
| BRI MIN                  | 20%                 | 21%                   |
| ERO BOT                  | 10%                 | 11%                   |
| SUN BUF                  | 10%                 | 11%                   |
| HOR MAR                  | 15%                 | 16%                   |
|                          |                     |                       |
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|                          |                     |                       |
| TOTAL SUM ( $\Sigma$ ) = | <u>95</u>           | 100%                  |

**COVER:**

|             |            |
|-------------|------------|
| Vegetation  | <u>95%</u> |
| Bare Ground | <u>5%</u>  |
| Rocks       | <u>—</u>   |
| Other       | <u>—</u>   |
| TOTAL =     | 100%       |

| <u>Species (Descending Order)</u> | <u>Relative Cover</u> | <u>Cumulative Cover</u> | <u>Indicator Status</u> | <u>Dominants</u> |
|-----------------------------------|-----------------------|-------------------------|-------------------------|------------------|
| BRO HOR                           | 26%                   | 26%                     | FACU-                   | ✓                |
| BRI MIN                           | 21%                   | 47%                     | FACU                    | ✓                |
| LOL MUL                           | 16%                   | 63%                     | FAC*                    | ✓                |
| HOR MAR                           | 16%                   | 79%                     | FAC                     |                  |
| ERO BOT                           | 11%                   | 90%                     | N/L                     |                  |
| SUN BUF                           | 11%                   | 101%                    | FACW+                   |                  |
|                                   |                       |                         |                         |                  |
|                                   |                       |                         |                         |                  |
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TOTAL SUM ( $\Sigma$ ) = 100% N-2 - 25

Project/Site: NV Greens #1 Date: 10/12/04 Sample Point: Ver 13  
 Applicant/Owner: North Vineyard Greens G.P. Field Investigator(s): J. Hansen  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): EIK Grove Section/Township/Range: SS, T. 7N, R. 6E  
 Do normal environmental conditions exist site? Yes  No  If no, explain:  
 Atypical Situation? Yes  No  Explain: in Agg. field -> runoff from near-by irrigated la  
 Is this a potential Problem Area? Yes  No  Explain: Caused by runoff -> no depression/hydrology

VEGETATION

HYDROPHYTIC VEGETATION? Yes  No

| Dominant Species  | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>PAS DIL</u> | <u>FAC</u>  | <u>Herb</u> | <u>100%</u>  | 5) _____         | _____       | _____   | _____        |
| 2) _____          | _____       | _____       | _____        | 6) _____         | _____       | _____   | _____        |
| 3) _____          | _____       | _____       | _____        | 7) _____         | _____       | _____   | _____        |
| 4) _____          | _____       | _____       | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/1 = 100%

Comments: Meets criteria for hydrophytic vegetation

HYDROLOGY

WETLAND HYDROLOGY? Yes  No

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetla  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: No depression; does not meet criteria for hydrology

SOILS

HYDRIC SOILS? Yes  No

Series/Phase: 2B3 San Joaquin silt loam Drainage Class: Mod. Well-dr  
 Taxonomy [Subgroup]: Fine, Abruptic Durixerollics Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concrete  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: None On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon  | Matrix Color     | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|----------|------------------|--------------|------------------------------|---------------------------------|
| <u>8"</u>   | <u>A</u> | <u>7.5YR 3/2</u> | _____        | _____                        | <u>Sandy loam</u>               |
| _____       | _____    | _____            | _____        | _____                        | _____                           |
| _____       | _____    | _____            | _____        | _____                        | _____                           |

Comments: Does not meet criteria for hydric soils

\* DECISION \*

WETLAND / WATERS DETERMINATION? Yes  No

Rationale: Only meets one out of 3 criteria for wetlands

General comments: \_\_\_\_\_

Wetland Type: upland point



HERBACEOUS COVER / DOMINANCE WORK SHEET

| <u>Species Observed</u> | <u>Actual Cover</u> | <u>Relative Cover</u> |
|-------------------------|---------------------|-----------------------|
| <i>Dalis grass</i>      | 100 %               | 100 %                 |
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| TOTAL SUM (Σ) =         |                     | 100%                  |

COVER:

|             |       |
|-------------|-------|
| Vegetation  | 100 % |
| Bare Ground |       |
| Rocks       |       |
| Other       |       |
| TOTAL =     | 100%  |

| <u>Species (Descending Order)</u> | <u>Relative Cover</u> | <u>Cumulative Cover</u> | <u>Indicator Status</u> | <u>Dominants</u> |
|-----------------------------------|-----------------------|-------------------------|-------------------------|------------------|
| PAS DIL                           | 100 %                 | 100 %                   | FAC                     | ✓                |
|                                   |                       |                         |                         |                  |
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|                                   |                       |                         |                         |                  |
| TOTAL SUM (Σ) =                   | 100%                  |                         |                         |                  |

## **Appendix O-1**

# **Wetland Delineation Report – North Vineyard Greens Unit 3**

WETLAND DELINEATION  
FOR  
**NORTH VINEYARD GREENS UNIT #3**  
SACRAMENTO COUNTY, CALIFORNIA

03 0141

**RECEIVED**

APR 16 2004

PLANNING DEPT.  
County of Sacramento

March 31, 2004

Prepared for:  
**North Vineyard Greens General Partnership**



**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

**CONTENTS**

WETLAND DELINEATION  
**NORTH VINEYARD GREENS UNIT #3**

INTRODUCTION..... 1  
SURVEY METHODOLOGY ..... 1  
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- Figure 3. Wetland Delineation

**LIST OF ATTACHMENTS**

- Attachment A – Wetland Delineation Data Sheets
- Attachment B – Plant List
- Attachment C – Wetland Delineation

## **INTRODUCTION**

On behalf of the North Vineyard Greens General Partnership, ECORP Consulting, Inc. has conducted a wetland delineation of the North Vineyard Greens Unit #3 site located in the North Vineyard Station Specific Plan Area, Sacramento County, California.

The ±49.5-acre subject property is located north of Gerber Road, west of Bradshaw Road, south of Florin Road, and east of Elk Grove Florin Road (Figure 1 – *Project Site and Vicinity*). Undeveloped pasture, and rural residents are located around the subject property. The site corresponds to a portion of Section 6 of Township 7 North, and Range 6 East of the "Elk Grove, California" 7.5-minute quadrangle (U.S. Department of the Interior, Geological Survey, photorevised 1979).

### **APPLICANT:**

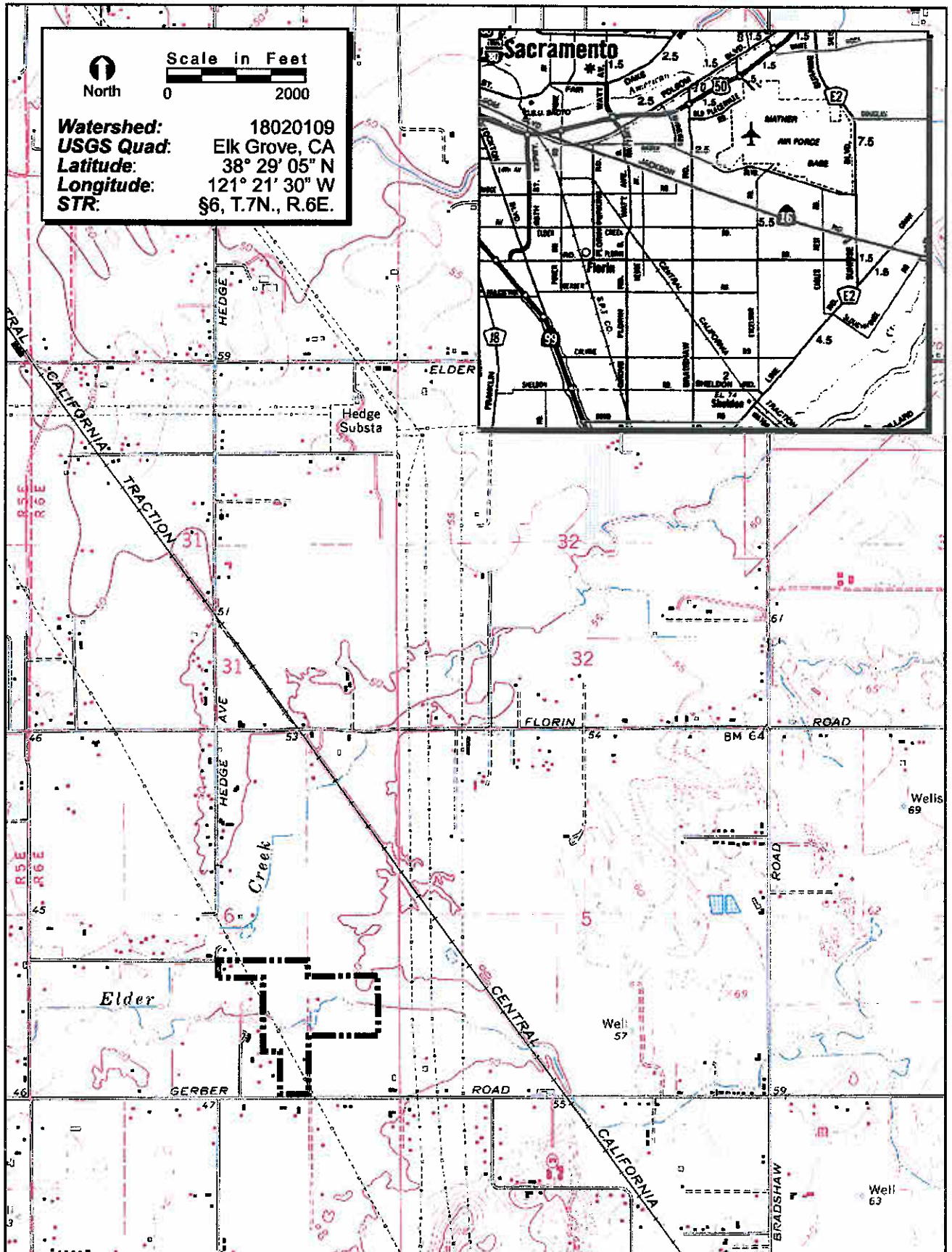
Attn: Mr. Peter Daru  
North Vineyard Greens G.P.  
720 Howe Avenue, Suite 103  
Sacramento, California 95825  
Phone: (916) 641-2081  
Fax: (916) 641-2233

### **AGENT:**

Attn: Ms. Jinnah Hansen  
ECORP Consulting, Inc.  
2260 Douglas Boulevard, Suite 160  
Roseville, California 95661  
Phone: (916) 782-9100  
Fax: (916) 782-9134

## **SURVEY METHODOLOGY**

The wetland delineation was conducted on July 10, 2003, and December 19, 2003 during which time, biologist Jinnah Hansen, walked and inspected the entire site. This wetland delineation was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987). A color aerial photograph (scale: 1"=100,' date flown: March 30, 2002) was utilized to assist with mapping and ground-truthing. A *Munsell Soil Color Chart* (Kollmorgen Instruments Corp. 1990) was used to identify hydric soils in the field and the *Jepson Manual* (Hickman 1994) was used for plant identification.



**FIGURE 1. Project Site and Vicinity Map**

## **EXISTING SITE CONDITIONS**

### **Current Land Use**

The site is comprised of leveled pasture and is situated at an elevation of approximately 50 feet above mean sea level. The site has historically been farmed, but it is currently fallow and does not appear to have been cultivated for some time. Two houses are located in the northern portion of the site. Gerber Creek flows through the property, dividing it into two unequal halves.

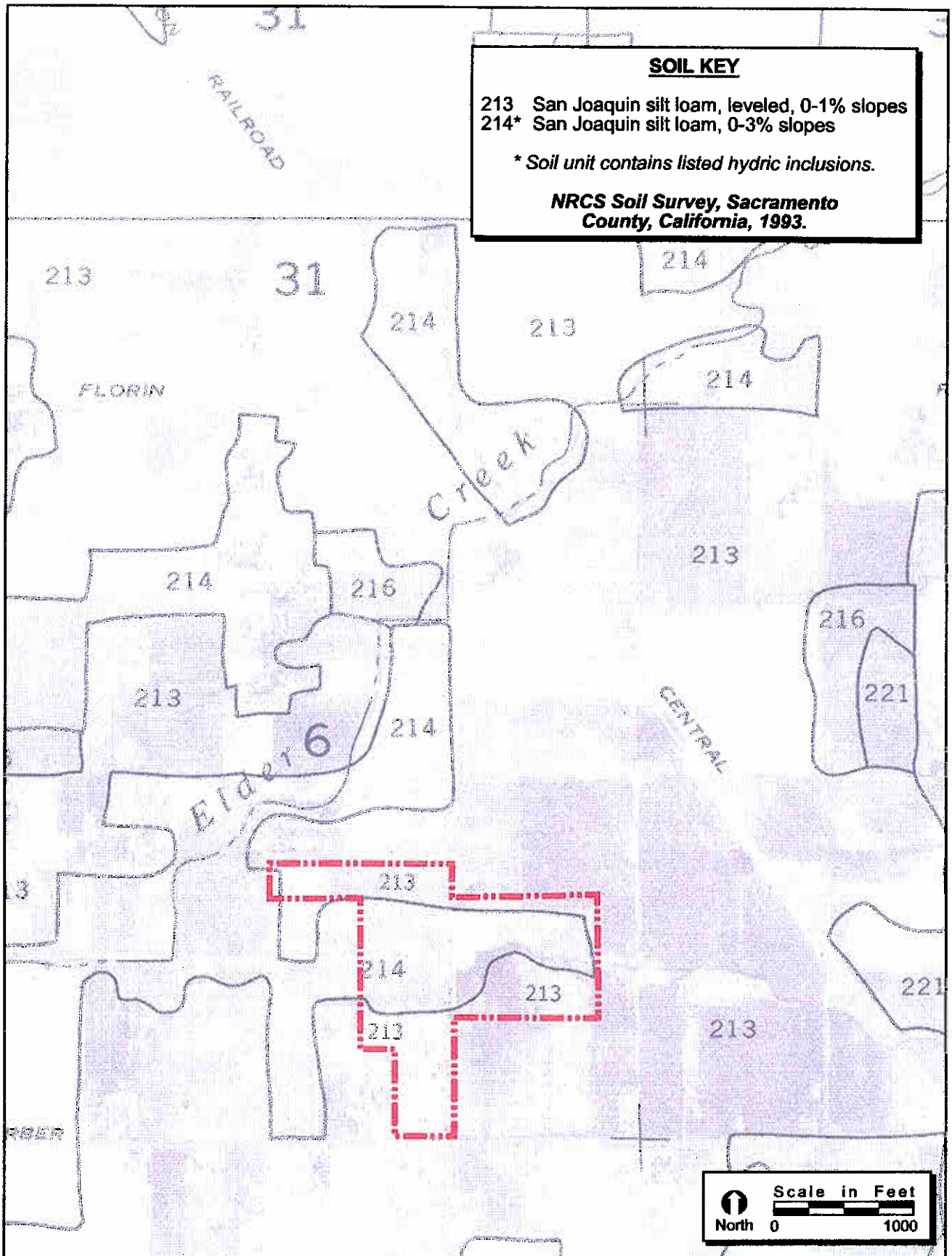
### **Soils**

According to the *Soil Survey of Sacramento County, California* (U.S. Department of Agriculture, Natural Resource Conservation Service 1993), two soil units, or types, have been mapped for the site (Figure 2 – *NRCS Soil Types*). These are: (213) San Joaquin silt loam, leveled, 0-1 percent slopes, and (214) San Joaquin silt loam, 0-3 percent slopes. The San Joaquin silt loam is not considered to be a hydric soil; however, it does contain listed hydric inclusions.

### **Vegetation Community**

The primary vegetation community present on-site is annual grassland. Within the annual grassland are ephemeral features (i.e., seasonal wetlands).

The non-irrigated annual grassland community is comprised primarily of non-native naturalized Mediterranean grasses. These include ripgut brome (*Bromus diandrus*), soft brome (*Bromus hordeaceus*), wild oats (*Avena fatua*), ryegrass (*Lolium multiflorum*), Mediterranean barley (*Hordeum marinum*), and medusahead grass (*Taeniatherum caput-medusae*). Other non-native herbaceous species in this community include hairy hawk-bit (*Leontodon taraxacoides*), filaree (*Erodium botrys*), pineapple weed (*Chamomilla suaveolens*), and yellow-star thistle (*Centaurea solstitialis*).



**FIGURE 2. NRCS Soil Types**

2003-090 North Vineyard Greens Unit 3



## **WATERS OF THE U.S.**

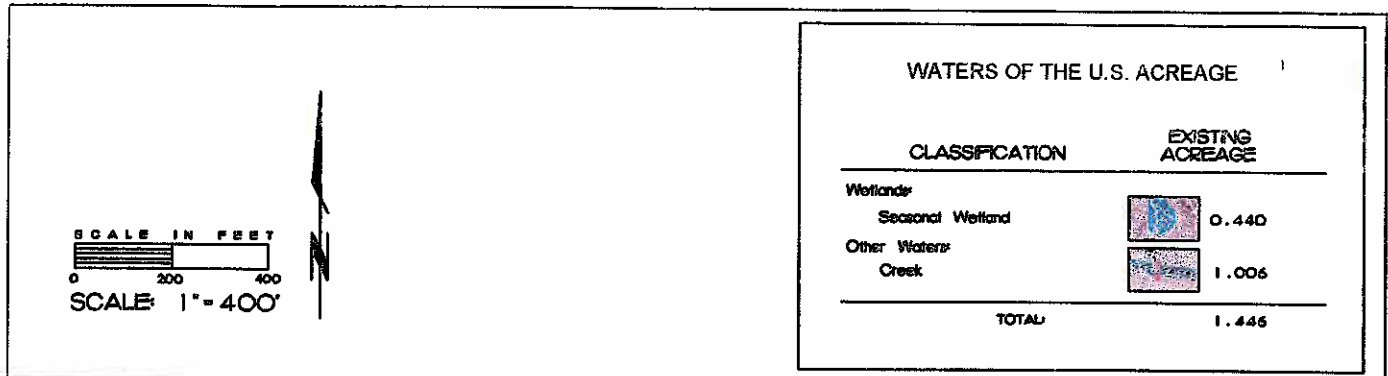
In accordance with the *Corps of Engineers Wetlands Delineation Manual*, several three-parameter data points were taken throughout the site to determine the extent of the wetlands. The data sheets are provided as Attachment A. A corresponding list of plants identified at the data collection points is presented in Attachment B. Potentially jurisdictional waters of the U. S. mapped include wetlands (0.440 acre) and other waters (1.006 acre). The wetlands consist of several seasonal wetland features, and other waters of the U.S. include Gerber Creek (Figure 3 - *Wetland Delineation* and Attachment C).

### **Wetlands**

Nine seasonal wetland areas have been mapped within the non-irrigated pasture. The seasonal wetland depressions SW-1 (0.044 acre), SW-4 (0.005 acre), SW-5 (0.079 acre), SW-6 (0.008), SW-7 (0.014), SW-8 (0.006), and SW-9 (0.026) are ephemerally wet areas where surface runoff and rainwater accumulate within low-lying areas. They are dominated by mostly non-native wetland generalist plant species, which include Italian ryegrass (*Lolium multiflorum*), curly dock (*Rumex crispus*), soft brome (*Bromus hordeaceus*), and manna grass (*Glyceria* sp.). Two seasonal wetland areas SW-2 (0.095 acre) and SW-3 (0.163 acre) may be the direct result of earthen fill on the adjacent property to the southwest. It appears that the fill on the adjacent property has created a berm that restricts sheet flow runoff.

### **Other Waters**

Gerber Creek, which flows in a westerly direction, has been mapped as a seasonal creek according to the "Elk Grove, California" 7.5-minute quadrangle. In general, Gerber Creek exhibits bed-and-bank characteristics and is largely unvegetated due to its depth and the scouring effects of flowing water. However, some hydrophytic vegetation may be present along the upper edges, and in areas where sediment accumulations provide a substrate suitable for plant establishment and growth. Himalayan blackberry (*Rubus discolor*) thickets can be found along the banks at various reaches of the creek. During the survey, Gerber Creek was completely dry.



**WATERS OF THE U.S. ACREAGE**

| CLASSIFICATION      | EXISTING ACREAGE |
|---------------------|------------------|
| <b>Wetlands</b>     |                  |
| Seasonal Wetland    | 0.440            |
| <b>Other Waters</b> |                  |
| Creek               | 1.006            |
| <b>TOTAL:</b>       | <b>1.446</b>     |



**FIGURE 3. Wetland Delineation**

FILENAME: -DWGS\2003-090\nv-3greens.DWG 03/31/04

## **Interstate or Foreign Commerce Connection**

Gerber Creek flows westward into Elder Creek, which continues westward into Morrison Creek and ultimately to the Sacramento River, which is a documented navigable water of the U.S. Due to the topography of the site, rainwater collects within the seasonal wetland, and eventually flows into Gerber Creek. However, SW-2, SW-3, and SW-4 may be considered isolated, as these wetland areas do not appear to be tributary to or adjacent to Gerber Creek. Consequently, Gerber Creek, SW-1, SW-5, SW-6, SW-7, SW-8, and SW-9 should be considered connected with and/or adjacent to a Waters of a U.S. and would therefore be subject to interstate and/or foreign commerce. SW-2, SW-3, and SW-4 may be, at the discretion of the Corps of Engineers, considered isolated wetlands.

## **CONCLUSION**

Potentially jurisdictional waters of the U.S. mapped include wetlands and other waters. Wetlands consist of seasonal wetlands, and other waters include Gerber Creek (1.006 acres). Gerber Creek, SW-1 (0.044 acre), SW-5 (0.079 acre), SW-6 (0.008), SW-7 (0.014), SW-8 (0.006), and SW-9 (0.026) should be considered tributary to and/or adjacent to a Waters of a U.S. and would therefore be subject to interstate and/or foreign commerce. Any impact to these features would require permitting pursuant to Section 404 and 401 of the federal Clean Water Act, and/or Section 1600-1603 of the California Fish and Game Code (Lake and Streambed Alteration Agreement). SW-2 (0.095 acre), SW-3 (0.163 acre), and SW-4 (0.005 acre) may be, at the discretion of the Corps of Engineers, considered isolated wetlands. If the Corps considers these features isolated wetlands, they would not be subject to regulation pursuant to Section 404 of the Clean Water Act.

## **LIST OF ATTACHMENTS**

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Attachment A – Wetland Delineation Data Sheets

Attachment B – Plant List

Attachment C – Wetland Delineation

**ATTACHMENT A**

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Wetland Delineation Data Sheets



**ECORP Consulting, Inc.**  
**ENVIRONMENTAL CONSULTANTS**

**ROUTINE WETLAND DELINEATION**

Project/Site: North Vineyard Greens Unit # 3 Date: 7/10/03 Sample Point: 01  
 Applicant/Owner: North Vineyard Greens G.P. Field Investigator(s): J. Hansen  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Elk Grove, CA Section/Township/Range: T. 7 North, R. 6 East, sec. 6  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: seasonal pooling

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes  No

| Dominant Species  | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>Gly spe</u> | <u>Obl</u>  | <u>herb</u> | <u>50</u>    | 5) _____         | _____       | _____   | _____        |
| 2) <u>Lolund</u>  | <u>Fac</u>  | <u>herb</u> | <u>30</u>    | 6) _____         | _____       | _____   | _____        |
| 3) _____          | _____       | _____       | _____        | 7) _____         | _____       | _____   | _____        |
| 4) _____          | _____       | _____       | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 2/2 = 100 %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes  No

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: very slight topographic basin

**SOILS**

**HYDRIC SOILS?** Yes  No

Series/Phase: 214 San Joaquin silt loam, 0 to 3 percent stone Drainage Class: mod. well drained  
 Taxonomy [Subgroup]: Fine, mixed, thermic Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concretion  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: grat inclusions (depressions) On Hydric Soils List: Yes  No

| Depth (in.) | Horizon | Matrix Color       | Mottle Color   | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|---------|--------------------|----------------|------------------------------|---------------------------------|
| <u>0-8</u>  | _____   | <u>7.5YR 2.5/2</u> | <u>5YR 3/4</u> | _____                        | _____                           |
| _____       | _____   | _____              | _____          | _____                        | _____                           |
| _____       | _____   | _____              | _____          | _____                        | _____                           |

Comments: \_\_\_\_\_

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes  No

Rationale: Hydrophytes & hydric soils present  
 General comments: absence of hydrologic indicators likely due to summer/drought conditions  
 Wetland Type: seasonal wetland

**HERBACEOUS COVER / DOMINANCE WORK SHEET**

| <u>Species Observed</u> | <u>Actual Cover</u> | <u>Relative Cover</u> |
|-------------------------|---------------------|-----------------------|
| Gly spe                 | 50                  | 50                    |
| Pan cr.                 | 15                  |                       |
| Bog her                 | 5                   |                       |
| Lol mel                 | 30                  | 30                    |
| Com ans                 | tr                  |                       |
| Hor war                 | tr                  |                       |
|                         |                     |                       |
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|                         |                     |                       |
|                         |                     |                       |
| TOTAL SUM (Σ) =         | <u>100</u>          | 100%                  |

|                      |           |
|----------------------|-----------|
| <b><u>COVER:</u></b> |           |
| Vegetation           | <u>90</u> |
| Bare Ground          | _____     |
| Rocks                | _____     |
| Other                | _____     |
| TOTAL =              | 100%      |

| <u>Species (Descending Order)</u> | <u>Relative Cover</u> | <u>Cumulative Cover</u> | <u>Indicator Status</u> | <u>Dominants</u> |
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| TOTAL SUM (Σ) =                   | 100%                  |                         |                         |                  |



**ECORP Consulting, Inc.**  
 ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: North Vineyard Greens Unit #3 Date: 7/10/03 Sample Point: 02  
 Applicant/Owner: North Vineyard Greens G.P. Field Investigator(s): J. Hansen  
 County: Sacramento State: CA Plant Community: Annual Grass Land  
 Quad(s): Elk Grove, CA Section/Township/Range: T. 7 North, R. 6 East, sec. 6  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes  No

| Dominant Species   | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|--------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>Brodiaea</u> | <u>FACU</u> | <u>herb</u> | <u>90</u>    | 5) _____         | _____       | _____   | _____        |
| 2) _____           | _____       | _____       | _____        | 6) _____         | _____       | _____   | _____        |
| 3) _____           | _____       | _____       | _____        | 7) _____         | _____       | _____   | _____        |
| 4) _____           | _____       | _____       | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/1 = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes  No

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: no hydrologic indicators present

**SOILS**

HYDRIC SOILS? Yes  No

Series/Phase: Z14 San Joaquin silt loam, leveled, 0-10% slopes Drainage Class: mod. well drain.  
 Taxonomy [Subgroup]: Fne, mixed, thermic Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concretion  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes  No

| Depth (in.) | Horizon | Matrix Color     | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|---------|------------------|--------------|------------------------------|---------------------------------|
| <u>0-8</u>  | _____   | <u>7.5YR 3/2</u> | <u>-</u>     | _____                        | _____                           |
| _____       | _____   | _____            | _____        | _____                        | _____                           |
| _____       | _____   | _____            | _____        | _____                        | _____                           |
| _____       | _____   | _____            | _____        | _____                        | _____                           |

Comments: \_\_\_\_\_

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes  No

Rationale: all criteria have not been met  
 General comments: upland adjacent to #01

Wetland Type: \_\_\_\_\_

## HERBACEOUS COVER / DOMINANCE WORK SHEET

| <u>Species Observed</u> | <u>Actual Cover</u> | <u>Relative Cover</u> |
|-------------------------|---------------------|-----------------------|
| Bou hsr                 | 90                  | 90                    |
| Epi spe                 | 5                   | 5                     |
| Con cov.                | 5                   | 5                     |
| Ero hst                 |                     |                       |
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|                         |                     |                       |
| TOTAL SUM (Σ) = _____   |                     | 100%                  |

| <u>COVER:</u> |       |
|---------------|-------|
| Vegetation    | 90    |
| Bare Ground   | _____ |
| Rocks         | _____ |
| Other         | _____ |
| TOTAL =       | 100%  |

| <u>Species (Descending Order)</u> | <u>Relative Cover</u> | <u>Cumulative Cover</u> | <u>Indicator Status</u> | <u>Dominants</u> |
|-----------------------------------|-----------------------|-------------------------|-------------------------|------------------|
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|                                   |                       |                         |                         |                  |
| TOTAL SUM (Σ) = _____             |                       | 100%                    |                         |                  |

**ECORP Consulting, Inc.**  
**ENVIRONMENTAL CONSULTANTS**

**ROUTINE WETLAND DELINEATION**

Project/Site: North Vineyard Greens Unit #3 Date: 7/10/03 Sample Point: 05  
 Applicant/Owner: North Vineyard Greens G.P. Field Investigator(s): J. Hansen  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Elk Grove, CA Section/Township/Range: T. 7 North, R. 6 East, sec. 6

Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: irrigation runoff is backing up behind const. bank  
 Is this a potential Problem Area? Yes  No  Explain: seasonal (or periodic) saturation

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes  No

| Dominant Species  | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>Hor man</u> | <u>Fac</u>  | <u>herb</u> | <u>45</u>    | 5) _____         | _____       | _____   | _____        |
| 2) <u>Lol mul</u> | <u>Fac</u>  | <u>herb</u> | <u>45</u>    | 6) _____         | _____       | _____   | _____        |
| 3) _____          | _____       | _____       | _____        | 7) _____         | _____       | _____   | _____        |
| 4) _____          | _____       | _____       | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 2/2 = 100 %

Comments: \_\_\_\_\_

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes  No

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_

Comments: \_\_\_\_\_

**SOILS**

**HYDRIC SOILS?** Yes  No

Series/Phase: 213 San Joaquin silt loam, leveled, 0-1% slopes Drainage Class: mod well drained  
 Taxonomy [Subgroup]: fine, mixed, thermic Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concretion  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes  No

| Depth (in.)  | Horizon | Matrix Color     | Mottle Color     | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|--------------|---------|------------------|------------------|------------------------------|---------------------------------|
| <u>0-13"</u> | _____   | <u>7.5YR 3/2</u> | <u>7.5YR 3/4</u> | _____                        | _____                           |
| _____        | _____   | _____            | _____            | _____                        | _____                           |
| _____        | _____   | _____            | _____            | _____                        | _____                           |

Comments: \_\_\_\_\_

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes  No

Rationale: all criteria have been met  
 General comments: \_\_\_\_\_

Wetland Type: seasonal wetland

**HERBACEOUS COVER / DOMINANCE WORK SHEET**

| <u>Species Observed</u>                  | <u>Actual Cover</u> | <u>Relative Cover</u> |
|--|---------------------|-----------------------|
| Her mar                                  | 45                  |                       |
| Lol mid                                  | 45                  |                       |
| Rum cr.                                  | 5                   |                       |
| Bro hor                                  | 5                   |                       |
|  |                     |                       |
|  |                     |                       |
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| <b>TOTAL SUM (<math>\Sigma</math>) =</b> | _____               | <b>100%</b>           |

| <u>COVER:</u>  |             |
|----------------|-------------|
| Vegetation     | <u>100</u>  |
| Bare Ground    | _____       |
| Rocks          | _____       |
| Other          | _____       |
| <b>TOTAL =</b> | <b>100%</b> |

| <u>Species (Descending Order)</u>        | <u>Relative Cover</u> | <u>Cumulative Cover</u> | <u>Indicator Status</u> | <u>Dominants</u> |
|--|-----------------------|-------------------------|-------------------------|------------------|
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| <b>TOTAL SUM (<math>\Sigma</math>) =</b> | <b>100%</b>           |                         |                         |                  |

**ECORP Consulting, Inc.**  
 ENVIRONMENTAL CONSULTANTS

**ROUTINE WETLAND DELINEATION**

Project/Site: North Vineyard Greens Unit #3 Date: 7/10/03 Sample Point: 06  
 Applicant/Owner: North Vineyard Greens G.P. Field Investigator(s): J. Hansen  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Elk Grove, CA Section/Township/Range: T. 7 North, R. 6 East, sec. 6  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: irrigation  
 Is this a potential Problem Area? Yes  No  Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes  No

| Dominant Species   | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|--------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>Brodiaea</u> | <u>FACW</u> | <u>herb</u> | <u>30</u>    | 5) _____         | _____       | _____   | _____        |
| 2) <u>Holcus</u>   | <u>NL</u>   | <u>herb</u> | <u>25</u>    | 6) _____         | _____       | _____   | _____        |
| 3) _____           | _____       | _____       | _____        | 7) _____         | _____       | _____   | _____        |
| 4) _____           | _____       | _____       | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/2 = 0 %

Comments: \_\_\_\_\_

**HYDROLOGY**

WETLAND HYDROLOGY? Yes  No

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: \_\_\_\_\_

**SOILS**

HYDRIC SOILS? Yes  No

Series/Phase: 213 San Joaquin silt loam, leveled, 0-15% slopes Drainage Class: mod. well drain.  
 Taxonomy [Subgroup]: Fine, mixed, thermic Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concretions  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes  No

| Depth (in.) | Horizon | Matrix Color     | Mottle Color   | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|---------|------------------|----------------|------------------------------|---------------------------------|
| <u>0-3</u>  | _____   | <u>7.5YR 3/3</u> | <u>5YR 2/4</u> | _____                        | _____                           |
| _____       | _____   | _____            | _____          | _____                        | _____                           |
| _____       | _____   | _____            | _____          | _____                        | _____                           |

Comments: \_\_\_\_\_

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes  No

Rationale: Criteria have not been met  
 General comments: upland area adjacent to #05; area may get some irrigation runoff, but not much Wetland Type: \_\_\_\_\_



## ATTACHMENT B

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Plant List

**North Vineyard Greens Unit #3  
Wetland Delineation – Plants Observed at Data Points**

| <b>Abbr.</b> | <b>Scientific Name</b>        | <b>Common Name</b>   | <b>Indicator Status</b> |
|--------------|-------------------------------|----------------------|-------------------------|
| BRO HOR      | <i>Bromus hordeaceus</i>      | Soft brome           | FACU-                   |
| CON ARV      | <i>Convolvulus arvensis</i>   | Morning glory        | N/L                     |
| CYN DAC      | <i>Cynodon dactylon</i>       | Bermuda grass        | FAC                     |
| EPI SPE      | <i>Epilobium species</i>      | Willow-herb          | --                      |
| ERO BOT      | <i>Erodium botrys</i>         | Filaree              | N/L                     |
| GLY spe.     | <i>Glyceria species</i>       | Mannagrass           | OBL                     |
| HOL VIR      | <i>Holcarpha virgata</i>      | Sticky tarweed       | N/L                     |
| HOR MAR      | <i>Hordeum marinum</i>        | Mediterranean barley | FAC                     |
| LEO TAR      | <i>Leontodon taraxacoides</i> | Hairy hawkbit        | FACU                    |
| LOL MUL      | <i>Lolium multiflorum</i>     | Ryegrass             | FAC*                    |
| RUM CRI      | <i>Rumex crispus</i>          | Curly dock           | FACW-                   |
| TRI DUB      | <i>Trifolium dubium</i>       | Suckling clover      | FACU*                   |
| TRI HIR      | <i>Trifolium hirtum</i>       | Rose clover          | N/L                     |
| VIC spe.     | <i>Vicia species</i>          | Vetch                | --                      |
| VUL BRO      | <i>Vulpia bromoides</i>       | Vulpia               | FACW                    |

**Indicator Status Codes**

**OBL** = Obligate Wetland; occur almost always (estimated probability >99%) under natural conditions in wetlands.

**FACW** = Facultative Wetland; usually occur in wetlands (estimated probability 67%-99%) under natural conditions in wetlands.

**FAC** = Facultative; equally likely to occur in wetlands or non-wetlands (estimated probability 34%-66%).

**FACU** = Facultative Upland; usually occur in non-wetlands (estimated probability 67%-99%).

**UPL** = Obligate Upland; occur almost always (estimated probability >99%) in non-wetlands in the region specified.

**N/L** = Not Listed.

**NI** = No indicator was recorded for those species for which insufficient information was available to determine a status.

-- = May or may not occur in wetlands depending upon species.

A positive (+) sign indicates a frequency toward the higher (more frequently found in wetlands) end of the facultative categories.

A negative (-) sign indicates a frequency toward the lower (less frequently found in wetlands) end of the facultative categories.

An asterisk (\*) indicates a tentative assignment based upon limited information or conflicting review.



**ATTACHMENT C**

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Wetland Delineation

## **Appendix O-2**

### **Revised Wetland Delineation Report – North Vineyard Greens Unit 3**



November 3, 2004

0 3 0 1 4 1

Jonathan Foster  
U.S. Army Corps of Engineers, Sacramento District  
Regulatory Branch  
1325 J Street, 14th Floor  
Sacramento, CA 95814-2922

***Re: North Vineyard Greens Unit #3 (Reg. # 200400274) – Revised Wetland Delineation***

Dear Mr. Foster:

Please find enclosed the revised wetland delineation map for the North Vineyard Greens #3 site located in Sacramento County, California. The subject property is located north of Gerber Road, west of Bradshaw Road, south of Florin Road, and east of Elk Grove Florin Road. The site corresponds to a portion of Section 6 of Township 7 North, and Range 6 East of the "Elk Grove, California" 7.5-minute quadrangle (U.S. Department of the Interior, Geological Survey, photorevised 1979).

The changes to this delineation reflect those we discussed in the field during our field verification visit conducted on August 12, 2004. Five additional data points have been taken per our discussion during the field verification visit (Attachment A). One seasonal wetland (#10, 0.049 acre) and one seasonal wetland swale (#1, 0.003 acre) have been added as a result of these additional data points. Consequently, the waters of the U.S. for this site total 1.448 acres. Wetlands consist of seasonal wetland (0.489 acre), wetland swale (0.003 acre), and other waters are comprised of Gerber Creek (1.006 acres). A map with these additions is included as (Attachment B).

Please call me at (916) 782-9100 if you have any questions regarding this project.

Sincerely,

A handwritten signature in black ink, appearing to read "Jinnah Hansen" with a stylized flourish at the end.

Jinnah Hansen  
Biologist

Attachment

cc: Peter Daru/NVG GP  
Ben French/MacKay & Soms

Project/Site: NV Greens #3 Date: 10/12/04 Sample Point: Ver 017  
 Applicant/Owner: North Vineyard Greens G.P. Field Investigator(s): J. Hansen  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): Elk Grove Section/Township/Range: S 5., T. 7N, R. 6E  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: \_\_\_\_\_

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes  No

| Dominant Species       | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|------------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>SOL ROS</u>      | <u>--</u>   | <u>Herb</u> | <u>50</u>    | 5) _____         | _____       | _____   | _____        |
| 2) <u>HEM PFT FACU</u> | _____       | <u>Herb</u> | <u>25</u>    | 6) _____         | _____       | _____   | _____        |
| 3) _____               | _____       | _____       | _____        | 7) _____         | _____       | _____   | _____        |
| 4) _____               | _____       | _____       | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/2 = 0%

Comments: Does not meet criteria for hydrophytic vegetation

**HYDROLOGY**

WETLAND HYDROLOGY? Yes  No

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: Slight depressional swale; Does not meet criteria for hydrology

**SOILS**

HYDRIC SOILS? Yes  No

Series/Phase: 214 San Joaquin silt loam Drainage Class: mod. well dr.  
 Taxonomy [Subgroup]: Fine, Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concrete  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: Galt inclusions On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon  | Matrix Color     | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|----------|------------------|--------------|------------------------------|---------------------------------|
| <u>6"</u>   | <u>A</u> | <u>7.5YR 3/2</u> | _____        | _____                        | <u>Sandy loam</u>               |
| _____       | _____    | _____            | _____        | _____                        | _____                           |
| _____       | _____    | _____            | _____        | _____                        | _____                           |

Comments: Does not meet criteria for hydric soils

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes  No

Rationale: Does not meet any of the 3 criteria for wetlands  
 General comments: possibly receives overflow from Garber Creek at high flow

Wetland Type: \_\_\_\_\_

# HERBACEOUS COVER / DOMINANCE WORK SHEET

| Species Observed         | Actual Cover | Relative Cover |
|--------------------------|--------------|----------------|
| HEM FIT                  | 10%          | 25%            |
| Solanum rostratum        | 20%          | 50%            |
| CEN SOL                  | 5%           | 13%            |
| CON ARV                  | 5%           | 13%            |
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| TOTAL SUM ( $\Sigma$ ) = | 40%          | 100%           |

COVER:

|             |      |
|-------------|------|
| Vegetation  | 40%  |
| Bare Ground | 60%  |
| Rocks       | —    |
| Other       | —    |
| TOTAL =     | 100% |

| Species (Descending Order) | Relative Cover | Cumulative Cover | Indicator Status | Dominants |
|----------------------------|----------------|------------------|------------------|-----------|
| SOL ROS                    | 50%            | 50%              | —                | —         |
| HEM FIT                    | 25%            | 75%              | FACU             | ✓         |
| CEN SOL                    | 13%            | 88%              | N/L              | —         |
| CON ARV                    | 13%            | 100%             | N/L              | —         |
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|                            |                |                  |                  |           |
| TOTAL SUM ( $\Sigma$ ) =   | 100%           |                  |                  |           |

# ECORP Consulting, Inc.

ENVIRONMENTAL CONSULTANTS

ROUTINE WETLAND DELINEATION

Project/Site: NV Greens #3 Date: 10/12/04 Sample Point: Ver 02  
 Applicant/Owner: North Vineyard Greens G.P. Field Investigator(s): J. Hansen  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): EIK Grove Section/Township/Range: SS., T. 7N, R. 6E  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: historic creek bed for Gerber Creek

## VEGETATION

HYDROPHYTIC VEGETATION? Yes  No

| Dominant Species  | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>ALN RHO</u> | <u>FACW</u> | <u>Tree</u> | <u>100%</u>  | 5) _____         | _____       | _____   | _____        |
| 2) _____          | _____       | _____       | _____        | 6) _____         | _____       | _____   | _____        |
| 3) _____          | _____       | _____       | _____        | 7) _____         | _____       | _____   | _____        |
| 4) _____          | _____       | _____       | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/1 = 100%

Comments: Meets criteria for vegetation

## HYDROLOGY

WETLAND HYDROLOGY? Yes  No

Recorded Data: Yes  No  if yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: Does not meet criteria for hydrology

## SOILS

HYDRIC SOILS? Yes  No

Series/Phase: 214 San Joaquin silt loam Drainage Class: mod well-drain  
 Taxonomy [Subgroup]: Fine, Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concrete  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: Galt inclusions On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon  | Matrix Color    | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|----------|-----------------|--------------|------------------------------|---------------------------------|
| <u>6"</u>   | <u>A</u> | <u>10YR 3/4</u> | _____        | _____                        | <u>Sandy loam</u>               |
| _____       | _____    | _____           | _____        | _____                        | _____                           |
| _____       | _____    | _____           | _____        | _____                        | _____                           |

Comments: Does not meet criteria for hydric soils

## \* DECISION \*

WETLAND / WATERS DETERMINATION? Yes  No

Rationale: Only meets 1 out of 3 criteria for wetlands. Was historic path of  
 General comments: Gerber Creek but has been filled.  
 Wetland Type: upland point

# HERBACEOUS COVER / DOMINANCE WORK SHEET

| Species Observed         | Actual Cover | Relative Cover |
|--------------------------|--------------|----------------|
| <u>Alder</u>             | <u>100%</u>  |                |
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| TOTAL SUM ( $\Sigma$ ) = | <u>100%</u>  | 100%           |

| <u>COVER:</u> |             |
|---------------|-------------|
| Vegetation    | <u>100%</u> |
| Bare Ground   | <u>    </u> |
| Rocks         | <u>    </u> |
| Other         | <u>    </u> |
| TOTAL =       | 100%        |

| Species (Descending Order) | Relative Cover | Cumulative Cover | Indicator Status | Dominants                           |
|----------------------------|----------------|------------------|------------------|-------------------------------------|
| <u>ALN RHO</u>             | <u>100%</u>    | <u>100%</u>      | <u>FACW</u>      | <input checked="" type="checkbox"/> |
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|                            |                |                  |                  |                                     |
| TOTAL SUM ( $\Sigma$ ) =   | 100%           |                  |                  |                                     |

TOTAL SUM ( $\Sigma$ ) = 100%

# ECORP Consulting, Inc.

ENVIRONMENTAL CONSULTANTS

ROUTINE WETLAND DELINEATION

Project/Site: NV Greens #3 Date: 10/12/04 Sample Point: Var 03  
 Applicant/Owner: North Vineyard Greens G.P. Field Investigator(s): J. Hansen  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): ELK Grove Section/Township/Range: S 5., T. 7N, R. 6E  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: historic creek bed for Gerber Creek

## VEGETATION

HYDROPHYTIC VEGETATION? Yes  No

| Dominant Species  | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>HOR MAR</u> | <u>FAC</u>  | <u>Herb</u> | <u>25</u>    | 5) _____         | _____       | _____   | _____        |
| 2) <u>RUM CRT</u> | <u>FACW</u> | <u>Herb</u> | <u>20</u>    | 6) _____         | _____       | _____   | _____        |
| 3) <u>LOL MLL</u> | <u>FAC*</u> | <u>Herb</u> | <u>15</u>    | 7) _____         | _____       | _____   | _____        |
| 4) <u>ALN RHO</u> | <u>FACW</u> | <u>tree</u> | <u>15</u>    | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 3/4 = 75 %

Comments: Meets criteria for hydrophytic vegetation

## HYDROLOGY

WETLAND HYDROLOGY? Yes  No

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: Does not meet criteria for hydrology

## SOILS

HYDRIC SOILS? Yes  No

Series/Phase: 21A San Joaquin silt loam Drainage Class: mod. well-drai  
 Taxonomy [Subgroup]: Fine, Abruptic Durixerolls Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concrete  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: Galt inclusions On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon  | Matrix Color    | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|----------|-----------------|--------------|------------------------------|---------------------------------|
| <u>8"</u>   | <u>A</u> | <u>10YR 3/3</u> | _____        | _____                        | <u>Sandy loam</u>               |
| _____       | _____    | _____           | _____        | _____                        | _____                           |
| _____       | _____    | _____           | _____        | _____                        | _____                           |

Comments: Does not meet criteria for hydric soils

## \* DECISION \*

WETLAND / WATERS DETERMINATION? Yes  No

Rationale: Only meets 1 out of 3 criteria for wetlands. Was historic path of  
 General comments: Gerber Creek but has been filled

Wetland Type: upland point



HERBACEOUS COVER / DOMINANCE WORK SHEET

| Species Observed | Actual Cover | Relative Cover |
|------------------|--------------|----------------|
| HOR MAR          | 25%          | 25%            |
| RUM CRT          | 20%          | 20%            |
| RAP SAT          | 5%           | 5%             |
| LAC SER          | 5%           | 5%             |
| LOL MUL          | 15%          | 15%            |
| LYT HYS          | 5%           | 5%             |
| Alnus            | 15%          | 15%            |
| CYN DAC          | 10%          | 10%            |
|                  |              |                |
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|                  |              |                |
| TOTAL SUM (Σ) =  | 100%         | 100%           |

COVER:

|             |      |
|-------------|------|
| Vegetation  | 100% |
| Bare Ground | —    |
| Rocks       | —    |
| Other       | —    |
| TOTAL =     | 100% |

| Species (Descending Order) | Relative Cover | Cumulative Cover | Indicator Status | Dominants |
|----------------------------|----------------|------------------|------------------|-----------|
| HOR MAR                    | 25%            | 25%              | FAC              | ✓         |
| RUM CRT                    | 20%            | 45%              | FACW-            | ✓         |
| LOL MUL                    | 15%            | 60%              | FAC*             | ✓         |
| ALN RHO                    | 15%            | 75%              | FACW             | ✓         |
| CYN DAC                    | 10%            | 85%              | FAC              |           |
| RAP SAT                    | 5%             | 90%              | UPL              |           |
| LAC SER                    | 5%             | 95%              | FAC              |           |
| LYT HYS                    | 5%             | 100%             | FACW             |           |
|                            |                |                  |                  |           |
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|                            |                |                  |                  |           |
|                            |                |                  |                  |           |
|                            |                |                  |                  |           |
| TOTAL SUM (Σ) =            | 100%           |                  |                  |           |

TOTAL SUM (Σ) = 100%

Project/Site: NV Greens #3 Date: 10/12/04 Sample Point: Var 04  
 Applicant/Owner: North Vineyard Greens G.P. Field Investigator(s): J. Hansen  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): EIK Grove Section/Township/Range: S5, T. 7N, R. 6E  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: Seasonally inundated area

**VEGETATION**

HYDROPHYTIC VEGETATION? Yes  No

| Dominant Species  | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>HOR MAR</u> | <u>FAC</u>  | <u>Herb</u> | <u>25%</u>   | 5) _____         | _____       | _____   | _____        |
| 2) <u>LOL MLL</u> | <u>FAC*</u> | <u>Herb</u> | <u>25%</u>   | 6) _____         | _____       | _____   | _____        |
| 3) _____          | _____       | _____       | _____        | 7) _____         | _____       | _____   | _____        |
| 4) _____          | _____       | _____       | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 2/2 = 100%

Comments: meets criteria for hydrophytic vegetation

**HYDROLOGY**

WETLAND HYDROLOGY? Yes  No

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: old Gerber Creek -> piles of dirt dumped in middle of old channel

**SOILS**

HYDRIC SOILS? Yes  No

Series/Phase: 2A San Joaquin silt loam Drainage Class: mod. well  
 Taxonomy [Subgroup]: Fine, Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concrete  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon  | Matrix Color    | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|----------|-----------------|--------------|------------------------------|---------------------------------|
| <u>6"</u>   | <u>A</u> | <u>7.5YR3/3</u> | _____        | _____                        | <u>Sandy loam</u>               |
| _____       | _____    | _____           | _____        | _____                        | _____                           |
| _____       | _____    | _____           | _____        | _____                        | _____                           |

Comments: Does not meet criteria for hydric soils

**\* DECISION \***

WETLAND / WATERS DETERMINATION? Yes  No

Rationale: Meets 2 out of 3 criteria for wetlands; soils are not hydric  
 General comments: possibly due to recent filling of old Gerber Creek channel  
 Wetland Type: Seasonal Wetland

# HERBACEOUS COVER / DOMINANCE WORK SHEET

| Species Observed         | Actual Cover | Relative Cover |
|--------------------------|--------------|----------------|
| RUM CRI                  | 10%          | 10%            |
| HOR MAR                  | 25%          | 25%            |
| LAC SER                  | 10%          | 10%            |
| LOL MUL                  | 25%          | 25%            |
| LYT HYS                  | 15%          | 15%            |
| RAP SAT                  | 5%           | 5%             |
| Eremocarpus              | 10%          | 10%            |
|                          |              |                |
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|                          |              |                |
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|                          |              |                |
|                          |              |                |
|                          |              |                |
| TOTAL SUM ( $\Sigma$ ) = | 100%         | 100%           |

COVER:  
 Vegetation 100%  
 Bare Ground \_\_\_\_\_  
 Rocks \_\_\_\_\_  
 Other \_\_\_\_\_  
 TOTAL = 100%

| Species (Descending Order) | Relative Cover | Cumulative Cover | Indicator Status | Dominants |
|----------------------------|----------------|------------------|------------------|-----------|
| HOR MAR                    | 25%            | 25%              | EAC              | ✓         |
| LOL MUL                    | 25%            | 50%              | FAC*             | ✓         |
| LYT HYS                    | 15%            | 65%              | FACW             |           |
| RUM CRI                    | 10%            | 75%              | FACW-            |           |
| LAC SER                    | 10%            | 85%              | FAC              |           |
| ERE SET                    | 10%            | 95%              | N/L              |           |
| RAP SAT                    | 5%             | 100%             | UPL              |           |
|                            |                |                  |                  |           |
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|                            |                |                  |                  |           |
| TOTAL SUM ( $\Sigma$ ) =   | 100%           |                  |                  |           |

Project/Site: NV Greens #3 Date: 10/12/04 Sample Point: Ver 05  
 Applicant/Owner: North Vineyard Greens G.P. Field Investigator(s): J. Hansen  
 County: Sacramento State: CA Plant Community: Annual Grassland  
 Quad(s): EIK Grove Section/Township/Range: S.S., T. 7N, R. 6E  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: \_\_\_\_\_

**VEGETATION**

**HYDROPHYTIC VEGETATION?** Yes  No

| Dominant Species | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>LA MUL</u> | <u>FAC*</u> | <u>herb</u> | <u>65%</u>   | 5) _____         | _____       | _____   | _____        |
| 2) _____         | _____       | _____       | _____        | 6) _____         | _____       | _____   | _____        |
| 3) _____         | _____       | _____       | _____        | 7) _____         | _____       | _____   | _____        |
| 4) _____         | _____       | _____       | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/1 = 100%

Comments: meets criteria for hydrophytic vegetation

**HYDROLOGY**

**WETLAND HYDROLOGY?** Yes  No

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetland  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: Very slight depression - field slopes towards corners, does not meet criteria

**SOILS**

**HYDRIC SOILS?** Yes  No

Series/Phase: 213 San Joaquin, silt loam Drainage Class: mid. well-dra  
 Taxonomy [Subgroup]: Fine, Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concrete  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: None On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon  | Matrix Color     | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|----------|------------------|--------------|------------------------------|---------------------------------|
| <u>6"</u>   | <u>A</u> | <u>7.5YR 3/4</u> | _____        | _____                        | <u>Sandy loam</u>               |
| _____       | _____    | _____            | _____        | _____                        | _____                           |
| _____       | _____    | _____            | _____        | _____                        | _____                           |

  
 Comments: Does not meet criteria for hydric soils

**\* DECISION \***

**WETLAND / WATERS DETERMINATION?** Yes  No

Rationale: Only meets one out of 3 criteria for wetlands  
 General comments: \_\_\_\_\_

Wetland Type: upland point

**HERBACEOUS COVER / DOMINANCE WORK SHEET**

| <u>Species Observed</u> | <u>Actual Cover</u> | <u>Relative Cover</u> |
|-------------------------|---------------------|-----------------------|
| LOL MUL                 | 65%                 | 65%                   |
| BRO HOR                 | 30%                 | 30%                   |
| Eremocarphus            | 5%                  | 5%                    |
|                         |                     |                       |
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|                         |                     |                       |
|                         |                     |                       |
| <b>TOTAL SUM (Σ) =</b>  | <b>100%</b>         | <b>100%</b>           |

COVER:

|                |             |
|----------------|-------------|
| Vegetation     | 100%        |
| Bare Ground    |             |
| Rocks          |             |
| Other          |             |
| <b>TOTAL =</b> | <b>100%</b> |

| <u>Species (Descending Order)</u> | <u>Relative Cover</u> | <u>Cumulative Cover</u> | <u>Indicator Status</u> | <u>Dominant</u> |
|-----------------------------------|-----------------------|-------------------------|-------------------------|-----------------|
| LOL MUL                           | 65%                   | 65%                     | FA*CK                   | ✓               |
| BRO HOR                           | 30%                   | 95%                     | FA*CU-                  |                 |
| ERE SET                           | 5%                    | 100%                    | N/L                     |                 |
|                                   |                       |                         |                         |                 |
|                                   |                       |                         |                         |                 |
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|                                   |                       |                         |                         |                 |
|                                   |                       |                         |                         |                 |
| <b>TOTAL SUM (Σ) =</b>            | <b>100%</b>           |                         |                         |                 |

# **Appendix P**

## **Wetland Delineation Report – Gosal Estates**

WETLAND DELINEATION  
FOR  
**GOSAL ESTATES**  
SACRAMENTO COUNTY, CALIFORNIA

March 31, 2004

*Prepared for:*  
**North Vineyard Greens General Partnership**



**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS



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SURVEY METHODOLOGY ..... 1  
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- Figure 2. NRCS Soil Types
- Figure 3. Wetland Delineation

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- Attachment A – Wetland Delineation Data Sheets
- Attachment B – Plant List
- Attachment C – Wetland Delineation



## INTRODUCTION

At the request of the North Vineyard Greens General Partnership, ECORP Consulting, Inc. has conducted a wetland delineation of the Gosal Estates project site located in the North Vineyard Station Specific Plan Area, Sacramento County, California.

The 9-acre subject property is generally located north of Gerber Road, west of Passallis Lane, south of Florin Road, and east of Elk Grove Florin Road (Figure 1). Gerber Road represents the southern boundary of the site. The site corresponds to a portion of Section 6 of Township 7 North and Range 6 East, "Elk Grove, California" 7.5-minute quadrangle (U.S. Department of the Interior, Geological Survey, photorevised 1979).

### APPLICANT:

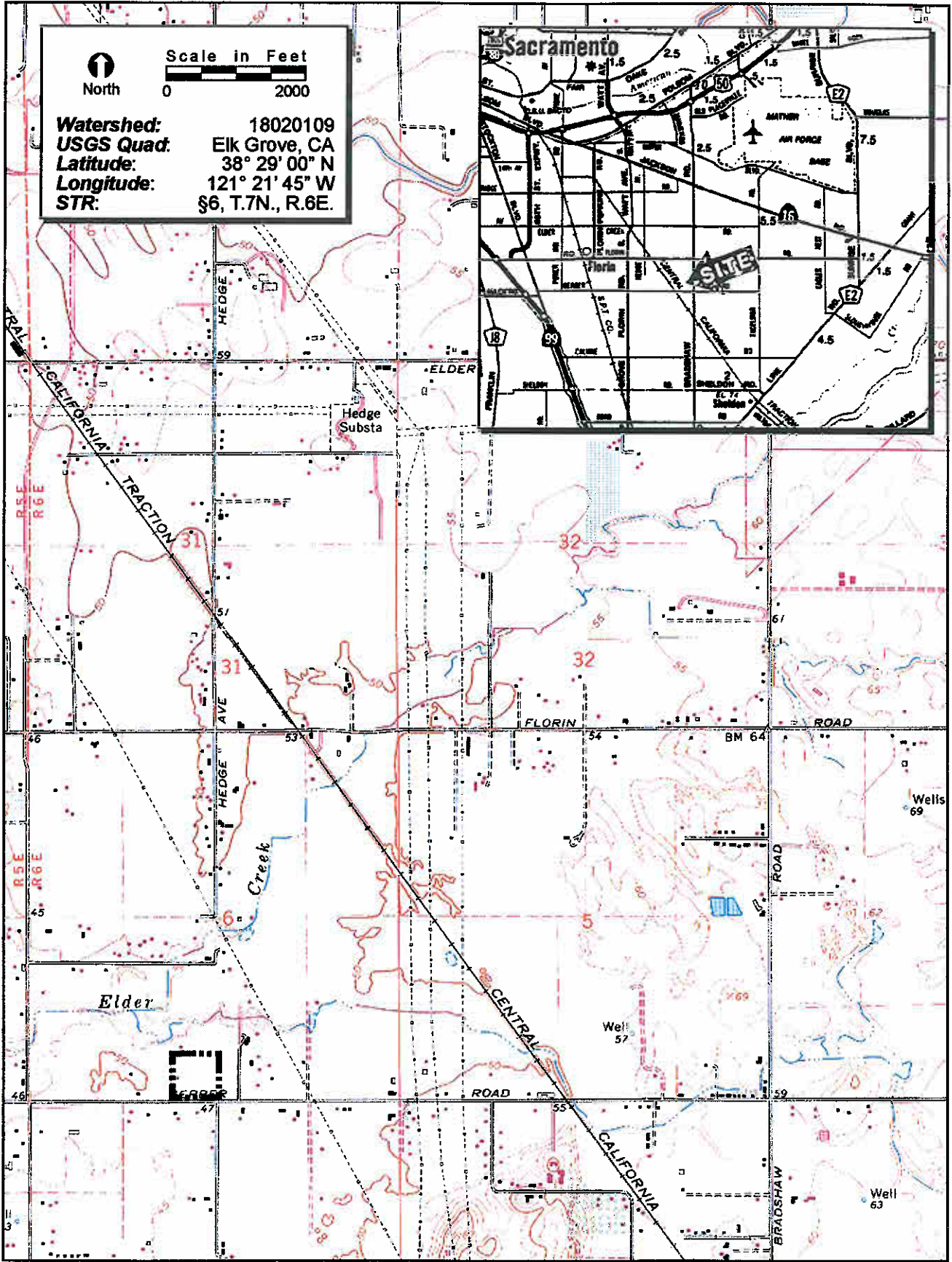
Attn: Mr. Peter Daru  
North Vineyard Greens G.P.  
720 Howe Avenue, Suite 103  
Sacramento, California 95825  
Phone: (916) 641-2081  
Fax: (916) 641-2233

### AGENT:

Attn: Ms. Jinnah Hansen  
ECORP Consulting, Inc.  
2260 Douglas Boulevard, Suite 160  
Roseville, California 95661  
Phone: (916) 782-9100  
Fax: (916) 782-9134

## SURVEY METHODOLOGY

The wetland delineation was conducted during August 2002 by ECORP biologists Keith Kwan and Sandra Starr and on July 10, 2003 by ECORP biologist Jinnah Hansen. The entire site was walked and inspected for potential waters of the U.S. This wetland delineation was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987). A color aerial photograph (scale: 1"=100', date flown: March 30, 2002) was utilized to assist with mapping and ground-truthing. A *Munsell Soil Color Chart* (Kollmorgen Instruments Corp. 1990) was used to identify hydric soils in the field and the *Jepson Manual* (Hickman 1994) was used for plant identification.



**FIGURE 1. Project Site and Vicinity Map**

## **EXISTING SITE CONDITIONS**

### **Current Land Use**

The site is comprised of a leveled field and is situated at an elevation of approximately 50 feet above mean sea level. The site is undeveloped and is surrounded by rural residences and other undeveloped parcels. Much of the Gosal Estates site has been historically leveled and/or farmed, but it is currently fallow and does not appear to have been cultivated for some time.

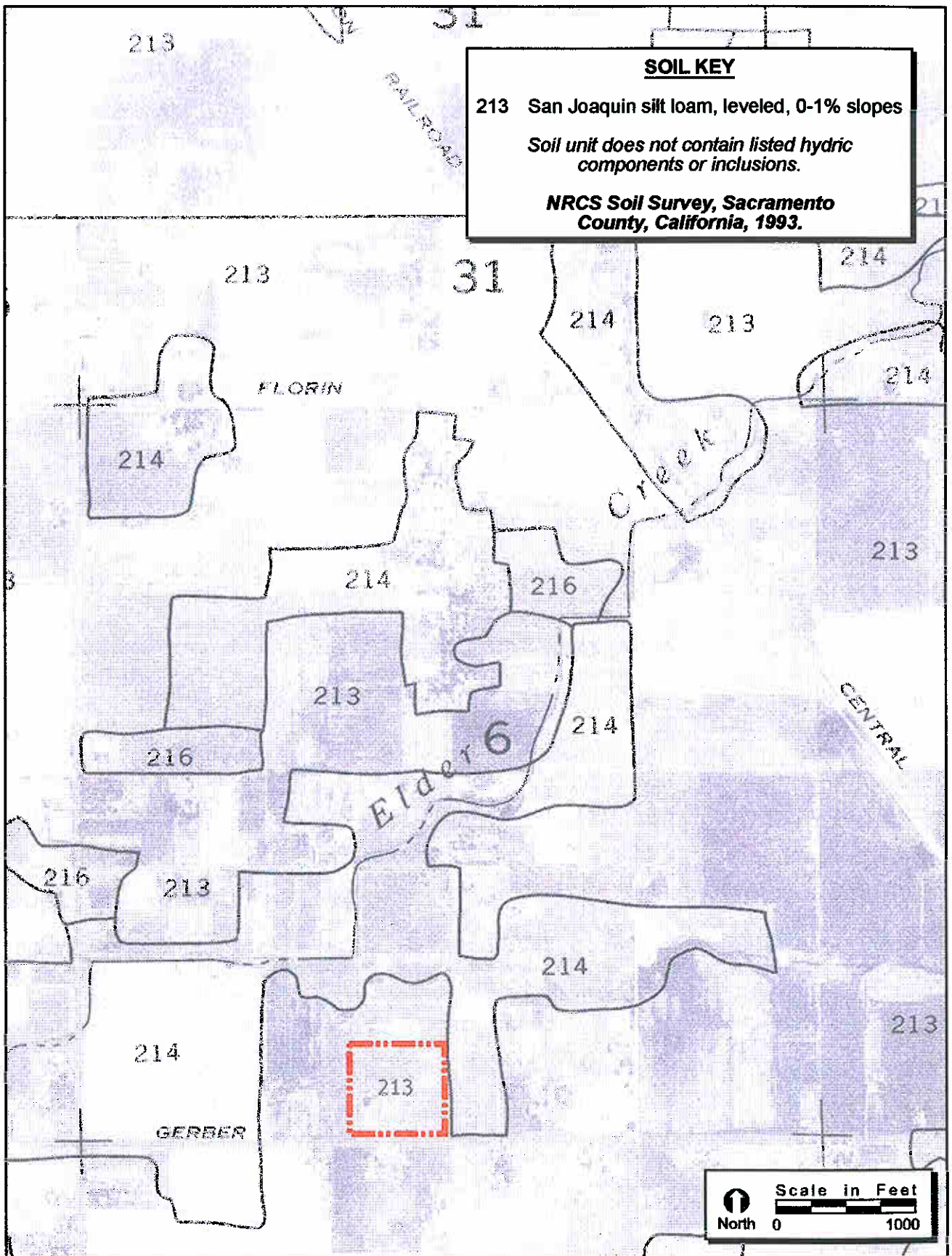
### **Soils**

According to the *Soil Survey of Sacramento County, California* (U. S. Department of Agriculture, Natural Resource Conservation Service 1993), one soil unit, or type, has been mapped for the site (213) San Joaquin silt loam, leveled, 0-1 percent slopes (Figure 2).

### **Vegetation Community**


The primary vegetation community present on-site is annual grassland. One seasonal wetland feature was mapped on-site (Attachment C and Figure 3). The annual grassland community is comprised primarily of non-native naturalized Mediterranean grasses. These include ripgut brome (*Bromus diandrus*), soft brome (*Bromus hordeaceus*), wild oats (*Avena fatua*), ryegrass (*Lolium multiflorum*), Mediterranean barley (*Hordeum marinum*), and medusahead grass (*Taeniatherum caput-medusae*). Other non-native herbaceous species in this community include hairy hawk-bit (*Leontodon taraxacoides*), filaree (*Erodium botrys*), pineapple weed (*Chamomilla suaveolens*), and yellow-star thistle (*Centaurea solstitialis*).

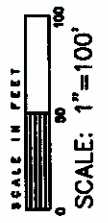
Several blue gum (*Eucalyptus globulus*) trees are situated at the western boundary of the site alongside the unpaved access road.



**FIGURE 2. NRCS Soil Types**



| CLASSIFICATION   |   | EXISTING<br>ACREAGE |
|------------------|---|---------------------|
| Seasonal Wetland |  | 0.010               |
| TOTAL:           |   | 0.010               |



FILENAME: DWGS\2003-09\gosal-wd.dwg 3/31/04

FIGURE 3. Wetland Delineation

## **WATERS OF THE U.S.**

In accordance with the *Corps of Engineers Wetlands Delineation Manual*, several three-parameter data points were taken throughout the site to determine the extent of the wetlands. The data sheets are provided as Attachment A. A corresponding list of plants observed at those points is presented in Attachment B. Potentially jurisdictional waters of the U. S. mapped include one seasonal wetland (0.01 acres) (Figure 3 and Attachment C).

### **Wetlands**

One seasonal wetland totaling 0.01 acres has been mapped for the site. The seasonal wetland represents a very slight topographic basin within the grassland community that is underlain with an impermeable or semi-permeable hardpan or duripan layer. This wetland is comprised primarily of facultative grasses that include ryegrass (*Lolium multiflorum*) and Mediterranean barley (*Hordeum marinum*) with scattered non-native herbaceous plants that include morning glory (*Convolvulus arvensis*), turkey mullein (*Eremocarpus setigerus*), and hyssop loosestrife (*Lythrum hyssopifolium*). The dominance of facultative plant species suggests that soil saturation may be a greater influence on the hydrology than inundation or flooding.

### **Interstate or Foreign Commerce Connection**

Due to the topography of the site, overland flows and direct rainfall accumulate within the seasonal wetland. During the height of the wet season, accumulations in the wetland area are directed to Gerber Creek via overland sheet flow. Gerber Creek, which is several hundred yards north of the site, is tributary to Elder Creek in the Morrisson Creek watershed. Morrisson Creek is tributary to the Sacramento River, which is a documented navigable waterway. Thus, the seasonal wetland mapped on-site is considered connected with and/or adjacent to a water of the U.S. and would therefore be subject to interstate and/or foreign commerce.

## **CONCLUSION**

Potentially jurisdictional waters of the U. S. mapped include one seasonal wetland (0.01 acres). Any impact to these features would likely require permitting pursuant to Section 404 and 401 of the federal Clean Water Act, and/or Section 1600-1603 of the California Fish and Game Code (Lake and Streambed Alteration Agreement).

## **LIST OF ATTACHMENTS**

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Attachment A – Wetland Delineation Data Sheets

Attachment B – Plant List

Attachment C – Wetland Delineation



**ATTACHMENT A**

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Wetland Delineation Data Sheets



**ECORP Consulting, Inc.**  
**ENVIRONMENTAL CONSULTANTS**

**ROUTINE WETLAND DELINEATION**

Project/Site: NVS - County Floods Date: 8/15/02 Sample Point: 16  
 Applicant/Owner: APN # 065-0080-057 Field Investigator(s): S. Starrs, K. Kuan  
 County: Sacramento State: CA Plant Community: Grassland  
 Quad(s): Elk Grove Section/Township/Range: 6/7N/6E  
 Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_  
 Atypical Situation? Yes  No  Explain: \_\_\_\_\_  
 Is this a potential Problem Area? Yes  No  Explain: potential seasonal ponding

**HYDROPHYTIC VEGETATION?** Yes  No

**VEGETATION**

| Dominant Species       | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|------------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>Lolium bord.</u> | <u>FAC*</u> | <u>herb</u> | <u>32</u>    | 5) _____         | _____       | _____   | _____        |
| 2) <u>Hord. max.</u>   | <u>FAC</u>  | <u>herb</u> | <u>32</u>    | 6) _____         | _____       | _____   | _____        |
| 3) <u>Conu. orn.</u>   | <u>UPL</u>  | <u>herb</u> | <u>24</u>    | 7) _____         | _____       | _____   | _____        |
| 4) _____               | _____       | _____       | _____        | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 2/3 = 66%  
 Comments: Most hydric dom, but associates are non-wetland. No wetland associates observed

**WETLAND HYDROLOGY?** Yes  No

**HYDROLOGY**

Recorded Data: Yes  No  If yes, \_\_\_\_\_  
 Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)  
 Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetlands  
 Secondary Indicators (2 or more required):  
 Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_  
 Comments: Slight top - undefined low area. - No sure sign off hydrology.

**HYDRIC SOILS?** Yes  No

**SOILS**

Series/Phase: 213 San Joaquin silt loam, leveled, 0-1% slopes Drainage Class: mod. well drained  
 Taxonomy [Subgroup]: fine, mixed, thermic Abruptic Durixeralfs Confirm Map Type: Yes  No   
 Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concretions  
 High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_  
 Inclusions [Series/Phase]: \_\_\_\_\_ On Hydric Soils List: Yes  No   

| Depth (in.) | Horizon | Matrix Color    | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|---------|-----------------|--------------|------------------------------|---------------------------------|
| _____       | _____   | <u>10YR 4/3</u> | _____        | _____                        | _____                           |
| _____       | _____   | _____           | _____        | _____                        | _____                           |
| _____       | _____   | _____           | _____        | _____                        | _____                           |

Comments: \_\_\_\_\_ **WETLAND / WATERS DETERMINATION?** Yes  No

**\* DECISION \***

Rationale: Does not meet criteria.  
 General comments: \_\_\_\_\_ Wetland Type: N/A



ENVIRONMENTAL CONSULTANTS

Project/Site: NVS County Flood Date: 8/15/02 Sample Point: 17
Applicant/Owner: APN#: 065-0080-057 Field Investigator(s): S. Starr & K. Kwan
County: Sacramento State: CA Plant Community: Grassland
Quad(s): Elk Grove Section/Township/Range: 6/7N/6E
Do normal environmental conditions exist site? Yes [X] No [ ] If no, explain:
Atypical Situation? Yes [ ] No [X] Explain:
Is this a potential Problem Area? Yes [X] No [ ] Explain: Seasonal wetland

HYDROPHYTIC VEGETATION? Yes [X] No [ ]

VEGETATION

Table with 8 columns: Dominant Species, Ind. Status, Stratum, Rel. % Cover, Dominant Species, Ind. Status, Stratum, Rel. % Cover. Row 1: Lolium mult, FAC\*, herb, 40. Row 2: Horde max, FAC, herb, 40.

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 2/2 = 100%

Comments: A # of the associates are wetland species.

WETLAND HYDROLOGY? Yes [X] No [ ]

HYDROLOGY

Recorded Data: Yes [ ] No [X] If yes,
Depth of surface water: (in.) Depth to free water in pit: (in.) Depth to saturated soil: (in.)
Primary Indicators: [ ] Inundated [ ] Saturated in Upper 12 in. [ ] Water Marks [ ] Drift Lines [ ] Sediment Deposits [X] Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
[X] Oxidized Root Channels in Upper 12 in. [ ] Water-stained Leaves [ ] Local Soil Survey Data [ ] FAC-Neutral Test [ ] Other
Comments: Appears to be low spot in historic drainage swale.

HYDRIC SOILS? Yes [ ] No [X]

SOILS

Series/Phase: 213 San Joaquin silt loam, leveled, 0-1% slopes Drainage Class: mod. well drained
Taxonomy [Subgroup]: fine, mixed, thermic Abruptic Duxreol(s) Confirm Map Type: Yes [ ] No [ ]
[ ] Histosol [ ] Histic Epipedon [ ] Sulfidic Odor [ ] Aquic Moisture Regime [ ] Reducing Conditions [ ] Gleyed/Low Chroma Colors [ ] Concretions
[ ] High Organic Content in Surface Layer in Sandy Soils [ ] Organic Streaking in Sandy Soils [ ] Listed on Hydric Soils List [ ] Other
Inclusions [Series/Phase]: On Hydric Soils List: Yes [ ] No [X]
Table with 6 columns: Depth (in.), Horizon, Matrix Color, Mottle Color, Mottle (Abund/Contrast/Size), Texture, Concretions, Structure. Row 1: 0-5", -, 10YR 7/3, -, -, Clay loam

Comments: Dry - Rock hard

WETLAND / WATERS DETERMINATION? Yes [X] No [ ]

\* DECISION \*

Rationale: Meet criteria.

General comments:

Wetland Type: Seasonal wetland



ENVIRONMENTAL CONSULTANTS

Project/Site: NVS - County Flood Date: 8/15/02 Sample Point: 18N

Applicant/Owner: APN# 065-0080-057 Field Investigator(s): S. Starr & K. Kwan

County: Sacramento State: CA Plant Community: Grassland

Quad(s): Elk Grove Section/Township/Range: 6/7N/6E

Do normal environmental conditions exist site? Yes  No  If no, explain: \_\_\_\_\_

Atypical Situation? Yes  No  Explain: \_\_\_\_\_

Is this a potential Problem Area? Yes  No  Explain: \_\_\_\_\_

HYDROPHYTIC VEGETATION? Yes  No

VEGETATION

| Dominant Species      | Ind. Status | Stratum     | Rel. % Cover | Dominant Species | Ind. Status | Stratum | Rel. % Cover |
|-----------------------|-------------|-------------|--------------|------------------|-------------|---------|--------------|
| 1) <u>lol mult</u>    | <u>FAC*</u> | <u>herb</u> | <u>24</u>    | 5) _____         | _____       | _____   | _____        |
| 2) <u>Hard mar.</u>   | <u>FAC</u>  | <u>herb</u> | <u>24</u>    | 6) _____         | _____       | _____   | _____        |
| 3) <u>Vulp. brom.</u> | <u>FACW</u> | <u>herb</u> | <u>24</u>    | 7) _____         | _____       | _____   | _____        |
| 4) <u>Bro hard</u>    | <u>UPL</u>  | <u>herb</u> | <u>24</u>    | 8) _____         | _____       | _____   | _____        |

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 3/4 = 75%

Comments: Upland habitat

WETLAND HYDROLOGY? Yes  No

HYDROLOGY

Recorded Data: Yes  No  If yes, \_\_\_\_\_

Depth of surface water: \_\_\_\_\_ (in.) Depth to free water in pit: \_\_\_\_\_ (in.) Depth to saturated soil: \_\_\_\_\_ (in.)

Primary Indicators:  Inundated  Saturated in Upper 12 in.  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):  Oxidized Root Channels in Upper 12 in.  Water-stained Leaves  Local Soil Survey Data  FAC-Neutral Test  Other \_\_\_\_\_

Comments: Upland - No hydrology signs.

HYDRIC SOILS? Yes  No

SOILS

Series/Phase: 213 San Joaquin silt loam, leveled, 0-1% slopes Drainage Class: mod well drained

Taxonomy [Subgroup]: fine, mixed, chromic Abrupt Durixeralfs Confirm Map Type: Yes  No

Histosol  Histic Epipedon  Sulfidic Odor  Aquic Moisture Regime  Reducing Conditions  Gleyed/Low Chroma Colors  Concretions

High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Hydric Soils List  Other \_\_\_\_\_ On Hydric Soils List: Yes  No

| Depth (in.) | Horizon  | Matrix Color    | Mottle Color | Mottle (Abund/Contrast/Size) | Texture, Concretions, Structure |
|-------------|----------|-----------------|--------------|------------------------------|---------------------------------|
| <u>0-4"</u> | <u>-</u> | <u>10YR 4/3</u> | <u>-</u>     | <u>-</u>                     | <u>clay loam</u>                |
| _____       | _____    | _____           | _____        | _____                        | _____                           |
| _____       | _____    | _____           | _____        | _____                        | _____                           |

Comments: Dry - Rock hard

WETLAND / WATERS DETERMINATION? Yes  No

\* DECISION \* Rationale: Does not meet all 3 parameters.

General comments: \_\_\_\_\_ Wetland Type: N/A





## ATTACHMENT B

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Plant List

**Gosal Estates**  
**Wetland Delineation – Plants Observed at Data Points**

| <b>Abbr.</b> | <b>Scientific Name</b>         | <b>Common Name</b>    | <b>Indicator Status</b> |
|--------------|--------------------------------|-----------------------|-------------------------|
| BRO HOR      | <i>Bromus hordeaceus</i>       | Soft brome            | FACU-                   |
| CON ARV      | <i>Convolvulus arvensis</i>    | Morning glory         | N/L                     |
| ERE SET      | <i>Eremocarpus setigerus</i>   | Turkey mullien        | N/L                     |
| HOL VIR      | <i>Holocarpha virgata</i>      | Sticky tarweed        | N/L                     |
| HOR MAR      | <i>Hordeum marinum</i>         | Mediterranean barley  | FAC                     |
| KIC ELA      | <i>Kickxia elatine</i>         | Fluvellin             | NI*                     |
| LOL MUL      | <i>Lolium multiflorum</i>      | Ryegrass              | FAC*                    |
| LYT HYS      | <i>Lythrum hyssopifolium</i>   | Hyssop loosestrife    | FACW                    |
| NAV LEU      | <i>Navarretia leucocephala</i> | White-head navarretia | OBL                     |
| RUM CRI      | <i>Rumex crispus</i>           | Curly dock            | FACW-                   |
| VUL BRO      | <i>Vulpia bromoides</i>        | Vulpia                | FACW                    |
| XAN STR      | <i>Xanthium strumarium</i>     | Rough cockle-bur      | FAC+                    |

**Indicator Status Codes**

**OBL** = Obligate Wetland; occur almost always (estimated probability >99%) under natural conditions in wetlands.

**FACW** = Facultative Wetland; usually occur in wetlands (estimated probability 67%-99%) under natural conditions in wetlands.

**FAC** = Facultative; equally likely to occur in wetlands or non-wetlands (estimated probability 34%-66%).

**FACU** = Facultative Upland; usually occur in non-wetlands (estimated probability 67%-99%).

**UPL** = Obligate Upland; occur almost always (estimated probability >99%) in non-wetlands in the region specified.

**N/L** = Not Listed.

**NI** = No indicator was recorded for those species for which insufficient information was available to determine a status.

-- = May or may not occur in wetlands depending upon species.

A positive (+) sign indicates a frequency toward the higher (more frequently found in wetlands) end of the facultative categories.

A negative (-) sign indicates a frequency toward the lower (less frequently found in wetlands) end of the facultative categories.

An asterisk (\*) indicates a tentative assignment based upon limited information or conflicting review.

**ATTACHMENT C**

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Wetland Delineation

# **Appendix Q**

## **EPA Comment Letter**



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105-3901

NOV 19 2004

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**PLANNING DEPT.  
County of Sacramento**

Colonel Ronald N. Light  
District Engineer, Sacramento District  
Attention: Justin Cutler, Regulatory Section  
U.S. Army Corps of Engineers  
1325 J Street, 14<sup>th</sup> Floor  
Sacramento, California 95814-2922

**Re: North Vineyard Station Specific Plan (NVSSP) Sacramento County, California**

Dear Colonel Light:

We are writing with regard to the proposed NVSSP, and to propose an "Onsite Conservation Alternative" that landowners in the NVSSP could use toward achieving compliance with the Clean Water Act (CWA) Section 404(b)(1) Guidelines at 40 CFR 230 (Guidelines). Following a site visit by EPA on 21 July 2004 with representatives of Lennar Communities, and a meeting with Justin Cutler of your Regulatory Branch on 26 August 2004, EPA in coordination with the Corps, is proposing an Onsite Conservation Alternative (attached) which minimizes the environmental impacts associated with the development of the NVSSP.

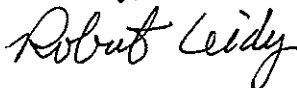
As you know, the proposed the NVSSP would impact 72.22 acres of waters of the United States (waters). The proposed project described in the PN within the NVSSP (Vineyard Creek, North Vineyard Station and the NVSSP Drainage Master Plan) would result in impacts to 27.42 acres of waters. On 26 January 2004, we determined the proposed project did not comply with the Guidelines, and will have substantial and unacceptable impacts to aquatic resources of national importance (ARNI). In addition, we observed that the scale of the project warranted comprehensive environmental review under the National Environmental Policy Act (NEPA), and we urged the Corps to require an Environmental Impact Statement (EIS).

Attached, please find our Onsite Conservation Alternative that advances the goal of compliance with the Guidelines. Key elements discussed in this alternative include:

(1) establishment of onsite preserves; (2) the augmentation, where necessary, of buffer zones around waters to ensure a minimum 100-foot buffer extending outward from the edge of each waterbody; (3) the establishment of a robust, enforceable land management strategy for preserved areas; and (4) compensatory mitigation for unavoidable impacts to waters. Implementation of this alternative will allow EPA to consider rescinding our option to seek a higher-level review of a permit decision by the Sacramento Corps District as specified in our interagency Memorandum of Agreement promulgated under CWA Section 404(q).

We are committed to continued dialogue with the Sacramento Corps District to resolve the important environmental issues surrounding the proposed projects. If you wish to discuss this matter further, please contact me at (415) 972-3464, or have your staff contact Elizabeth Goldmann at (415) 972- 3398.

Sincerely,



for Tim Vendlinski, Supervisor  
Wetlands Regulatory Office

cc:

Mr. Michael Jewel (via this letter to Col. Light)

Applicant

cc: (without attachment)

USFWS, Sacramento

CDFG, Rancho Cordova

RWQCB, Sacramento

**Detailed EPA Comments**  
**PN 200200410 for the proposed Vineyard Creek, North Vineyard Pointe, NVSSP**  
**Drainage Master Plan**

**Project Description**

The proposed project encompasses approximately 315 acres and is located within the 1,590-acre NVSSP. The NVSSP area consists of a 5,732 dwelling unit residential land-use plan with supporting commercial, business professional, park, school, and open space uses. This environmentally sensitive area is bounded by Florin Road to the north, Gerber Road and/or Gerber Creek to the south, the northerly extension of Vineyard Road on the east, and generally by Elder Creek on the west. There are approximately 72.22 acres of waters within the NVSSP. The three proposed projects described in the PN would adversely impact 27.42 acres of waters as follows: NVSSP Drainage Master Plan (15.71)acres; Vineyard Creek development (2.69 acres); and North Vineyard Pointe development (9.02 acres).

The indirect and cumulative impacts of these projects have not been evaluated. In addition to direct impacts to wetlands, indirect impacts include: 1) pollutant runoff from filled areas; 2) vegetative changes and disturbance to previously undisturbed wetland habitats, resulting in a reduction in the functional capacity of adjacent wetlands; 3) the introduction of non-native and noxious pests and weeds; 4) fragmentation of large, relatively undeveloped, functioning wetland ecosystems; and 5) the creation of noise, glare and other similar human-related disturbances.

The Sacramento County Department of Water Resources proposes to mitigate for 15.71 acres of waters by widening and creating wetlands habitat within the reconstructed drainage corridors of Elder and Gerber creeks. Impacts to depressional and slope wetlands are proposed to be mitigated off-site at a mitigation bank.

**Onsite Conservation Alternative**

Based on the land-use proposal and mitigation plan described in the PN, we are proposing the following Onsite Conservation Alternative for the projects within the NVSSP. Implementation of the Onsite Conservation Alternative described below will result in natural resource protection and will help ensure the long term integrity of waters on and off the project site. The following are key elements of this alternative:

- ▶ **Avoidance and preservation** of jurisdictional waters with legally binding stewardship arrangements and land use restrictions established up front.
- ▶ **Preservation of depressional and slope wetlands** as a natural open space amenity.

- ▶ **Establishment of appropriate buffer zones** along Gerber and Elder Creeks and the depressional/slope wetland preservation area to minimize direct and indirect impacts associated with the proposed development.
- ▶ **Establishment of legally binding, enforceable land-use restrictions and a fully-funded endowment** to ensure the perpetual protection and management of the preservation areas.
- ▶ **Onsite enhancement of degraded waters and offsite compensation** for remaining unavoidable impacts to wetlands.

### **Avoid, Preserve, and Protect Onsite Aquatic Ecosystems**

Pursuant to EPA's Guidelines, the proposed project cannot be permitted unless appropriate and practicable steps have been taken which will minimize potential adverse effects of the discharge on the aquatic ecosystem (40 CFR 230.10(d)). This is commonly referred to as mitigation. As set forth in the *Memorandum of Agreement Between the Environmental Protection Agency and the Department of the Army Concerning the Determination of Mitigation Under the Clean Water Act Section 404(b)(1) Guidelines*, dated 6 February 1990 (Mitigation MOA), mitigation consists of three categories of activities: avoidance, minimization, and compensatory mitigation. Distinguishing among these categories of mitigation is important for several reasons. First, the Guidelines and the Mitigation MOA establish a preference for avoidance and minimization, with compensatory mitigation only available to address impacts that cannot be avoided or otherwise minimized. Second, the Guidelines, as clarified by the Mitigation MOA, establish that "[c]ompensatory mitigation may not be used as a method to reduce environmental impacts in the evaluation of the least environmentally damaging practicable alternatives for the purposes of requirement under Section 230.10(a)." (Mitigation MOA at p.4). In other words, applicants cannot "buy-down" anticipated project impacts at the outset with mitigation proposals without first attempting to avoid and minimize damage to aquatic resources.

The Draft Environmental Impact Report (DEIR) for the NVSSP (page 14.14) states, "The project proposes to compensate for wetland impacts rather than avoid, minimize, rectify or reduce/eliminate impacts as required by CEQA and U.S. Fish and Wildlife Service policy. All wetlands are proposed to be mitigated (compensated for) off site." The DEIR (page 14.17) goes on to state, "While preservation of all vernal pools and seasonal wetlands within the Specific Plan area would not be compatible with its urban designation, opportunities for preservation do exist."

As mentioned in the DEIR referenced above, opportunities to preserve wetlands exist on the project site. EPA and the Corps have identified the locations demarcated on the enclosed NVSSP Onsite Conservation Alternative for preservation. The two preserve corridors consist of depressional and slope wetlands. The first corridor generally runs in a north/south direction through the center of the site and has the potential, through restoration, to connect depressional



and slope waters/wetlands (identified as Wetlands A on the attached map) via surface flow to Gerber Creek to the south. The second corridor located in the south eastern section of the specific plan connects depressional and slope water/wetlands (identified as Wetlands B in the attached map) in an east/west direction to Gerber Creek.

Avoidance and preservation of these areas will: (1) create a network of waters in urban settings supporting aquatic flora and fauna, (2) reduce the degradation of water quality; (3) reduce the loss of aquatic ecosystem functions in waters modified, partially filled, or otherwise disturbed by development; and (4) allow for the enhancement of waters through the establishment of native flora and fauna and further minimize the introduction of non-native invasive species.

EPA also recommends avoidance, where practicable, of the 100-year flood plain. Regulations at 33 CFR 320.4(k) recognize that floodplains possess significant natural values and carry out numerous functions important to the public interest. In accordance with Executive Order 11988, District Engineers, as part of their public interest review, should avoid to the extent practicable: (1) long and short term significant adverse impacts associated with the occupancy and modification of flood plains; and (2) the direct and indirect floodplain development whenever there is a practicable alternative.

### **Establish Appropriate Buffers**

To ensure the long term integrity of Elder and Gerber Creeks and the preservation areas on the NVSSP Onsite Conservation Alternative, appropriate buffers must be established. These buffers are critical to mitigate the effects of land use changes that expand the cover of impervious surfaces including: (1) the frequency, rates, and volumes of stormwater run-off; (2) the annual pollutant loads to receiving waters; and (3) the modification of physical and biological processes of the receiving waters.<sup>1</sup>

Buffers are essential in protecting the functions of stream systems. Appropriately sized buffers preserve transition zones within habitats and protect the diversity of wildlife communities while capturing pollutants and improving water quality.<sup>2,3</sup> Effective buffers will help absorb some volume of discharges and pollutant loads, and will help reduce the potential damage to downstream aquatic resources. The creeks on the project site will capture and channel precipitation from storm events, and in the future, will capture and channel suburban run-off from surrounding impervious surfaces. These functions will contribute to the sustainability and the character of the future NVSSP community, and cannot be sustained without appropriate buffer zones.<sup>2</sup>

### *Gerber and Elder Creeks*

The applicant proposes to provide flood protection and water quality treatment for the development of the NVSSP area. The main components of the plan include flood control, detention of anticipated increased flows from the NVSSP area, and treatment of urban runoff.

We are concerned that Gerber and Elder Creeks do not appear to have adequate buffers. To ensure that both the hydrologic and habitat functions of these reaches are preserved, the existing preserve corridors should be augmented where necessary to ensure a minimum 100-foot buffer extending outward from the edge of each bank.

A minimum buffer width of 100 feet from edge of bank is strongly supported by the scientific literature to maintain the functional integrity of aquatic ecosystems.<sup>2,3,4,5,6,7</sup> In stream systems, buffers of this size allow most of the natural lateral migration of the stream to persist, creating an intact hydrologic and biological "right-of-way" through an impacted landscape.<sup>2</sup> The 100-foot buffer provides greater certainty that the habitat functions of waters are captured and preserved in perpetuity.<sup>2,4</sup>

These principles apply to wetlands, perennial, intermittent and ephemeral streams as they perform the same fundamental purpose: to preserve the ecological functions of aquatic resources occurring in, and dependent on, an integrated landscape.<sup>3,8</sup> Within the proposed NVSSP, these buffers will help to effectively contain flood events, prevent significant degradation of water quality, and protect the ecosystem functions of waters of the U.S. The 100-foot standard has broad acceptance as a minimum to protect habitat functions under most conditions, and has been shown, on average, to be the common standard used by regulators nationally.<sup>2,9</sup>

In addition to the establishment of an adequate buffer, the creek design should:

- ▶ be modified to follow the natural meander of the creek;
- ▶ be designed to support a fully vegetated system not requiring maintenance;
- ▶ require the creation of bioswales to carry urban runoff;
- ▶ construct off-stream detention basins to support the establishment of wetland habitat, increase the carrying capacity of flood waters and sequester pollutants; and
- ▶ construct trails outside of the 100-foot buffer.

Given the information provided in *North Vineyard Station Specific Plan Drainage Master Plan Update and Phasing* dated 18 January 2002 prepared for the Sacramento County Department of Water Resources by Borcalli and Associates, Inc. Consulting Services, EPA is requesting additional information on the proposed phasing for the construction of the drainage infrastructure, the storm drain pipe system route, the locations and design of interim and permanent detention basins, and compliance with section 402 of the Clean Water Act. While the plan requires post-project peak flows not exceed pre-project peak flows, additional information is needed on the range and duration of flows following build-out of the NVSSP.

### **Land Management Strategy**

A land management strategy is necessary to ensure the functional integrity of preserved areas in perpetuity. Important components of a perpetual land management strategy include conservation easements or other legal restrictions, adaptive management practices, best management practices, educational outreach, and law enforcement programs. To ensure long-term viability of the

preservation areas, the following elements should be incorporated as permit conditions for the proposed development before any discharges are allowed to proceed:

- ▶ Designate a third-party conservation entity for approval by the Corps and EPA as trustees and land stewards of the conservation areas.
- ▶ Establish a fully-funded endowment to provide for the perpetual maintenance and monitoring of on-site and off-site mitigation, preservation and avoidance areas.
- ▶ Record the preserved lands as conservation areas using distinct parcel numbers to distinguish them from the rest of the NVSSP development.

### **Onsite Enhancement and Offsite Compensatory Mitigation**

For unavoidable impacts to wetlands, EPA believes there are opportunities on the project site to enhance the function of the existing wetlands within the preservation areas. The applicant has also proposed offsite mitigation which will compensate the remaining mitigation obligation.

### **Innovative Design Principles: Open Space Development**

We encourage the applicant to build upon their use of innovative design principles to further minimize their project's impacts. By employing these principles, developers are able to expand the protection of open space without sacrificing the units of housing available to the market.<sup>6</sup> Open space development, or cluster design, serves to concentrate development density in some areas in exchange for reduced density elsewhere. Open space designs can reduce impervious cover by 40 to 60% when compared to conventional subdivision designs, and can produce a 20 to 60% reduction in the annual run-off volume.<sup>6</sup> Studies have shown that these designs are highly desirable and have economic advantages, including cost savings and higher market appreciation. Most cost savings are due to reduced costs for road building and stormwater management systems.

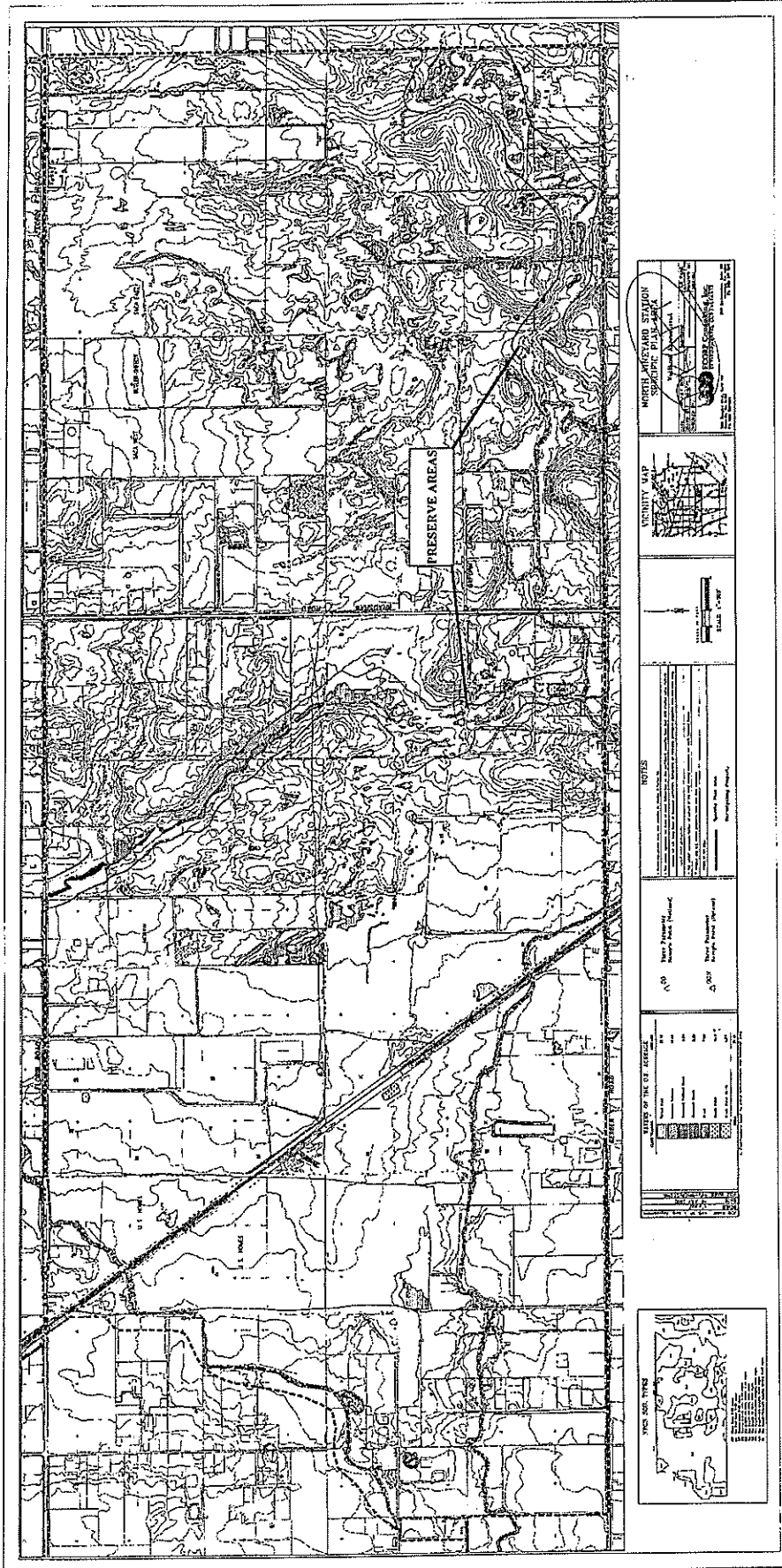
With proper siting, fencing and signage, a system of trails created adjacent to the preserved areas would also help define and benefit the NVSSP by providing recreational opportunities. The conservation areas would also provide premium aesthetic value to surrounding homeowners. The incorporation of innovative design principles in development of the NVSSP could further enhance the natural environment, while improving the quality of life in local neighborhoods.<sup>6</sup>

Recommended strategies to minimize impacts to preserved washes and realize economic benefits through the retention of the region's natural aesthetic include<sup>5</sup>:

- ▶ Adequate buffers on both sides of all preserved drainages;
- ▶ Incorporating the use of smaller lot sizes;
- ▶ Maximizing the amount of community open space and preservation of natural areas;
- ▶ Providing open space adjacent to as many lots as possible, utilizing front-loaded streets when practicable (where residential and commercial units are situated on one side of an access road and face buffered creeks and wetlands that are safeguarded on the other side of the road);
- ▶ Minimizing impervious cover throughout the site by using narrower streets, smaller turn-arounds, and shorter driveways.

## Literature Cited

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4. Castelle, A.J. et al. 1992. *Wetland Buffers: Use and Effectiveness*. Washington State Department of Ecology, Shorelands and Coastal Zone Management Program. Olympia, WA.
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6. Lynch, J.A., E.S. Corbett, K. Mussallem. 1985. Best management practices for controlling nonpoint-source pollution of forested watersheds. *Journal of Soil and Water Conservation* 40: 164-167.
7. G. Palone, R.S. and A.H. Todd (eds.) 1997. Chesapeake Bay Riparian Handbook: A Guide for Establishing and Maintaining Riparian Forest Buffers. USDA Forest Service Northeastern Area State and Private Forestry NA-TP-02-97. Radnor, PA.
8. Burke, V.J. and J. Whitfield Gibbons. 1995. Terrestrial Buffer Zones and Wetland Conservation: A Case Study of Freshwater Turtles in a Carolina Bay. *Conservation Biology* 9(6): 1365-1369.
9. Castelle, A.J., A.W. Johnson and C. Connolly. Wetland and Stream Buffer Size Requirements – a Review. *Journal of Environmental Quality* 23:878-882.



## **Appendix R-1**

### **Special-Status Species Assessment – North Vineyard Greens Unit 1**

Special-Status Species Assessment

For

**North Vineyard Greens Unit 1**

Sacramento County, California

03 0099

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PLANNING DEPT.  
County of Sacramento

March 31, 2004

*Prepared for:*

**North Vineyard Greens General Partnership**





**CONTENTS**

**SPECIAL-STATUS SPECIES ASSESSMENT**

**NORTH VINEYARD GREENS UNIT 1**

INTRODUCTION..... 1  
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- Figure 2. NRCS Soil Types
- Figure 3. Wetland Delineation

**LIST OF ATTACHMENTS**

- Attachment A – Potentially Occuring Special-Status Species
- Attachment B – Rarefind 2 CNDDDB Data Report

## **INTRODUCTION**

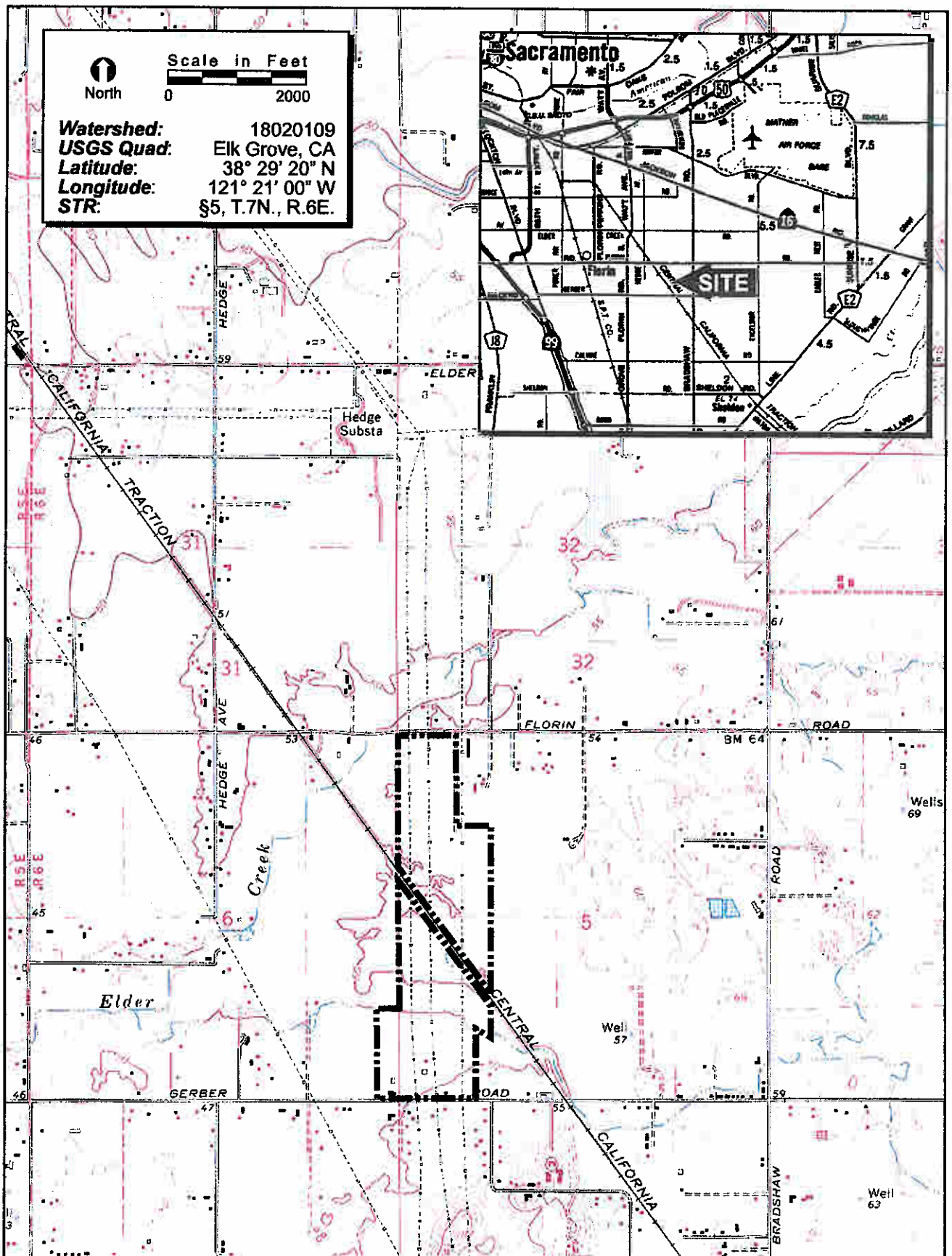
On behalf of North Vineyard Greens General Partnership, ECORP Consulting, Inc. has conducted a special-status species assessment of the ±146.7-acre North Vineyard Greens Unit 1 site located in Sacramento County, California.

The subject property is located north of Gerber Road, west of Bradshaw Road, south of Florin Road, and east of Elk Grove Florin Road (Figure 1 – *Project Site and Vicinity*). The Central California Traction railroad alignment splits the subject property into two unequal sized halves. Undeveloped pasture, nursery, and rural residents surround the subject property. The site corresponds to a portion of section 6 of Township 7 North, and Range 6 East of the “Elk Grove, California” 7.5-minute quadrangle (U.S. Department of the Interior, Geological Survey, photorevised 1979).

The purpose of this special-status species assessment is to assess the potential for occurrence of special-status plant and wildlife species and identify unique habitats or natural communities within the project site.

## **METHODOLOGY**

The field investigation for this assessment was conducted concurrent with a wetland delineation field survey on July 10, 2003, during which time ECORP biologist Jinnah Hansen walked the entire project area. The site was visually inspected for the presence of special-status species and potential habitat for regionally occurring special-status species. The special-status species assessment included taxa specific literature review, California Department of Fish and Game Natural Diversity Data Base query, and reconnaissance-level field survey. This assessment of potentially occurring special-status plant and wildlife species does not constitute a determinate-level presence/absence survey, which should be done according to agency approved survey protocol during the appropriate season.



**FIGURE 1. Project Site and Vicinity Map**

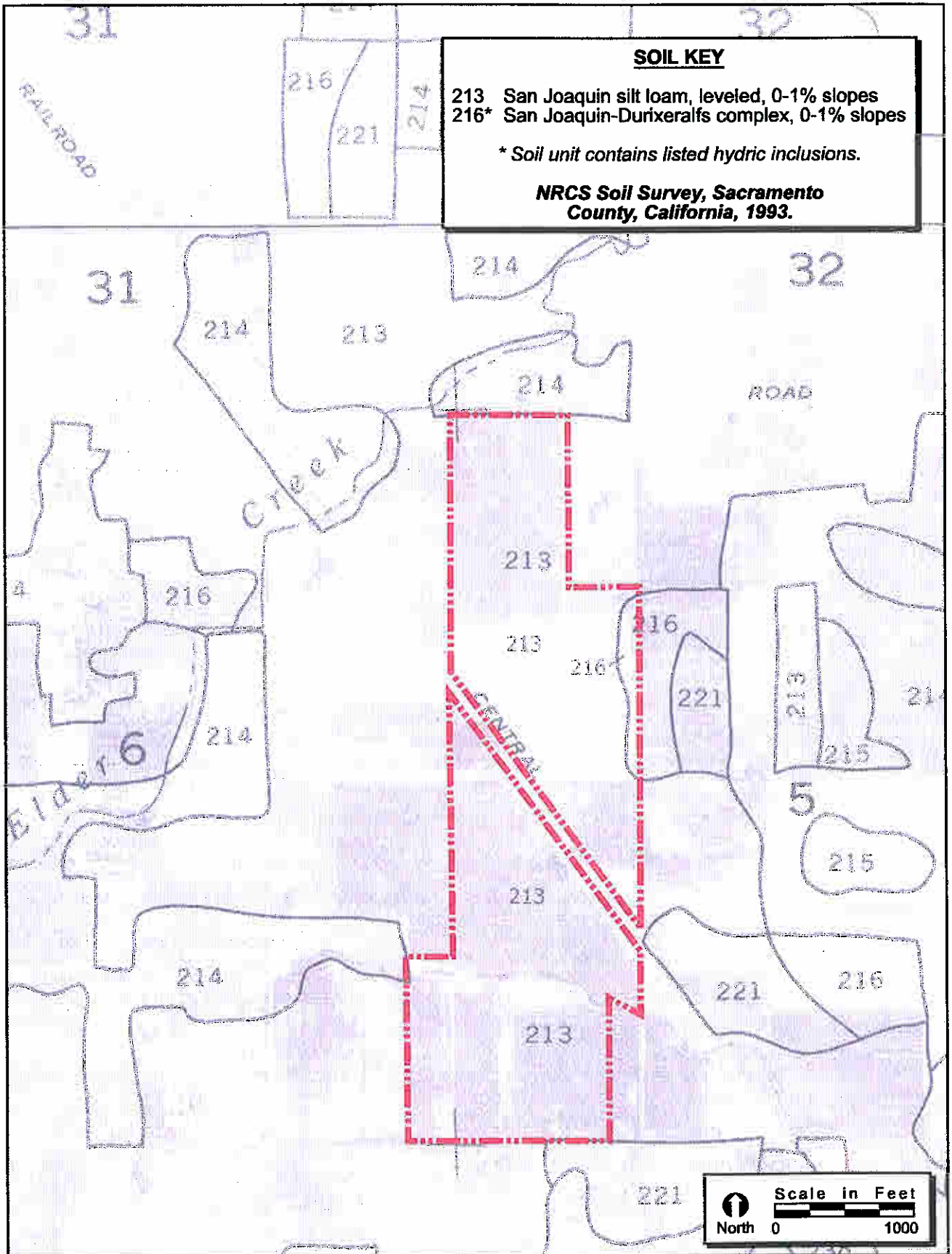
For the purposes of this assessment, "special-status" refers to those species which:

- Have been designated by the California Department of Fish and Game (CDFG) or the U.S. Fish and Wildlife Services (USFWS) as either *rare*, *threatened*, or *endangered*; and are legally protected under the California or federal endangered species acts;
- Are proposed or candidate species being considered for listing under either federal or California Endangered Species Acts; or
- Are of expressly stated interest to resource regulatory agencies, or local jurisdictions, such as CDFG species of special concern, USFWS species of concern, or California Native Plant Society (CNPS) List species.

## **RESULTS**

### **Existing Site Conditions**

The North Vineyard Greens Unit 1 property is comprised of leveled pasture and is situated at an elevation of approximately 50 feet above mean sea level. According to the *Soil Survey of Sacramento County, California* (U.S. Department of Agriculture, Natural Resource Conservation Service 1993), two soil units, or types, have been mapped for the site (Figure 2 – *NRCS Soil Types*). These are: (213) San Joaquin silt loam, leveled, 0-1 percent slopes and (216) San Joaquin-Durixeralfs complex, 0-1 percent slopes. The San Joaquin-Durixeralfs complex is not considered to be a hydric soil; however, it does contain listed hydric inclusions.



**FIGURE 2. NRCS Soil Types**

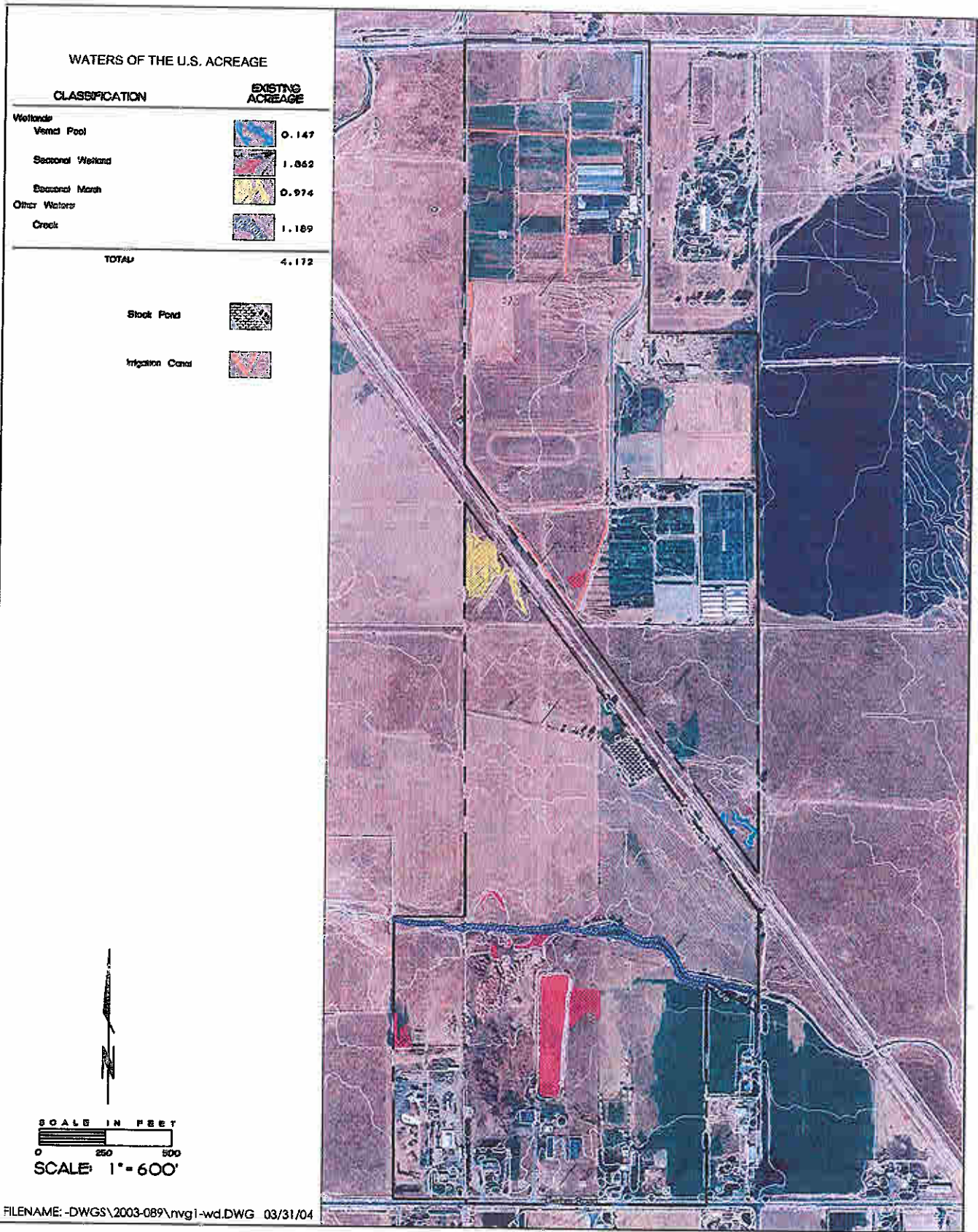
2003-089 North Vineyard Greens Unit 1

Much of the site is currently fallow but appears to have been historically farmed and irrigated. Rural residence and nursery operations are located in the northern portion of the site. The nursery is currently active and several irrigation canals that appear to drain the excess runoff from the nursery are located west of the nursery, within the subject property. The Central California Traction Railroad easement lies diagonal through the property, dividing it into two unequal halves. Gerber Creek meanders through the southern portion of the subject property. A man-made stock pond is situated in the southern half of the site. It has been constructed by excavation and placement of fill around the perimeter. The pond is filled by mechanical pump that draws ground waters. It is surrounded by willows (*Salix* sp.), pampas grass (*Cortaderia selloana*), Fremont's cottonwood (*Populus fremontii*), grape (*Vitis* sp.), and date palm (*Phoenix* sp.).

The primary vegetation community present on-site is annual grassland. Within the annual grassland are ephemeral features (i.e., seasonal wetlands and vernal pools) (Figure 3 – *Wetland Delineation*). A wide variety of native and non-native ornamental trees are scattered throughout the specific plan area. These include blue gum (*Eucalyptus globulus*), Valley oak (*Quercus lobata*), tree-of-heaven (*Ailanthus altissima*), Chinese pistache (*Pistacia chinensis*), Fremont's cottonwood (*Populus fremontii*), black willow (*Salix gooddingii*), walnut (*Juglans* spp.), sweet gum (*Liquidambar styraciflua*), and plum (*Prunus* spp.), among others.

### **Special-Status Species**

Based upon vegetation communities present on the property, species' known distributive data, and the references cited above, a list of potentially occurring special-status species has been developed for the North Vineyard Greens Unit 1 site. This list is presented in Attachment A. Species include: seven plant species, four invertebrates, one amphibian, two reptiles, fifteen birds, and four mammals. According to the Natural Diversity Data Base (NDDDB), there are no previously documented occurrences of special-status species within the subject area. However, several special-status species have been documented within the vicinity. These include occurrences for white-tailed kite, tricolored blackbird, vernal pool fairy shrimp, and vernal pool tadpole shrimp. The NDDDB print out for the Elk Grove, California quadrangle is presented in Attachment B.



**FIGURE 3. Wetland Delineation**

2003-089 North Vineyard Greens #1

### *Plants*

Special-status plants that may occur on-site include those that are associated with vernal pools and marshes. The vernal pool species include dwarf downingia (*Downingia pusilla*, CNPS List 2), Boggs Lake hedge-hyssop (*Gratiola heterosepala*, California-endangered and CNPS List 1B), Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*, federal-species of concern and CNPS List 1B), Greene's legenera (*Legenera limosa*, federal-species of concern and CNPS List 1B), slender Orcutt grass (*Orcuttia tenuis*, California-endangered, federal-threatened, and CNPS List 1B), and Sacramento Orcutt grass (*Orcuttia viscida*, California-endangered, federal-endangered, and CNPS List 1B), and the marsh species includes Sanford's arrowhead (*Sagittaria sanfordii*, federal-species of concern and CNPS List 1B). Of these, Boggs Lake hedge-hyssop, slender Orcutt grass, and Sacramento Orcutt grass are listed and protected pursuant to the state and/or federal Endangered Species Acts. Dwarf downingia, Greene's legenera, Ahart's dwarf rush, and Sanford's arrowhead are not listed and protected pursuant to either state or federal Acts. However, these three species may be considered by local jurisdictions during the CEQA review process.

### *Invertebrates*

The vernal pool basins on-site can provide habitat for the federally-listed vernal pool fairy shrimp (*Branchinecta lynchi*, federal-threatened) and vernal pool tadpole shrimp (*Lepidurus packardii*, federal-endangered), and as such, are often considered by the U.S. Fish and Wildlife Service (USFWS) to represent potentially occupied habitat. Other aquatic special-status aquatic invertebrates that may utilize the on-site vernal pools and seasonal wetlands include the midvalley fairy shrimp (*Branchinecta mesoaliensis*, federal species of concern) and California linderiella (*Linderiella occidentalis*, federal species of concern).

### *Fish*

There are no immediate fish issues within Gerber Creek due to the presence of culverts and spillways or other potential obstructions downstream from the site. However, impacts to the Creek may affect down stream conditions for special-status fish species such as Sacramento



splittail (*Pogonichthys macrolepidotus* CDFG species of concern) and Central Valley Evolutionarily Significant Units (ESU) anadromous salmonids, such as Central Valley steelhead (*Oncorhynchus mykiss* federally threatened), fall and spring-run Chinook salmon (*Oncorhynchus tshawytscha* federal and state threatened).

### *Amphibians*

The seasonal wetlands, vernal pools, and adjacent grasslands on-site represent potentially suitable habitat for the western spadefoot toad (*Spea hammondi*, CDFG species of special concern and federal species of concern). No other special-status amphibians are expected to occur on-site.

### *Reptiles*

Two special-status reptiles may occur on-site, the giant garter snake (*Thamnophis gigas*, California and federally threatened) and northwestern pond turtle (*Clemmys marmorata marmorata*, CDFG species of special concern and California Code of Regulation Title 14 fully protected species). Giant garter snakes typically occupy perennial ponds, marshes, slow-moving streams, and agricultural ditches containing adequate water supply during the spring and summer months. Northwestern pond turtles typically occur within perennial streams, creeks, ponds, and marshes. Gerber Creek represents potentially suitable giant garter snake and northwestern pond turtle habitat.

### *Birds*

The potentially occurring special-status birds on-site include nesting raptors, nesting songbirds, and wintering or migrant birds. The nesting raptors include both tree nesting and ground nesting species. The potential nesting trees are scattered throughout the Drainage Master Plan area. These tree nesting species are white-tailed kite (*Elanus leucurus*, Fish and Game Code fully protected and USFWS bird of management concern), Cooper's hawk (*Accipiter cooperii*, CDFG species of special concern), and Swainson's hawk (*Buteo swainsoni*, California-threatened). Potentially occurring ground-nesting birds on-site include

northern harrier (*Circus cyaneus*, CDFG-species of special concern) and burrowing owl (*Athene cunicularia*, CDFG-species of special concern and federal species of concern).

Special-status songbirds that may nest within the Drainage Master Plan area include loggerhead shrike (*Lanius ludovicianus*, CDFG species of special concern and USFWS bird of management concern) and tricolored blackbird (*Agelaius tricolor*, CDFG species of special concern and USFWS bird of management concern).

In addition to the special-status birds that may nest on-site, all raptors, including common species such as red-tailed hawks (*Buteo jamaicensis*) and great horned owls (*Bubo virginianus*) and their nests, are protected under Fish and Game Code Section 3503.5.

Other special-status birds that may occur on-site are not known to nest in this region and/or suitable nesting habitat is not present on-site. These are: ferruginous hawk (*Buteo regalis*, CDFG-species of special concern and USFWS-Bird of Management Concern), golden eagle (*Aquila chrysaetos*, Fish and Game Code §3511-fully protected species and CDFG-species of special concern), Merlin (*Falco columbarius*, CDFG-species of special concern). The grassland and pastures on-site represent potential foraging habitat for these remaining species.

### *Mammals*

Gerber Creek and the irrigated pastures on-site may provide foraging habitat for a variety of special-status bats that are known to occur in this region. These are: small-footed myotis (*Myotis ciliolabrum*), Yuma myotis (*M. yumanensis*), Townsend's big-eared bat (*Corynorhinus townsendii*), and pallid bat (*Antrozous pallidus*). Typical breeding sites for these species are not likely present within the project site but include appropriate sites with minimal human disturbance in cliffs, buildings, caves, mines, and bridges. None of these species are listed and protected pursuant the California or federal Endangered Species Act; they are considered CDFG species of special concern.

## **CONCLUSION**

The vegetation communities observed on-site represent potentially suitable habitat for several regionally occurring special-status species. Plants include: dwarf downingia, Boggs Lake hedge-hyssop, Ahart's dwarf rush, Greene's legenera, slender Orcutt grass, Sacramento Orcutt grass, and Sanford's arrowhead. Vernal pool fairy shrimp, midvalley fairy shrimp, California linderiella, and vernal pool tadpole shrimp may occur in vernal pools and isolated seasonal wetlands. Gerber Creek represents potentially suitable habitat for northwestern pond turtle, and the giant garter snake. Vernal pools and isolated seasonal wetlands may also provide habitat for the western spadefoot toad. Northern harrier and burrowing owl may nest within open grasslands and pastures on-site. White-tailed kite, Cooper's hawk, and Swainson's hawk may nest in larger trees within the site. Small trees and shrubs represent potential nesting habitat for loggerhead shrike, and tricolored blackbirds are known to nest in marsh and riparian scrub habitats in the vicinity of the subject area. Other potentially occurring birds that do not nest in this region but may be observed within the project vicinity during migration and/or winter include ferruginous hawk, golden eagle, and Merlin. A number of special-status bat species may forage on-site.

Determinate-level and pre-construction surveys will be required prior to initiation of project-related activities that may impact the habitats of special-status species. Additional permits may be required pursuant to the federal or state Endangered Species Acts, the CDFG Fish and Game Code, or other local jurisdictional requirements.

## **LIST OF ATTACHMENTS**

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Attachment A – Potentially Occurring Special-Status Species

Attachment B – Rarefind 2 CNDDDB Data Report

**ATTACHMENT A**

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Potentially Occurring Special-Status Species

North Vineyard Greens Unit 1 (North Vineyard Station Specific Plan) - Potentially Occurring Special-Status Species

| Common Name                           | Scientific Name                               | Federal Status | State Status | Other Status           | Habitat Description                       | Approximate Survey Dates |
|---------------------------------------|---|----------------|--------------|------------------------|---|--------------------------|
| <b>Plants</b>                         |   |                |              |                        |   |                          |
| Dwarf Downingia                       | <i>Downingia pusilla</i>                      | -              | -            | 2                      | vernal pools/wetlands                     | April                    |
| Boggs Lake hedge-hyssop               | <i>Gratiola heterosepala</i>                  | -              | CE           | 1B                     | vernal pools                              | April-August             |
| Ahart's dwarf rush                    | <i>Juncus leiospermus</i> var. <i>ahartii</i> | -              | -            | FSC, 1B                | vernal pools                              | March-May                |
| Greene's legenere                     | <i>Legenere limosa</i>                        | -              | -            | FSC, 1B                | vernal pools                              | April-June               |
| Slender orcutt grass                  | <i>Orcuttia tenuis</i>                        | FT             | CE           | 1B                     | vernal pools                              | May-October              |
| Sacramento orcutt grass               | <i>Orcuttia viscida</i>                       | FE             | CE           | 1B                     | vernal pools                              | April-July               |
| Sanford's arrowhead                   | <i>Sagittaria sanfordii</i>                   | -              | -            | FSC, 1B                | marsh, creeks, ditches                    | May-October              |
| <b>Invertebrates</b>                  |   |                |              |                        |   |                          |
| Vernal pool fairy shrimp              | <i>Branchinecta lynchi</i>                    | FT             | -            | -                      | vernal pools/wetlands                     | November-April           |
| Midvalley fairy shrimp                | <i>Branchinecta mesovallensis</i>             | -              | -            | FSC                    | vernal pools/wetlands                     | November-April           |
| Vernal pool tadpole shrimp            | <i>Lepidurus packardii</i>                    | FE             | -            | -                      | vernal pools/wetlands                     | November-April           |
| California linderiella                | <i>Linderiella occidentalis</i>               | -              | -            | FSC                    | vernal pools/wetlands                     | November-April           |
| <b>Amphibians</b>                     |   |                |              |                        |   |                          |
| Western spadefoot toad                | <i>Spea hammondi</i>                          | -              | -            | FSC, CSC, CCR, BLM     | vernal pools, wetlands/adjacent grassland | March-May                |
| <b>Reptiles</b>                       |   |                |              |                        |   |                          |
| Northwestern pond turtle              | <i>Clemmys marmorata marmorata</i>            | -              | -            | FSC, CSC, CCR, FS, BLM | creeks, ponds                             | April-October            |
| <b>Birds</b>                          |   |                |              |                        |   |                          |
| White-tailed kite (nesting)           | <i>Elanus leucurus</i>                        | -              | -            | FSC, CFP, MNB          | woodland, grassland                       | April-June               |
| Northern harrier (nesting)            | <i>Circus cyaneus</i>                         | -              | -            | CSC                    | marsh, grassland                          | June-July                |
| Cooper's hawk (nesting)               | <i>Accipiter cooperii</i>                     | -              | -            | CSC                    | woodland                                  | April-June               |
| Swainson's hawk (nesting)             | <i>Buteo swainsoni</i>                        | -              | CT           | FS                     | grassland, riparian                       | March-July               |
| Ferruginous hawk (wintering)          | <i>Buteo regalis</i>                          | -              | -            | FSC, CSC, MNB, BLM     | grassland                                 | November-February        |
| Golden eagle (nesting and wintering)  | <i>Aquila chrysaetos</i>                      | -              | -            | CFP, CSC, CDF, BLM     | grassland                                 | November-February        |
| Merlin (wintering)                    | <i>Falco columbarius</i>                      | -              | -            | CSC                    | woodland, grassland                       | September-April          |
| Burrowing owl (burrow sites)          | <i>Athene cucularia</i>                       | -              | -            | FSC, CSC, MNB, BLM     | grassland                                 | April-July               |
| Loggerhead shrike                     | <i>Lanius ludovicianus</i>                    | -              | -            | FSC, CSC, MNB          | grassland, woodland                       | April-May                |
| Tricolored blackbird (nesting colony) | <i>Agelaius tricolor</i>                      | -              | -            | FSC, CSC, MNB, BLM     | marsh, grassland                          | April-June               |

| Mammals                  |   |   |   |                   |   |                 |
|--------------------------|---|---|---|-------------------|---|-----------------|
| Small-footed myotis      | <i>Myotis ciliolabrum</i>                 | - | - | FSC, BLM          | caves, mines, buildings, bridges, rock crevices, trees                                    | April-September |
| Yuma myotis              | <i>Myotis yumanensis</i>                  | - | - | FSC, CSC, BLM     | Riparian woodland, caves, mines, buildings, bridges, rock crevices, trees                 | April-September |
| Townsend's big-eared bat | <i>Corynorhinus townsendii townsendii</i> | - | - | FSC, CSC, FS, BLM | caves, mines, buildings, rock crevices, trees   | April-September |
| Pallid bat               | <i>Antrozous pallidus</i>                 | - | - | CSC, FS, BLM      | mines, man-made structures, rock outcrops, and woodland near open grasslands for foraging | April-September |

**Status Codes:**

- FE - Federally listed, Endangered.
- FT - Federally listed, Threatened.
- FSC - U. S. Fish and Wildlife Service Species of Concern
- MNB - U. S. Fish and Wildlife Service Migratory Nongame Birds of Management Concern
- BLM - Bureau of Land Management Sensitive Species
- FS - U. S. Forest Service Sensitive Species
- CE - California listed, Endangered.
- CT - California listed, Threatened.
- CCR - California Code of Regulations Title 14 Fully Protected Species
- CFP - Fish and Game Code of California Fully Protected Species (§3511-birds, §4700-mammals, §5050-reptiles/amphibians).
- CSC - California Department of Fish and Game Species of Special Concern.
- CDF - California Department of Forestry Sensitive Species
- 1B - California Native Plant Society/Rare or Endangered in California and elsewhere

**ATTACHMENT B**

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Rarefind 2 CNDDDB Data Report



California Department of Fish and Game  
Natural Diversity Data Base

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*Elanus leucurus*

white-tailed kite

Element Code: ABNK06010

|                             |                              |                       |
|-----------------------------|------------------------------|-----------------------|
| -----List Status-----       | -----NDDB Element Ranks----- | -----Other Lists----- |
| Federal: Species of Concern | Global: G5                   | CDFG Status:          |
| State: None                 | State: S3                    |                       |

-----Habitat Associations-----

General: (NESTING) ROLLING FOOTHILLS/VALLEY MARGINS W/SCATTERED OAKS & RIVER BOTTOMLANDS OR MARSHES NEXT TO DECIDUOUS WOODLAND  
Micro: OPEN GRASSLANDS, MEADOWS, OR MARSHES FOR FORAGING CLOSE TO ISOLATED, DENSE-TOPPED TREES FOR NESTING AND PERCHING.

|  |                  |                           |                                  |                    |
|--|------------------|---------------------------|----------------------------------|--------------------|
| Occurrence No. 28  | Map Index: 24807 | -----Dates Last Seen----- | Lat/Long: 38°29'13" / 121°21'51" | Township: 07N      |
| Occ Rank: Fair   |                  | Element: 1990-06-03       | UTM: Zone-10 N4260895 E642670    | Range: 06E         |
| Origin: Natural/Native occurrence  |                  | Site: 1990-06-03          | Precision: SPECIFIC              | Section: 06 Qtr SW |
| Presence: Presumed Extant  |                  |                           | Symbol Type: POINT               | Meridian: M        |
| Trend: Unknown   |                  |                           | Radius: 80 meters                | Elevation: 50 ft   |
| Main Source: JOHNSON, D. 1990 (OBS)  |                  |                           |                                  |                    |
| Quad Summary: ELK GROVE (3812143/496A)   |                  |                           |                                  |                    |
| County Summary: SACRAMENTO   |                  |                           |                                  |                    |
| SNA Summary: Camp Pendleton Southern Coast   |                  |                           |                                  |                    |
| Location: SOUTH SIDE OF MCCOY AVENUE, 0.4 MILE EAST OF ELK GROVE-FLORIN ROAD, SOUTH OF SACRAMENTO. |                  |                           |                                  |                    |

-----Comments-----

Distribution:  
Ecological: NEST TREE IS LOCATED ON RURAL RESIDENTIAL PROPERTY.  
Threat:  
General: 2 ADULTS OBSERVED NESTING IN 1990.  
Owner/Manager: PVT

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Natural Diversity Data Base

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*Accipiter cooperii*

Cooper's hawk

Element Code: ABNKC12040

-----List Status-----

Federal: None

State: None

-----NDDB Element Ranks-----

Global: G5

State: S3

-----Other Lists-----

CDFG Status: SC

-----Habitat Associations-----

General: (NESTING) WOODLAND, CHIEFLY OF OPEN, INTERRUPTED OR MARGINAL TYPE.

Micro: NEST SITES MAINLY IN RIPARIAN GROWTHS OF DECIDUOUS TREES, AS IN CANYON BOTTOMS ON RIVER FLOOD-PLAINS; ALSO, LIVE OAKS.

Occurrence No. 66      Map Index:36011      ---Dates Last Seen---      Lat/Long: 38°27'49" / 121°19'46"      Township: 07N  
Occ Rank: Good      Element: 1997-05-28      UTM: Zone-10 N4258380 E645757      Range: 06E  
Origin: Natural/Native occurrence      Site: 1997-05-28      Precision: SPECIFIC      Section: 16 Qtr NW  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 65 ft

Main Source: CURLETTE, J. & R. WALKER 1997 (OBS)

Quad Summary: ELK GROVE (3812143/496A)

County Summary: SACRAMENTO

SNA Summary:

Location: SW OF THE INTERSECTION OF CARMENCITA ROAD AND LAGUNA CREEK, 4 MILES NNE OF ELK GROVE.

-----Comments-----

Distribution: NEST TREE IS LOCATED APPROXIMATELY 50 FEET WEST OF CARMENCITA ROAD.

Ecological: NEST TREE IS LOCATED IN A BAND OF VALLEY OAK WOODLAND ADJACENT TO LAGUNA CREEK, WITH AN UNDERSTORY OF ELYTRIGIA AND ANNUAL GRASSES. ADJACENT RIPARIAN WOODLAND FORMS A COMPLETE CANOPY, EXTENDING TO ABOUT 100 FEET FROM THE CHANNEL EDGE.

Threat:

General: 2 ADULTS AND AT LEAST 1 JUVENILE OBSERVED AT NEST ON 28 MAY 1997.

Owner/Manager: PVT

California Department of Fish and Game  
Natural Diversity Data Base

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|   |  |  |  |
|---|--|--|--|
| <p><i>Agelaius tricolor</i><br/>tricolored blackbird<br/>Element Code: ABPBXB0020</p> | <p>-----List Status-----<br/>Federal: Species of Concern<br/>State: None</p> | <p>-----NDDB Element Ranks-----<br/>Global: G2<br/>State: S2</p> | <p>-----Other Lists-----<br/>CDFG Status: SC</p> |
|---|--|--|--|

-----Habitat Associations-----  
General: (NESTING COLONY) HIGHLY COLONIAL SPECIES, MOST NUMEROUS IN CENTRAL VALLEY & VICINITY. LARGELY ENDEMIC TO CALIFORNIA.  
Micro: REQUIRES OPEN WATER, PROTECTED NESTING SUBSTRATE, & FORAGING AREA WITH INSECT PREY WITHIN A FEW KM OF THE COLONY.

**\* SENSITIVE \***

Occurrence No. 6      Map Index:      ---Dates Last Seen---      Lat/Long: /      Township:  
Occ Rank: Good      Element: 1994-XX-XX      UTM:      Range:  
Origin: Natural/Native occurrence      Site: 1994-XX-XX      Precision:      Section:      Qtr  
Presence: Presumed Extant      Symbol Type:      Meridian:  
Trend: Fluctuating      Radius:      Elevation:

Main Source: HOSEA, R. 1986 (LIT)  
Quad Summary: FLORIN (3812144/496B)\*, ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.

-----Comments-----  
Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES, ADJACENT TO GRASSLAND.  
Threat: THREATENED BY ENCROACHING DEVELOPMENT. REALIGNMENT OF STRAWBERRY CREEK DAMAGED THIS SITE.  
General:  
Owner/Manager:

**\* SENSITIVE \***

Occurrence No. 13      Map Index:      ---Dates Last Seen---      Lat/Long: /      Township:  
Occ Rank: None      Element: 1981-XX-XX      UTM:      Range:  
Origin: Natural/Native occurrence      Site: 1992-06-16      Precision:      Section:      Qtr  
Presence: Possibly Extirpated      Symbol Type:      Meridian:  
Trend: Unknown      Radius:      Elevation:

Main Source: HOSEA, R. 1986 (LIT)  
Quad Summary: ELK GROVE (3812143/496A)\*, CARMICHAEL (3812153/512D)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.

-----Comments-----  
Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
Ecological:  
Threat:  
General:  
Owner/Manager:

**\* SENSITIVE \***

Occurrence No. 156      Map Index:      ---Dates Last Seen---      Lat/Long: /      Township:  
Occ Rank: Unknown      Element: XXXX-XX-XX      UTM:      Range:  
Origin: Natural/Native occurrence      Site: XXXX-XX-XX      Precision:      Section:      Qtr  
Presence: Presumed Extant      Symbol Type:      Meridian:  
Trend: Unknown      Radius:      Elevation:

Main Source: DEHAVEN, R. (OBS)  
Quad Summary: ELK GROVE (3812143/496A)\*, GALT (3812133/496D), BRUCEVILLE (3812134/496C), FLORIN (3812144/496B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.

-----Comments-----  
Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
Ecological: NESTING SUBSTRATE CONSISTS OF CATTAILS AND BULRUSH.  
Threat:  
General:  
Owner/Manager:

California Department of Fish and Game  
Natural Diversity Data Base

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*Agelaius tricolor* (cont.)  
tricolored blackbird  
Element Code: ABPBXB0020

|                             |                    |                 |
|-----------------------------|--------------------|-----------------|
| List Status                 | NDDB Element Ranks | Other Lists     |
| Federal: Species of Concern | Global: G2         | CDFG Status: SC |
| State: None                 | State: S2          |                 |

**\* SENSITIVE \***

Occurrence No. 157      Map Index:      —Dates Last Seen—      Lat/Long: /      Township:  
 Occ Rank: Unknown      Element: 1972-05-XX      UTM:      Range:  
 Origin: Natural/Native occurrence      Site: 1972-05-XX      Precision:      Section:      Qtr  
 Presence: Presumed Extant      Symbol Type:      Meridian:  
 Trend: Unknown      Radius:      Elevation:  
 Main Source: DEHAVEN, R. (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)\*, SLOUGHHOUSE (3812142/495B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.  
 Comments:  
 Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
 Ecological: NESTING SUBSTRATE IS CATTAILS.  
 Threat:  
 General:  
 Owner/Manager:

**\* SENSITIVE \***

Occurrence No. 158      Map Index:      —Dates Last Seen—      Lat/Long: /      Township:  
 Occ Rank: Unknown      Element: 1972-XX-XX      UTM:      Range:  
 Origin: Natural/Native occurrence      Site: 1972-XX-XX      Precision:      Section:      Qtr  
 Presence: Presumed Extant      Symbol Type:      Meridian:  
 Trend: Unknown      Radius:      Elevation:  
 Main Source: DEHAVEN, R. (OBS)  
 Quad Summary: CARMICHAEL (3812153/512D)\*, ELK GROVE (3812143/496A), BUFFALO CREEK (3812152/511C)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.  
 Comments:  
 Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
 Ecological: NESTING IN CATTAILS AND TULE.  
 Threat:  
 General:  
 Owner/Manager:

**\* SENSITIVE \***

Occurrence No. 177      Map Index:      —Dates Last Seen—      Lat/Long: /      Township:  
 Occ Rank: Unknown      Element: 1997-XX-XX      UTM:      Range:  
 Origin: Natural/Native occurrence      Site: 1997-XX-XX      Precision:      Section:      Qtr  
 Presence: Presumed Extant      Symbol Type:      Meridian:  
 Trend: Fluctuating      Radius:      Elevation:  
 Main Source: JOHNSON, D. 1990 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)\*, CARMICHAEL (3812153/512D)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.  
 Comments:  
 Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
 Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES ALONG A RESIDENTIAL ROAD; SURROUNDED BY PASTURELAND.  
 Threat: POSSIBLY THREATENED BY DEVELOPMENT OF THE SURROUNDING AREA.  
 General:  
 Owner/Manager:

California Department of Fish and Game  
Natural Diversity Data Base

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|  |  |                 |                    |               |                             |            |                 |             |           |  |
|--|--|-----------------|--------------------|---------------|-----------------------------|------------|-----------------|-------------|-----------|--|
| Agelaius tricolor (cont.)<br>tricolored blackbird<br>Element Code: ABPXB0020 | <table border="0"> <tr> <td>—List Status—</td> <td>NDDB Element Ranks</td> <td>—Other Lists—</td> </tr> <tr> <td>Federal: Species of Concern</td> <td>Global: G2</td> <td>CDFG Status: SC</td> </tr> <tr> <td>State: None</td> <td>State: S2</td> <td></td> </tr> </table> | —List Status—   | NDDB Element Ranks | —Other Lists— | Federal: Species of Concern | Global: G2 | CDFG Status: SC | State: None | State: S2 |  |
| —List Status—  | NDDB Element Ranks   | —Other Lists—   |                    |               |                             |            |                 |             |           |  |
| Federal: Species of Concern  | Global: G2   | CDFG Status: SC |                    |               |                             |            |                 |             |           |  |
| State: None  | State: S2  |                 |                    |               |                             |            |                 |             |           |  |

**\* SENSITIVE \***

Occurrence No. 232      Map Index:      —Dates Last Seen—      Lat/Long: /      Township:  
 Occ Rank: Good      Element: 1994-06-XX      UTM:      Range:  
 Origin: Natural/Native occurrence      Site: 1994-06-XX      Precision:      Section:      Qtr  
 Presence: Presumed Extant      Symbol Type:      Meridian:  
 Trend: Unknown      Radius:      Elevation:

Main Source: ROSCOE, T. 1992 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.  
 Comments:

Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
 Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES, AND SOME WILD ROSE, ALONG LAGUNA CREEK.  
 Threat: FORAGING HABITAT THREATENED BY RESIDENTIAL DEVELOPMENT.  
 General:  
 Owner/Manager:

**\* SENSITIVE \***

Occurrence No. 297      Map Index:      —Dates Last Seen—      Lat/Long: /      Township:  
 Occ Rank: Unknown      Element: 1994-04-23      UTM:      Range:  
 Origin: Natural/Native occurrence      Site: 1994-04-23      Precision:      Section:      Qtr  
 Presence: Presumed Extant      Symbol Type:      Meridian:  
 Trend: Unknown      Radius:      Elevation:

Main Source: BURKE, C. 1994 (OBS)  
 Quad Summary: SLOUGHHOUSE (3812142/495B)\*, ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.  
 Comments:

Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
 Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRY, OCCUPYING ~1 ACRE.  
 Threat: POSSIBLE THREATS INCLUDE PROXIMITY TO ROAD/HOUSES AND FERAL CATS.  
 General:  
 Owner/Manager:

**\* SENSITIVE \***

Occurrence No. 298      Map Index:      —Dates Last Seen—      Lat/Long: /      Township:  
 Occ Rank: Unknown      Element: 1994-06-XX      UTM:      Range:  
 Origin: Natural/Native occurrence      Site: 1994-06-XX      Precision:      Section:      Qtr  
 Presence: Presumed Extant      Symbol Type:      Meridian:  
 Trend: Unknown      Radius:      Elevation:

Main Source: BURKE, C. 1994 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.  
 Comments:

Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
 Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES AND WILLOWS; SURROUNDED BY GRASSLAND AND MOIST FIELDS PROVIDING FACULTATIVE WETLAND VEGETATION.  
 Threat:  
 General:  
 Owner/Manager:

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Agelaius tricolor (cont.)  
tricolored blackbird  
Element Code: ABPXB0020

|                             |                              |                       |
|-----------------------------|------------------------------|-----------------------|
| -----List Status-----       | -----NDDB Element Ranks----- | -----Other Lists----- |
| Federal: Species of Concern | Global: G2                   | CDFG Status: SC       |
| State: None                 | State: S2                    |                       |

**\* SENSITIVE \***

Occurrence No. 299      Map Index:      ---Dates Last Seen---      Lat/Long: /      Township:  
 Occ Rank: Good      Element: 1994-06-XX      UTM:      Range:  
 Origin: Natural/Native occurrence      Site: 1997-XX-XX      Precision:      Section:      Qtr  
 Presence: Presumed Extant      Symbol Type:      Meridian:  
 Trend: Unknown      Radius:      Elevation:  
 Main Source: BURKE, C. 1994 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.  
 -----Comments-----  
 Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
 Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRY THICKETS; SURROUNDED BY CATTLE PASTURE ASSOCIATED WITH A DAIRY OPERATION.  
 Threat: PROXIMITY OF THIS SITE TO AN ACTIVE DAIRY OPERATION MAY BE A POSSIBLE THREAT.  
 General:  
 Owner/Manager:

**\* SENSITIVE \***

Occurrence No. 300      Map Index:      ---Dates Last Seen---      Lat/Long: /      Township:  
 Occ Rank: Unknown      Element: 1994-04-23      UTM:      Range:  
 Origin: Natural/Native occurrence      Site: 1994-04-23      Precision:      Section:      Qtr  
 Presence: Presumed Extant      Symbol Type:      Meridian:  
 Trend: Unknown      Radius:      Elevation:  
 Main Source: MANOLIS, T. 1994 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.  
 -----Comments-----  
 Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
 Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES; SURROUNDED BY LIGHTLY GRAZED GRASSLAND.  
 Threat:  
 General:  
 Owner/Manager:

**\* SENSITIVE \***

Occurrence No. 301      Map Index:      ---Dates Last Seen---      Lat/Long: /      Township:  
 Occ Rank: Good      Element: 1994-05-XX      UTM:      Range:  
 Origin: Natural/Native occurrence      Site: 1994-05-XX      Precision:      Section:      Qtr  
 Presence: Presumed Extant      Symbol Type:      Meridian:  
 Trend: Unknown      Radius:      Elevation:  
 Main Source: MANOLIS, T. 1994 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.  
 -----Comments-----  
 Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
 Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES IN AN AREA COVERING ~50 ACRES; SURROUNDED BY GRAZED GRASSLAND.  
 Threat:  
 General:  
 Owner/Manager:

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Agelaius tricolor (cont.)  
tricolored blackbird  
Element Code: ABPBXB0020

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Species of Concern Global: G2 CDFG Status: SC  
State: None State: S2

\* SENSITIVE \*

Occurrence No. 319 Map Index: ---Dates Last Seen--- Lat/Long: / Township:  
Occ Rank: Good Element: 1996-06-03 UTM: Range:  
Origin: Natural/Native occurrence Site: 1996-06-03 Precision: Section: Qtr  
Presence: Presumed Extant Symbol Type: Meridian:  
Trend: Unknown Radius: Elevation:  
Main Source: ROSCOE, T. 1996 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.  
-----Comments-----  
Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
Ecological: NESTING SUBSTRATE IS BLACKBERRIES; SURROUNDING HABITAT CONSISTS OF AGRICULTURE, GRAZED PASTURE, AND RURAL RESIDENTIAL.  
Threat: THREATENED BY DEVELOPMENT.  
General:  
Owner/Manager:

\* SENSITIVE \*

Occurrence No. 321 Map Index: ---Dates Last Seen--- Lat/Long: / Township:  
Occ Rank: Good Element: 1996-06-10 UTM: Range:  
Origin: Natural/Native occurrence Site: 1996-06-10 Precision: Section: Qtr  
Presence: Presumed Extant Symbol Type: Meridian:  
Trend: Unknown Radius: Elevation:  
Main Source: ROSCOE, T. 1996 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.  
-----Comments-----  
Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
Ecological: HABITAT CONSISTS OF BLACKBERRY BRAMBLES GROWING ALONG A ROADSIDE DITCH; SURROUNDING AREA CONSISTS OF RURAL RESIDENTIAL/AGRICULTURE.  
Threat: THREATENED BY DEVELOPMENT.  
General:  
Owner/Manager:

\* SENSITIVE \*

Occurrence No. 347 Map Index: ---Dates Last Seen--- Lat/Long: / Township:  
Occ Rank: Good Element: 1993-06-XX UTM: Range:  
Origin: Natural/Native occurrence Site: 1993-06-XX Precision: Section: Qtr  
Presence: Presumed Extant Symbol Type: Meridian:  
Trend: Unknown Radius: Elevation:  
Main Source: COOK, L. 1993 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.  
-----Comments-----  
Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES; SURROUNDED BY GRASSLAND, TO THE SOUTH AND EAST.  
Threat:  
General:  
Owner/Manager:

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Agelaius tricolor (cont.)  
tricolored blackbird  
Element Code: ABPBXB0020

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Species of Concern      Global: G2      CDFG Status: SC  
State: None      State: S2

**\* SENSITIVE \***

Occurrence No. 351      Map Index:      ---Dates Last Seen---      Lat/Long: /      Township:  
Occ Rank: Good      Element: 1992-05-XX      UTM:      Range:  
Origin: Natural/Native occurrence      Site: 1992-05-XX      Precision:      Section:      Qtr  
Presence: Presumed Extant      Symbol Type:      Meridian:  
Trend: Unknown      Radius:      Elevation:  
Main Source: COOK, L. 1992 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.  
-----Comments-----  
Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more  
information: (916) 324-3812.  
Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES; SURROUNDED BY PASTURE.  
Threat:  
General:  
Owner/Manager:



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*Buteo swainsoni*

Swainson's hawk

Element Code: ABNKC19070

|                             |                         |                  |
|-----------------------------|-------------------------|------------------|
| -----List Status-----       | NDDB Element Ranks----- | Other Lists----- |
| Federal: Species of Concern | Global: G4              | CDFG Status:     |
| State: Threatened           | State: S2               |                  |

-----Habitat Associations-----

General: (NESTING) BREEDS IN STANDS WITH FEW TREES IN JUNIPER-SAGE FLATS, RIPARIAN AREAS AND IN OAK SAVANNAH.  
Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 131      Map Index:11672      ---Dates Last Seen---      Lat/Long: 38°25'13" / 121°17'08"      Township: 07N  
Occ Rank: Excellent      Element: 1994-XX-XX      UTM: Zone-10 N4253642 E649668      Range: 06E  
Origin: Natural/Native occurrence      Site: 1994-XX-XX      Precision: SPECIFIC      Section: XX Qtr XX  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Stable      Radius: 80 meters      Elevation: 60 ft  
Main Source: CDFG RAPTOR NEST FILES 1984 (PERS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: DEER CREEK, AT THE INTERSECTION OF WILTON ROAD, 0.5 MILE NW OF COSUMNES RIVER.

-----Comments-----

Distribution:  
Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY AGRICULTURAL CROPS AND GRAZING.  
Threat: POSSIBLE THREAT FROM SURROUNDING DEVELOPMENT OF SMALL RANCHETTES.  
General: DFG SWHA #SA013. 2 ADULTS (1 LT, 1 DK) OBSERVED SOARING/ROOSTING HERE IN 1981 AND 1984. NEST OBSERVED DURING A SURVEY OF COSUMNES RIVER IN 1994.  
Owner/Manager: PVT

Occurrence No. 183      Map Index:11621      ---Dates Last Seen---      Lat/Long: 38°22'48" / 121°19'01"      Township: 06N  
Occ Rank: Excellent      Element: 1994-XX-XX      UTM: Zone-10 N4249107 E647020      Range: 06E  
Origin: Natural/Native occurrence      Site: 1994-XX-XX      Precision: SPECIFIC      Section: 10 Qtr XX  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Stable      Radius: 80 meters      Elevation: 45 ft  
Main Source: CDFG RAPTOR NEST FILES 1984 (PERS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary: Lower Deer Creek  
Location: COSUMNES RIVER, RM-13.4(R), 2 MILES EAST OF THE INTERSECTION OF GRANT LINE ROAD & HWY 99, COSUMNES RIVER PRESERVE.

-----Comments-----

Distribution:  
Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY AGRICULTURAL CROPS AND GRAZING.  
Threat: POSSIBLE THREAT FROM DEVELOPMENT OF SMALL RANCHETTES IN THE AREA.  
General: DFG SWHA #SA025. 1 ADULT OBSERVED DIVING ON TURKEY VULTURE (1982); NO NEST FOUND. IN SUMMER 1994, NEST OBSERVED DURING A SURVEY OF COSUMNES RIVER AREA.  
Owner/Manager: TNC-COSUMNES RIVER PRESERVE

Occurrence No. 184      Map Index:11655      ---Dates Last Seen---      Lat/Long: 38°23'00" / 121°18'28"      Township: 06N  
Occ Rank: Excellent      Element: 1995-06-13      UTM: Zone-10 N4249504 E647797      Range: 06E  
Origin: Natural/Native occurrence      Site: 1995-06-13      Precision: SPECIFIC      Section: XX Qtr XX  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Stable      Radius: 80 meters      Elevation: 60 ft  
Main Source: CDFG RAPTOR NEST FILES 1984 (PERS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: NORTH BANK OF COSUMNES RIVER, AT RM-14.9, ESE OF ELK GROVE.

-----Comments-----

Distribution: LOCATED ~0.25 MILE UPSTREAM FROM DFG COSUMNES RIVER CONSERVATION EASEMENT.  
Ecological: NEST TREE IS A VALLEY OAK; HABITAT CONSISTS OF RIPARIAN SURROUNDED BY ROW CROPS.  
Threat:  
General: DFG SWHA #SA038. 1 DARK, 1 MEDIUM PHASE OBSERVED SOARING IN 1984; NO NEST FOUND. 2 ADULTS/3 JUVENILES OBSERVED AT THE NEST IN 1987. 2 CHICKS OBSERVED IN THE NEST ON 13 JUNE 1995.  
Owner/Manager: PVT

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|  |  |  |  |
|--|--|--|--|
| Buteo swainsoni (cont.)<br>Swainson's hawk<br>Element Code: ABNKC19070 | <del>-----List Status-----</del><br>Federal: Species of Concern<br>State: Threatened | <del>-----NDDB Element Ranks-----</del><br>Global: G4<br>State: S2 | <del>-----Other Lists-----</del><br>CDFG Status: |
|--|--|--|--|

Occurrence No. 185      Map Index:11725      ~~-----Dates Last Seen-----~~      Lat/Long: 38°22'34" / 121°15'26"      Township: 06N  
 Occ Rank: Unknown      Element: 1984-05-22      UTM: Zone-10 N4248777 E652235      Range: 07E  
 Origin: Natural/Native occurrence      Site: 1985-05-24      Precision: NON-SPECIFIC      Section: 18 Qtr NW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 1/5 mile      Elevation: 70 ft  
 Main Source: DEPT. OF FISH & GAME 1984 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)\*, GALT (3812133/496D)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: 0.25 MILE SE OF THE INTERSECTION OF DAVIS AND WALMORT ROADS  
~~-----Comments-----~~  
 Distribution:  
 Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY AGRICULTURAL FIELDS.  
 Threat:  
 General: DFG SWHA #SA036. 1 LIGHT AND 1 DARK PHASE OBSERVED SOARING; NO NEST FOUND, BUT NESTING PRESUMED. SITE CHECKED ON 24 MAY 1985, BUT NO NEST AND NO BIRDS WERE OBSERVED.  
 Owner/Manager: PVT

Occurrence No. 190      Map Index:11652      ~~-----Dates Last Seen-----~~      Lat/Long: 38°24'55" / 121°17'36"      Township: 07N  
 Occ Rank: Unknown      Element: 1984-05-17      UTM: Zone-10 N4253065 E649001      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1984-05-17      Precision: NON-SPECIFIC      Section: 35 Qtr SW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 1/5 mile      Elevation: 60 ft  
 Main Source: DEPT. OF FISH & GAME 1984 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: DEER CREEK, AT WILTON ROAD.  
~~-----Comments-----~~  
 Distribution: AREA UNSURVEYED. SOURCE DOCUMENT SAYS SECTION 35.  
 Ecological: NEST TREE IS AN OAK.  
 Threat:  
 General: DFG SWHA #SA024. 1 ADULT OBSERVED ON NEST.  
 Owner/Manager: PVT

Occurrence No. 191      Map Index:11728      ~~-----Dates Last Seen-----~~      Lat/Long: 38°27'28" / 121°15'32"      Township: 07N  
 Occ Rank: Unknown      Element: 1979-06-29      UTM: Zone-10 N4257837 E651918      Range: 07E  
 Origin: Natural/Native occurrence      Site: 1982-06-28      Precision: NON-SPECIFIC      Section: 18 Qtr SW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 1/5 mile      Elevation: 90 ft  
 Main Source: DEPT. OF FISH & GAME 1984 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: 0.5 MILE EAST OF GRANT LINE ROAD, ELK GROVE  
~~-----Comments-----~~  
 Distribution: LOCATED ABOUT HALF-WAY BETWEEN CALVINE ROAD AND SLOUGHHOUSE ROAD.  
 Ecological:  
 Threat:  
 General: DFG SWHA #SA002. 2 ADULTS AND YOUNG OBS 1979. NO ACTIVITY IN 1980 OR 1982.  
 Owner/Manager: PVT

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|  |                             |  |            |                              |              |                       |  |
|--|-----------------------------|--|------------|------------------------------|--------------|-----------------------|--|
| Buteo swainsoni (cont.)<br>Swainson's hawk<br>Element Code: ABNKC19070 | -----List Status-----       |  |            | -----NDDB Element Ranks----- |              | -----Other Lists----- |  |
|  | Federal: Species of Concern |  | Global: G4 |                              | CDFG Status: |                       |  |
|  | State: Threatened           |  | State: S2  |                              |              |                       |  |

Occurrence No. 262      Map Index:11626      ---Dates Last Seen---      Lat/Long: 38°23'51" / 121°18'41"  
 Occ Rank: Unknown      Element: 1987-XX-XX      UTM: Zone-10 N4251063 E647460      Township: 06N  
 Origin: Natural/Native occurrence      Site: 1987-XX-XX      Precision: NON-SPECIFIC      Range: 06E  
 Presence: Presumed Extant      Symbol Type: POINT      Section: 03 Qtr SW  
 Trend: Unknown      Radius: 1/5 mile      Meridian: M  
 Main Source: DEPT. OF FISH & GAME 1984 (PERS)      Elevation: 60 ft  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary: Lower Deer Creek  
 Location: DEER CREEK, 1 MILE SE OF GRANT LINE ROAD  
 -----Comments-----  
 Distribution:  
 Ecological:  
 Threat:  
 General: DFG SWHA #SA037. 2 DARK PHASE ADULTS; NO NEST FOUND IN 1984. 2 ADULTS/1 JUVENILE OBSERVED AT NEST IN 1987.  
 Owner/Manager: PVT

Occurrence No. 662      Map Index:33208      ---Dates Last Seen---      Lat/Long: 38°23'15" / 121°17'54"  
 Occ Rank: Excellent      Element: 1994-XX-XX      UTM: Zone-10 N4249970 E648619      Township: 06N  
 Origin: Natural/Native occurrence      Site: 1994-XX-XX      Precision: SPECIFIC      Range: 06E  
 Presence: Presumed Extant      Symbol Type: POINT      Section: XX Qtr XX  
 Trend: Unknown      Radius: 80 meters      Meridian: M  
 Main Source: ROSCOE, T. 1994 (OBS)      Elevation: 50 ft  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: COSUMNES RIVER, RM-14.6(L), 2.5 MILES SW OF THE INTERSECTION OF WILTON ROAD AND DILLARD ROAD, EAST OF ELK GROVE.  
 -----Comments-----  
 Distribution:  
 Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY AGRICULTURAL CROPS AND GRAZING.  
 Threat: POSSIBLE THREAT FROM DEVELOPMENT OF SURROUNDING AREA INTO SMALL RANCHETTES.  
 General: ACTIVE NEST OBSERVED DURING A SUMMER 1994 SURVEY OF COSUMNES RIVER AREA.  
 Owner/Manager: UNKNOWN

Occurrence No. 663      Map Index:33209      ---Dates Last Seen---      Lat/Long: 38°22'58" / 121°18'49"  
 Occ Rank: Excellent      Element: 1994-XX-XX      UTM: Zone-10 N4249426 E647305      Township: 06N  
 Origin: Natural/Native occurrence      Site: 1994-XX-XX      Precision: SPECIFIC      Range: 06E  
 Presence: Presumed Extant      Symbol Type: POINT      Section: XX Qtr XX  
 Trend: Unknown      Radius: 80 meters      Meridian: M  
 Main Source: ROSCOE, T. 1994 (OBS)      Elevation: 45 ft  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary: \*  
 Location: COSUMNES RIVER, RM-13.6(R), 3 MILES SE OF ELK GROVE.  
 -----Comments-----  
 Distribution:  
 Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY AGRICULTURAL CROPS AND GRAZING.  
 Threat: POSSIBLE THREAT FROM DEVELOPMENT OF SURROUNDING AREA INTO SMALL RANCHETTES.  
 General: ACTIVE NEST OBSERVED DURING A SUMMER 1994 SURVEY OF THE COSUMNES RIVER AREA.  
 Owner/Manager: UNKNOWN

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|   |                             |                    |              |
|---|-----------------------------|--------------------|--------------|
| <i>Buteo swainsoni</i> (cont.)<br>Swainson's hawk<br>Element Code: ABNKC19070 | List Status                 | NDDB Element Ranks | Other Lists  |
|   | Federal: Species of Concern | Global: G4         | CDFG Status: |
|   | State: Threatened           | State: S2          |              |

Occurrence No. 664      Map Index:33210      —Dates Last Seen—      Lat/Long: 38°22'32" / 121°19'14"  
 Occ Rank: Excellent      Element: 1994-XX-XX      UTM: Zone-10 N4248606 E646716      Township: 06N  
 Origin: Natural/Native occurrence      Site: 1994-XX-XX      Precision: SPECIFIC      Range: 06E  
 Presence: Presumed Extant      Symbol Type: POINT      Section: XX Qtr XX  
 Trend: Unknown      Radius: 80 meters      Meridian: M  
 Elevation: 45 ft  
 Main Source: ROSCOE, T. 1994 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)\*, GALT (3812133/496D)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: COSUMNES RIVER, RM-13.0(L), 2.5 MILES SE OF ELK GROVE.  
 Comments:  
 Distribution:  
 Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY AGRICULTURAL CROPS AND GRAZING.  
 Threat: POSSIBLE THREAT FROM DEVELOPMENT OF SURROUNDING AREA INTO SMALL RANCHETTES.  
 General: ACTIVE NEST OBSERVED DURING A SUMMER 1994 SURVEY OF COSUMNES RIVER AREA.  
 Owner/Manager: UNKNOWN

Occurrence No. 665      Map Index:33211      —Dates Last Seen—      Lat/Long: 38°25'00" / 121°16'30"  
 Occ Rank: Excellent      Element: 1994-XX-XX      UTM: Zone-10 N4253242 E650587      Township: 07N  
 Origin: Natural/Native occurrence      Site: 1994-XX-XX      Precision: SPECIFIC      Range: 06E  
 Presence: Presumed Extant      Symbol Type: POINT      Section: XX Qtr XX  
 Trend: Unknown      Radius: 80 meters      Meridian: M  
 Elevation: 70 ft  
 Main Source: ROSCOE, T. 1994 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: COSUMNES RIVER, RM-17.5(L), 0.5 MILE NW OF WILTON.  
 Comments:  
 Distribution:  
 Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY AGRICULTURAL CROPLANDS AND GRAZING.  
 Threat: POSSIBLE THREAT FROM DEVELOPMENT OF SURROUNDING AREA INTO SMALL RANCHETTES.  
 General: ACTIVE NEST OBSERVED DURING A SUMMER 1994 SURVEY OF COSUMNES RIVER AREA.  
 Owner/Manager: UNKNOWN

Occurrence No. 672      Map Index:33224      —Dates Last Seen—      Lat/Long: 38°25'22" / 121°15'21"  
 Occ Rank: Excellent      Element: 1995-06-13      UTM: Zone-10 N4253970 E652248      Township: 07N  
 Origin: Natural/Native occurrence      Site: 1995-06-13      Precision: SPECIFIC      Range: 07E  
 Presence: Presumed Extant      Symbol Type: POINT      Section: XX Qtr XX  
 Trend: Unknown      Radius: 80 meters      Meridian: M  
 Elevation: 70 ft  
 Main Source: ROSCOE, T. 1995 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: SOUTH BANK OF COSUMNES RIVER, AT BEITZEL ROAD, ~5 MILES EAST OF ELK GROVE.  
 Comments:  
 Distribution:  
 Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY ROW CROPS.  
 Threat: POSSIBLE THREATS INCLUDE DEVELOPMENT AND CONVERSION TO VINEYARDS.  
 General: 2 ADULTS OBSERVED COPULATING ON 13 JUNE 1995.  
 Owner/Manager: PVT

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|   |                             |                              |                       |
|---|-----------------------------|------------------------------|-----------------------|
| <i>Buteo swainsoni</i> (cont.)<br>Swainson's hawk<br>Element Code: ABNKC19070 | -----List Status-----       | -----NDDB Element Ranks----- | -----Other Lists----- |
|   | Federal: Species of Concern | Global: G4                   | CDFG Status:          |
|   | State: Threatened           | State: S2                    |                       |

Occurrence No. 673      Map Index:33225      ---Dates Last Seen---      Lat/Long: 38°25'06" / 121°16'40"      Township: 07N  
 Occ Rank: Good      Element: 1995-06-13      UTM: Zone-10 N4253422 E650359      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1995-06-13      Precision: SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 60 ft  
 Main Source: ROSCOE, T. 1995 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: NORTH BANK OF COSUMNES RIVER, 0.1 MILE EAST OF WILTON ROAD, ~4 MILES EAST OF ELK GROVE.  
 -----Comments-----  
 Distribution:  
 Ecological: NEST TREE IS A COTTONWOOD SNAG; HABITAT CONSISTS OF RIPARIAN SURROUNDED BY ROW CROPS, SAND MINING, AND LOW-DENSITY RESIDENTIAL.  
 Threat: THREATENED BY DEVELOPMENT.  
 General: 1 CHICK OBSERVED IN THE NEST ON 13 JUNE 1995.  
 Owner/Manager: PVT

Occurrence No. 674      Map Index:33226      ---Dates Last Seen---      Lat/Long: 38°24'18" / 121°17'17"      Township: 06N  
 Occ Rank: Good      Element: 1995-06-13      UTM: Zone-10 N4251937 E649474      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1995-06-13      Precision: SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 55 ft  
 Main Source: ROSCOE, T. 1995 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: SOUTH BANK OF COSUMNES RIVER, ~1 MILE DOWNSTREAM FROM WILTON ROAD, ~4 MILES EAST OF ELK GROVE.  
 -----Comments-----  
 Distribution:  
 Ecological: NEST TREE IS A VALLEY OAK; HABITAT CONSISTS OF RIPARIAN SURROUNDED BY ROW CROPS AND LOW-DENSITY HOUSING.  
 Threat: THREATS INCLUDE DEVELOPMENT AND CONVERSION TO VINEYARDS.  
 General: ON 13 JUNE 1995, 2 ADULTS WERE OBSERVED SOARING IN THE VICINITY OF THE NEST TREE, FROM WHICH AT LEAST 2 CHICKS COULD BE HEARD CALLING.  
 Owner/Manager: PVT

Occurrence No. 760      Map Index:41774      ---Dates Last Seen---      Lat/Long: 38°23'07" / 121°19'01"      Township: 06N  
 Occ Rank: Unknown      Element: 1987-XX-XX      UTM: Zone-10 N4249707 E646996      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1987-XX-XX      Precision: NON-SPECIFIC      Section: 09 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 1/5 mile      Elevation: 35 ft  
 Main Source: DEPT. OF FISH & GAME 1994 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: DEER CREEK, 2.5 MILES EAST OF HIGHWAY 99, SE OF ELK GROVE.  
 -----Comments-----  
 Distribution:  
 Ecological: NEST TREE IS AN OAK; SURROUNDED BY A MIX OF RIPARIAN, AGRICULTURAL FIELDS, AND PASTURE.  
 Threat:  
 General: DFG SWHA #SA056. 2 ADULTS OBSERVED NESTING IN 1987.  
 Owner/Manager: PVT

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*Buteo swainsoni* (cont.)  
Swainson's hawk  
Element Code: ABNKC19070

|                             |                              |                       |
|-----------------------------|------------------------------|-----------------------|
| -----List Status-----       | -----NDDB Element Ranks----- | -----Other Lists----- |
| Federal: Species of Concern | Global: G4                   | CDPG Status:          |
| State: Threatened           | State: S2                    |                       |

Occurrence No. 761      Map Index:41775      ---Dates Last Seen---      Lat/Long: 38°22'22" / 121°19'33"      Township: 06N  
Occ Rank: Unknown      Element: 1987-XX-XX      UTM: Zone-10 N4248315 E646235      Range: 06E  
Origin: Natural/Native occurrence      Site: 1987-XX-XX      Precision: NON-SPECIFIC      Section: 16 Qtr NW  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 1/5 mile      Elevation: 35 ft  
Main Source: DEPT. OF FISH & GAME 1994 (PERS)  
Quad Summary: GALT (3812133/496D)\*, ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: DEER CREEK, 1.7 MILES EAST OF HIGHWAY 99, SE OF ELK GROVE.  
-----Comments-----  
Distribution:  
Ecological: NEST TREE IS AN OAK; SURROUNDED BY A MIX OF RIPARIAN, AGRICULTURAL FIELDS, AND PASTURE.  
Threat:  
General: DFG SWHA #SA057. 2 LIGHT-MORPH ADULTS OBSERVED NESTING IN 1987.  
Owner/Manager: PVT

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*Clemmys marmorata marmorata*  
northwestern pond turtle  
Element Code: ARAAD02031

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Species of Concern      Global: G3G4T3      CDFG Status: SC  
State: None                      State: S3

-----Habitat Associations-----

General: ASSOCIATED WITH PERMANENT OR NEARLY PERMANENT WATER IN A WIDE VARIETY OF HABITATS.  
Micro: REQUIRES BASKING SITES. NESTS SITES MAY BE FOUND UP TO 0.5 KM FROM WATER.

Occurrence No. 132      Map Index:46135      ---Dates Last Seen---      Lat/Long: 38°25'08" / 121°22'05"      Township: 07N  
Occ Rank: Fair      Element: 2001-07-11      UTM: Zone-10 N4253367 E642468      Range: 06E  
Origin: Natural/Native occurrence      Site: 2001-07-11      Precision: SPECIFIC      Section: 31 Qtr NW  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 35 ft  
Main Source: FULLEN, K. 2001 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: NE ELK GROVE. LAGUNA CK 0.3 MILES SOUTH INTERSECTION ELK GROVE FLORIN/ BOND RD & 0.2 MILES EAST OF ELK GROVE FLORIN RD

-----Comments-----

Distribution: OBSERVED BASKING ON WOODY DEBRIS WITHIN CREEK.  
Ecological: HABITAT CONSISTS OF VALLEY-FOOTHILL RIPARIAN PLANT COMMUNITY DOMINATED BY VALLEY OAK WITH UNDERSTORY OF HIMALAYAN BLACKBERRY. EMERGENT VEGETATION (CATTAILS, BULRUSH) AND LARGE AMOUNT OF ALGAE IN CREEK.  
Threat: CREEK AND TRAILS EXPERIENCE HEAVY USE BY HUMANS.  
General: 1 ADULT OBSERVED.  
Owner/Manager: ELK GROVE COMMUNITY SERVICES D

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*Thamnophis gigas*

giant garter snake  
Element Code: ARADB36150

| List Status         | NDDB Element Ranks | Other Lists  |
|---------------------|--------------------|--------------|
| Federal: Threatened | Global: G2G3       | CDFG Status: |
| State: Threatened   | State: S2S3        |              |

Habitat Associations

General: PREFERS FRESHWATER MARSH AND LOW GRADIENT STREAMS. HAS ADAPTED TO DRAINAGE CANALS & IRRIGATION DITCHES.  
Micro: THIS IS THE MOST AQUATIC OF THE GARTER SNAKES IN CALIFORNIA.

|   |                  |                       |                                  |                    |
|---|------------------|-----------------------|----------------------------------|--------------------|
| Occurrence No. 169  | Map Index: 47639 | ---Dates Last Seen--- | Lat/Long: 38°23'36" / 121°21'05" | Township: 06N      |
| Occ Rank: Fair  |                  | Element: 2002-03-27   | UTM: Zone-10 N4250557 E643957    | Range: 06E         |
| Origin: Natural/Native occurrence   |                  | Site: 2002-03-27      | Precision: SPECIFIC              | Section: 08 Qtr NW |
| Presence: Presumed Extant   |                  |                       | Symbol Type: POINT               | Meridian: M        |
| Trend: Unknown  |                  |                       | Radius: 80 meters                | Elevation: 50 ft   |
| Main Source: HENKE, J. 2002 (OBS)   |                  |                       |                                  |                    |
| Quad Summary: ELK GROVE (3812143/496A)  |                  |                       |                                  |                    |
| County Summary: SACRAMENTO  |                  |                       |                                  |                    |
| SNA Summary:  |                  |                       |                                  |                    |
| Location: EAST SIDE OF WATERMAN ROAD, 0.8 MILE NORTH OF GRANT LINE ROAD, SE OF ELK GROVE  |                  |                       |                                  |                    |
| Comments:   |                  |                       |                                  |                    |
| Distribution: SNAKE OBSERVED AT THE CONFLUENCE OF A WETLAND SWALE AND THE DITCH.  |                  |                       |                                  |                    |
| Ecological: HABITAT CONSISTS OF A ROADSIDE DITCH ALONG WATERMAN ROAD; VEGETATION CONSISTS OF PASPALUM DILATATUM, TYPHA LATIFOLIA, AND CYPERUS ERAGRASTIS. |                  |                       |                                  |                    |
| Threat: THREATENED BY TRAFFIC AND DITCH MAINTENANCE.  |                  |                       |                                  |                    |
| General: 1 ADULT OBSERVED ON 27 MAR 2002.   |                  |                       |                                  |                    |
| Owner/Manager: PVT  |                  |                       |                                  |                    |



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**Branchinecta lynchi**

vernal pool fairy shrimp  
Element Code: ICBRA03030

|                     |                     |               |
|---------------------|---------------------|---------------|
| —List Status—       | —NDB Element Ranks— | —Other Lists— |
| Federal: Threatened | Global: G2G3        | CDPG Status:  |
| State: None         | State: S2S3         |               |

—Habitat Associations—

General: ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MTNS, AND SOUTH COAST MTNS, IN ASTATIC RAIN-FILLED POOLS.  
Micro: INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Occurrence No. 100      Map Index:32550      —Dates Last Seen—      Lat/Long: 38°26'48" / 121°21'16"      Township: 07N  
 Occ Rank: Excellent      Element: 1997-02-11      UTM: Zone-10 N4256452 E643600      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1997-03-14      Precision: SPECIFIC      Section: 19 Qtr NE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 29.1 ac      Elevation: 60 ft  
 Main Source: GIBSON, J. & T. SKORDAL 1996 (LIT)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: 0.5 MILE SOUTH OF CALVINE ROAD AND IMMEDIATELY WEST OF WATERMAN ROAD, 2 MILES NORTH OF ELK GROVE.  
 —Comments—  
 Distribution: PERRY RANCH MITIGATION AREA IS A 37-ACRE PRESERVE, CONSISTING OF NORTHERN HARDPAN VERNAL POOLS (NATURAL AND CREATED), SEASONAL WETLANDS, WET SWALES, AND NON-NATIVE ANNUAL GRASSLANDS.  
 Ecological: NORTHERN HARDPAN VERNAL POOL HABITAT WITH CONSTRUCTED AND NATURAL POOLS; DOMINANT UPLAND CONSISTING OF NON-NATIVE ANNUAL GRASSLAND. SOIL TYPES: CORNING-REDDING COMPLEX (8-30% SLOPES) AND REDDING GRAVELLY LOAM (0-8% SLOPES).  
 Threat: WETLAND PRESERVE IS PROTECTED BY EXISTING PERIMETER FENCE AND NO DISTURBANCES NOTED.  
 General: 1995: 12/28-OBS IN 25 OF 26 CONSTRUCTED POOLS, 7 OF 10 REFERENCE POOLS. 2/2-OBS IN 2 OF 26 CONSTRUCTED POOLS, 1 OF 10 REFERENCE POOLS. 1996: OBS IN 25 OF 26 CONSTRUCTED POOLS, 3 OF 10 REFERENCE POOLS. 1997: UNKNOWN NUMBER OBS ON 1/8 & 2/11.  
 Owner/Manager: PVT-WINNCREST HOMES

Occurrence No. 160      Map Index:30622      —Dates Last Seen—      Lat/Long: 38°23'23" / 121°20'41"      Township: 06N  
 Occ Rank: Unknown      Element: 1993-03-02      UTM: Zone-10 N4250133 E644569      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1993-03-02      Precision: NON-SPECIFIC      Section: 08 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 3/5 mile      Elevation: 50 ft  
 Main Source: SUGNET & ASSOC. 1993 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: VICINITY OF GRANT LINE ROAD. ABOUT 1.5 MILES SE OF ELK GROVE.  
 —Comments—  
 Distribution: SEASONAL WETLANDS LOCATED SOMEWHERE IN SECTION 8.  
 Ecological: NATURAL SEASONAL WETLANDS.  
 Threat:  
 General: B. LYNCHI OBSERVED IN 1 OF 8 FEATURES INSPECTED ON 2/2/93 AND 3/2/93. SUGNET RECORD #'S 46 & 47.  
 Owner/Manager: UNKNOWN

Occurrence No. 162      Map Index:33686      —Dates Last Seen—      Lat/Long: 38°29'21" / 121°20'35"      Township: 07N  
 Occ Rank: Unknown      Element: 1993-02-16      UTM: Zone-10 N4261171 E644513      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1993-02-16      Precision: NON-SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 1,920.3 ac      Elevation: 60 ft  
 Main Source: SUGNET & ASSOC. 1993 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: NORTH OF GERBER ROAD, SOUTH OF FLORIN ROAD, EAST OF ELK GROVE-FLORIN ROAD. ABOUT 5 MILES NORTH OF ELK GROVE.  
 —Comments—  
 Distribution: SEASONAL WETLANDS, VERNAL POOLS, AND ROADSIDE DITCHES SOMEWHERE IN SECTIONS 4, 5 & 6.  
 Ecological: NATURAL SEASONAL WETLANDS, NATURAL VERNAL POOLS, MANMADE ROADSIDE DITCHES AND MANMADE "OTHER".  
 Threat:  
 General: B. LYNCHI OBSERVED IN 1 OF 3 SEASONAL WETLANDS & 1 OF 48 VERNAL POOLS INSPECTED IN SECTION 4. THEY WERE ALSO OBSERVED IN AN UNDESCRIBED MADMADE FEATURE IN SECTION 5. SUGNET RECORD #'S 58, 59 & 60.  
 Owner/Manager: UNKNOWN

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|  |                       |                              |                       |
|--|-----------------------|------------------------------|-----------------------|
| <i>Branchinecta lynchi</i> (cont.)<br>vernal pool fairy shrimp<br>Element Code: ICBRA03030 | -----List Status----- | -----NDDB Element Ranks----- | -----Other Lists----- |
|  | Federal: Threatened   | Global: G2G3                 | CDFG Status:          |
|  | State: None           | State: S2S3                  |                       |

Occurrence No. 163      Map Index:33687      ---Dates Last Seen---      Lat/Long: 38°27'11" / 121°20'01"      Township: 07N  
 Occ Rank: Unknown      Element: 1993-03-02      UTM: Zone-10 N4257183 E645412      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1993-03-02      Precision: NON-SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 2,537.5 ac      Elevation: 65 ft  
 Main Source: SUGNET & ASSOC. 1993 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: EAST OF ELK GROVE-FLORIN RD, WEST OF EXCELSIOR RD, & NORTH OF SHELDON RD. NNE OF ELK GROVE.  
 Comments:  
 Distribution: VERNAL POOLS LOCATED SOMEWHERE IN SECTIONS 15, 16, 17 & 19.  
 Ecological: NATURAL VERNAL POOLS.  
 Threat:  
 General: B. LYNCHI OBSERVED IN 4 OF 49 FEATURES INSPECTED IN SEC 15 ON 3/2/93, IN 1 FEATURE INSPECTED IN SEC 17 ON 1/23/93, AND IN 1 FEATURE INSPECTED IN SEC 19 ON 2/6/93. SUGNET RECORD #'S 61, 62 & 64.  
 Owner/Manager: UNKNOWN

Occurrence No. 164      Map Index:33688      ---Dates Last Seen---      Lat/Long: 38°24'59" / 121°20'34"      Township: 07N  
 Occ Rank: Unknown      Element: 1993-03-02      UTM: Zone-10 N4253115 E644670      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1993-03-02      Precision: NON-SPECIFIC      Section: 32 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 3/5 mile      Elevation: 50 ft  
 Main Source: SUGNET & ASSOC. 1993 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: NORTH OF ELK GROVE BLVD, SOUTH OF BOND RD, EAST OF WATERMAN RD, & WEST OF BRADSHAW RD. EAST OF ELK GROVE.  
 Comments:  
 Distribution: VERNAL POOLS AND SEASONAL WETLANDS LOCATED SOMEWHERE IN SECTION 32.  
 Ecological: NATURAL VERNAL POOLS AND NATURAL SEASONAL WETLANDS.  
 Threat:  
 General: B. LYNCHI OBSERVED IN 19 OF 24 INSPECTED VERNAL POOLS AND 2 OF 13 INSPECTED SEASONAL WETLANDS ON 2/2/93, AND IN 1 OF 23 INSPECTED VERNAL POOLS ON 3/2/93. SUGNET RECORD #'S 65, 66, & 67.  
 Owner/Manager: UNKNOWN

Occurrence No. 166      Map Index:36807      ---Dates Last Seen---      Lat/Long: 38°29'07" / 121°16'58"      Township: 07N  
 Occ Rank: Unknown      Element: 1991-04-06      UTM: Zone-10 N4260853 E649773      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1991-04-06      Precision: NON-SPECIFIC      Section: 02 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 158.8 ac      Elevation: 100 ft  
 Main Source: BELK, D. 1991 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: "MULTI-CULTURE PARK" (FORMERLY, FLORIN PARK), SOUTH OF (OLD) MATHER AIR FORCE BASE.  
 Comments:  
 Distribution:  
 Ecological:  
 Threat:  
 General: AN UNKNOWN NUMBER COLLECTED BY CHRIS NAGANO AND JAMIE KING ON 6 APRIL 1991; IDENTIFIED BY DENTON BELK (DB #991).  
 Owner/Manager: UNKNOWN

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*Branchinecta lynchi* (cont.)  
vernal pool fairy shrimp  
Element Code: ICBRA03030

|                       |                              |                       |
|-----------------------|------------------------------|-----------------------|
| -----List Status----- | -----NDDB Element Ranks----- | -----Other Lists----- |
| Federal: Threatened   | Global: G2G3                 | CDFG Status:          |
| State: None           | State: S2S3                  |                       |

Occurrence No. 190      Map Index:36874      ---Dates Last Seen---      Lat/Long: 38°30'14" / 121°15'10"      Township: 08N  
 Occ Rank: Good      Element: 2000-03-15      UTM: Zone-10 N4262974 E652346      Range: 07E  
 Origin: Natural/Native occurrence      Site: 2000-03-15      Precision: NON-SPECIFIC      Section: 31 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 587.8 ac      Elevation: 125 ft  
 Main Source: MUTH, D. 1996 (OBS)  
 Quad Summary: CARMICHAEL (3812153/512D)\*, SLOUGHHOUSE (3812142/495B), ELK GROVE (3812143/496A), BUFFALO CREEK (3812152/511C)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: VICINITY OF THE INTERSECTION OF EAGLES NEST ROAD AND HWY 16 (JACKSON ROAD), SOUTH OF MATHER AIR FORCE BASE.  
 -----Comments-----  
 Distribution:  
 Ecological: HABITAT CONSISTS OF NORTHERN HARDPAN VERNAL POOLS, AS WELL AS SCRAPES, SWALES, DEPRESSIONS, AND STOCK PONDS;  
 SURROUNDED BY NON-NATIVE GRASSLAND.  
 Threat: THREATENED BY GRAVEL MINING.  
 General: NUMEROUS FAIRY SHRIMP FOUND AT THIS SITE DURING SPRING 1996 AND 1997 SURVEYS. OBSERVED 10+ ADULTS MARCH 2000,  
 IN WESTERN PORTION OF POLYGON.  
 Owner/Manager: PVT

Occurrence No. 228      Map Index:33693      ---Dates Last Seen---      Lat/Long: 38°29'58" / 121°17'00"      Township: 08N  
 Occ Rank: Excellent      Element: 1998-01-28      UTM: Zone-10 N4262430 E649680      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1998-01-28      Precision: SPECIFIC      Section: 35 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 161.9 ac      Elevation: 115 ft  
 Main Source: WHITNEY, K. 1998 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)\*, CARMICHAEL (3812153/512D)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: ARROYO SECO SITE, 0.8 MILE ENE JCT OF EXCELSIOR RD & FLORIN RD, 1.5 MILES WSW OF JCT EAGLES NEST RD & JACKSON  
 RD.  
 -----Comments-----  
 Distribution: ARROYO SECO MITIGATION BANK SITE (PREVIOUSLY DESCRIBED AS: VERNAL POOLS SOMEWHERE IN SECTION 35).  
 Ecological: NATURAL VERNAL POOLS IN A VERNAL POOL COMMUNITY  
 Threat:  
 General: 100'S OBSERVED IN MITIGATION BANK, SURVEYED 28 JAN 1998.  
 Owner/Manager: PVT

Occurrence No. 343      Map Index:46127      ---Dates Last Seen---      Lat/Long: 38°27'48" / 121°20'10"      Township: 07N  
 Occ Rank: Excellent      Element: 2002-01-21      UTM: Zone-10 N4258335 E645154      Range: 06E  
 Origin: Natural/Native occurrence      Site: 2002-01-21      Precision: NON-SPECIFIC      Section: 17 Qtr NE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 93.8 ac      Elevation: 65 ft  
 Main Source: ECORP CONSULTING, INC. 2002 (LIT)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: CHURCHILL DOWNS WETLAND PRESERVE; 4 MILES NNE OF ELK GROVE.  
 -----Comments-----  
 Distribution: 1 MILE SOUTH GERBER RD, 0.5 MILE NORTH CALVINE RD & EXTENDING FROM 0.4 MILE WEST BRADSHAW RD. INDIVIDUALS  
 DETECTED IN POOL NUMBERS 12 AND 15 (NE 1/4 OF THE NE 1/4, SECTION 17).  
 Ecological: HABITAT CONSISTS OF A VERNAL POOL IN A GRASSLAND. LINDERIELLA OCCIDENTALIS IN AND LEPIDURUS PACKARDI ALSO IN  
 VICINITY.  
 Threat:  
 General: 10'S OBSERVED IN POOL 12 AND 1000'S OBSERVED IN POOL 15 ON 21 JAN 2002.  
 Owner/Manager: PVT

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*Branchinecta lynchi* (cont.)  
vernal pool fairy shrimp  
Element Code: ICBRA03030

| List Status                        | NDDB Element Ranks          | Other Lists  |
|------------------------------------|-----------------------------|--------------|
| Federal: Threatened<br>State: None | Global: G2G3<br>State: S2S3 | CDFG Status: |

Occurrence No. 344      Map Index:48534      —Dates Last Seen—      Lat/Long: 38°28'23" / 121°21'32"      Township: 07N  
Occ Rank: Excellent      Element: 2002-01-21      UTM: Zone-10 N4259383 E643155      Range: 06E  
Origin: Natural/Native occurrence      Site: 2002-01-21      Precision: NON-SPECIFIC      Section: 07 Qtr SE  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 55.4 ac      Elevation: 50 ft  
Main Source: ECORP CONSULTING, INC. 2002 (LIT)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: CHURCHILL DOWNS WETLAND PRESERVE; 4.5 MILES NORTH OF ELK GROVE.  
—Comments—  
Distribution: 0.5 MILE SOUTH OF GERBER RD, 1.2 MILES NORTH OF CALVINE AND 0.5 MILE EAST OF ELK GROVE FLORIN RD. INDIVIDUALS  
OBSERVED IN POOL NUMBER 9 (NE 1/4 OF THE SE 1/4, SECTION 7).  
Ecological: HABITAT CONSISTS OF A VERNAL POOL WITHIN A GRASSLAND. LINDERIELLA OCCIDENTALIS AND LEPIDURUS PACKARDI ALSO IN  
VICINITY.  
Threat:  
General: 10'S OBSERVED IN POOL NUMBER 9 ON 21 JAN 2002.  
Owner/Manager: PVT

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*Branchinecta mesovallensis*  
midvalley fairy shrimp  
Element Code: ICBRA03150

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Species of Concern    Global: G2    CDFG Status:  
State: None    State: S2

-----Habitat Associations-----

General: VERNAL POOLS IN THE CENTRAL VALLEY  
Micro: None for this Element

Occurrence No. 29    Map Index: 48318    -----Dates Last Seen-----    Lat/Long: 38°27'12" / 121°20'04"    Township: 07N  
Occ Rank: Unknown    Element: 1991-19-03    UTM: Zone-10 N4257241 E645317    Range: 06E  
Origin: Natural/Native occurrence    Site: 1991-19-03    Precision: NON-SPECIFIC    Section: 17 Qtr SE  
Presence: Presumed Extant    Symbol Type: POINT    Meridian: M  
Trend: Unknown    Radius: 1/10 mile    Elevation: 60 ft  
Main Source: BELK, D. & M. FUGATE 2002 (LIT)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: BELMONT ESTATES (OGDEN RANCH) NORTHWEST OF THE INTERSECTION OF BRADSHAW ROAD AND CALVINE ROAD.

-----Comments-----

Distribution:  
Ecological: VERNAL POOLS.  
Threat:  
General: DENTON BELK COLLECTION # 1014 COLLECTED 19 MAR 1991 BY BRENT HELM. UNKNOWN NUMBER OF INDIVIDUALS OBSERVED/COLLECTED AT SITE #003 (D. ROGERS) ON AN UNKNOWN DATE; ROGERS' LOCATION INFORMATION OBTAINED FROM VARIOUS SOURCES.  
Owner/Manager: UNKNOWN

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*Linderiella occidentalis*  
California linderiella  
Element Code: ICBRA06010

|                             |             |                    |             |              |  |
|-----------------------------|-------------|--------------------|-------------|--------------|--|
| List Status                 |             | NDDB Element Ranks |             | Other Lists  |  |
| Federal: Species of Concern | State: None | Global: G2G3       | State: S2S3 | CDFG Status: |  |

Habitat Associations

General: SEASONAL POOLS IN UNPLOWED GRASSLANDS WITH OLD ALLUVIAL SOILS UNDERLAIN BY HARDPAN OR IN SANDSTONE DEPRESSIONS.  
Micro: WATER IN THE POOLS HAS VERY LOW ALKALINITY, CONDUCTIVITY, AND TDS.

Occurrence No. 131      Map Index: 34800      —Dates Last Seen—      Lat/Long: 38°29'46" / 121°21'48"      Township: 07N  
 Occ Rank: Unknown      Element: 1992-04-02      UTM: Zone-10 N4261928 E642726      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1992-04-02      Precision: SPECIFIC      Section: 06 Qtr NW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 48 ft  
 Main Source: KOFORD, E. 1992 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: 0.1 MILES WEST OF HEDGE AVENUE AND SOUTH OF FLORIN ROAD IN A 35 FOOT LONG PUDDLE.  
 —Comments—  
 Distribution:  
 Ecological: 35 FOOT LONG PUDDLE.  
 Threat:  
 General: KOFORD OBSERVED LINDERIELLA IN PUDDLE DURING SURVEY IN SPRING OF 1992.  
 Owner/Manager: UNKNOWN

Occurrence No. 132      Map Index: 34801      —Dates Last Seen—      Lat/Long: 38°29'47" / 121°20'02"      Township: 07N  
 Occ Rank: Unknown      Element: 1992-04-02      UTM: Zone-10 N4262000 E645301      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1992-04-02      Precision: NON-SPECIFIC      Section: 05 Qtr NE  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 4/5 mile      Elevation: 64 ft  
 Main Source: KOFORD, E. 1992 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)\*, CARMICHAEL (3812153/512D)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: ROADSIDE DITCHES NEAR FLORIN ROAD AND BRADSHAW ROAD, BESIDE FLORIN ROAD.  
 —Comments—  
 Distribution: TWO SITES, 0.6 MILES APART.  
 Ecological: ROADSIDE DITCHES.  
 Threat:  
 General: KOFORD OBSERVED LINDERIELLA IN DITCHES DURING SURVEY IN SPRING OF 1992.  
 Owner/Manager: UNKNOWN

Occurrence No. 182      Map Index: 42726      —Dates Last Seen—      Lat/Long: 38°28'37" / 121°20'22"      Township: 07N  
 Occ Rank: Unknown      Element: 1993-03-31      UTM: Zone-10 N4259852 E644833      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1993-03-31      Precision: NON-SPECIFIC      Section: 08 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 156.9 ac      Elevation: 60 ft  
 Main Source: KIRKPATRICK, G. 1993 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: ALONG CENTRAL CALIFORNIA TRACTION RAILROAD, NORTH OF CALVINE RD, SOUTH OF FLORIN RD, & WEST OF VINEYARD RD.  
 —Comments—  
 Distribution: LONG NARROW RAIN FILLED DEPRESSIONS IN RAILROAD RIGHT-OF-WAY. LAND USE IS GRAZING AND RAILROAD RIGHT-OF-WAY.  
 Ecological: UNDULATING TOPOGRAPHY, RED CLAY SOILS. POOLS 5 X 10 TO 15 METERS  
 Threat: RAILROAD MAINTENANCE, CONVERSION TO RESIDENTIAL, INTENSIVE AGRICULTURE, GRAZING, DUMPING.  
 General: NUMEROUS TO FEW ADULTS OBSERVED, HIGHER NUMBERS IN THE MIDDLE SECTION OF MAPPED AREA. ALSO OBSERVED LEPIDURUS SP, CLAM SHRIMP, RED COPEPODS.  
 Owner/Manager: PVT

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*Linderiella occidentalis* (cont.)  
California *linderiella*  
Element Code: ICBRA06010

-----List Status----- NDDB Element Ranks-----Other Lists-----  
Federal: Species of Concern Global: G2G3 CDFG Status:  
State: None State: S2S3

Occurrence No. 183 Map Index: 42727 ---Dates Last Seen--- Lat/Long: 38°29'54" / 121°21'32" Township: 08N  
Occ Rank: Unknown Element: 1993-04-01 UTM: Zone-10 N4262184 E643088 Range: 06E  
Origin: Natural/Native occurrence Site: 1993-04-01 Precision: NON-SPECIFIC Section: 31 Qtr SE  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 27.2 ac Elevation: 40 ft  
Main Source: KIRKPATRICK, G. 1993 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)\*, CARMICHAEL (3812153/512D)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: ALONG CENTRAL CALIFORNIA TRACTION RAILROAD, BETWEEN HEDGE AVE AND FLORIN ROAD, SACRAMENTO.  
-----Comments-----  
Distribution: NARROW RAIN-FILLED DEPRESSION IN RIGHT-OF-WAY ~ 5 METERS IN WIDTH AND 15 METERS IN LENGTH. UNDULATING  
TOPOGRAPHY ON RED CLAY SOILS.  
Ecological: CLEAR, CLAY BOTTOMED POOL WITH SOME EMERGENT VEGETATION, POOL IS ADJACENT TO SAND LOADER USED FOR RAIL BED  
MAINTENANCE.  
Threat: RAILROAD MAINTENANCE AND GRADING OF RAILROAD.  
General: MODERATE DENSITY OF REPRODUCTIVE ADULTS OBSERVED; ALSO OBSERVED WESTERN TOAD TADPOLES, 1993.  
Owner/Manager: PVT

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|  |                       |                             |                       |
|--|-----------------------|-----------------------------|-----------------------|
| <i>Lepidurus packardii</i><br>vernal pool tadpole shrimp<br>Element Code: ICBRA10010 | -----List Status----- | -----NDB Element Ranks----- | -----Other Lists----- |
|  | Federal: Endangered   | Global: G2G3                | CDFG Status:          |
|  | State: None           | State: S2S3                 |                       |

-----Habitat Associations-----  
 General: INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.  
 Micro: POOLS COMMONLY FOUND IN GRASS BOTTOMED SWALES OF UNPLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED & HIGHLY TURBID.

Occurrence No. 71      Map Index:34802      ---Dates Last Seen---      Lat/Long: 38°29'53" / 121°17'38"      Township: 08N  
 Occ Rank: Unknown      Element: 1992-04-02      UTM: Zone-10 N4262263 E648784      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1992-04-02      Precision: NON-SPECIFIC      Section: 35 Qtr SW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 1/5 mile      Elevation: 110 ft  
 Main Source: KOFORD, E. 1992 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)\*, CARMICHAEL (3812153/512D)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: NEAR NORTHEAST CORNER OF EXCELSIOR ROAD AND FLORIN ROAD.  
 -----Comments-----  
 Distribution:  
 Ecological: VERNAL POOL.  
 Threat:  
 General: KOFORD OBSERVED TADPOLE SHRIMP DURING SURVEY IN SPRING OF 1992.  
 Owner/Manager: UNKNOWN

Occurrence No. 85      Map Index:36381      ---Dates Last Seen---      Lat/Long: 38°27'54" / 121°19'24"      Township: 07N  
 Occ Rank: Fair      Element: 1997-02-12      UTM: Zone-10 N4258522 E646281      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1997-02-12      Precision: SPECIFIC      Section: 16 Qtr NE  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 65 ft  
 Main Source: WOLFF, D. 1997 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: SOUTH OF LAGUNA CREEK, 0.5 MILE WEST OF VINEYARD BLVD, 4 MILES NE OF ELK GROVE.  
 -----Comments-----  
 Distribution: SITE IS LOCATED NORTH OF A LARGE SUBDIVISION BETWEEN VINEYARD LANE AND CENTRAL CALIFORNIA TRACTION.  
 Ecological: HABITAT CONSISTS OF A GRAZED SEASONAL WETLAND FORMED BY EARTH EXCAVATION, SCRAPING 6 YEARS AGO. SOME VERNAL POOL PLANTS PRESENT, BUT MANY WEEDY, NON-NATIVES AS WELL; DOMINANTS: PLAGIOBOTHRY'S STIPATATUS, ELEOCHARIS MACROSTACHYA.  
 Threat:  
 General: 7 ADULTS OBSERVED (6 DEAD, 1 ALIVE) ON 12 FEB 1997.  
 Owner/Manager: SAC COUNTY-PARKS & REC

Occurrence No. 86      Map Index:30622      ---Dates Last Seen---      Lat/Long: 38°23'23" / 121°20'41"      Township: 06N  
 Occ Rank: Unknown      Element: 1993-03-12      UTM: Zone-10 N4250133 E644569      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1993-03-12      Precision: NON-SPECIFIC      Section: 08 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 3/5 mile      Elevation: 50 ft  
 Main Source: SUGNET & ASSOC. 1993 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: VICINITY OF GRANT LINE ROAD. ABOUT 1.5 MILES SE OF ELK GROVE.  
 -----Comments-----  
 Distribution: ROADSIDE DITCH LOCATED SOMEWHERE IN SECTION 8.  
 Ecological: MANMADE ROADSIDE DITCH.  
 Threat:  
 General: LEPIDURUS PACKARDI OBSERVED IN THE 1 FEATURE INSPECTED. SUGNET RECORD #129.  
 Owner/Manager: UNKNOWN



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|  |                       |                              |                       |
|--|-----------------------|------------------------------|-----------------------|
| <i>Lepidurus packardii</i> (cont.)<br>vernal pool tadpole shrimp<br>Element Code: ICBRA10010 | -----List Status----- | -----NDDB Element Ranks----- | -----Other Lists----- |
|  | Federal: Endangered   | Global: G2G3                 | CDFG Status:          |
|  | State: None           | State: S2S3                  |                       |

Occurrence No. 90      Map Index:33686      ---Dates Last Seen---      Lat/Long: 38°29'21" / 121°20'35"      Township: 07N  
 Occ Rank: Unknown      Element: 1993-02-16      UTM: Zone-10 N4261171 E644513      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1993-02-16      Precision: NON-SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 1,920.3 ac      Elevation: 60 ft  
 Main Source: SUGNET & ASSOC. 1993 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: NORTH OF GERBER ROAD, SOUTH OF FLORIN ROAD, EAST OF ELK GROVE-FLORIN ROAD. ABOUT 5 MILES NORTH OF ELK GROVE.  
 Comments:  
 Distribution: SEASONAL WETLANDS, VERNAL POOLS AND ROADSIDE DITCHES SOMEWHERE IN SECTIONS 4, 5 & 6.  
 Ecological: NATURAL SEASONAL WETLANDS, NATURAL VERNAL POOLS AND MANMADE ROADSIDE DITCHES.  
 Threat:  
 General: LEPIDURUS PACKARDI OBSERVED IN 1 OF 3 SEASONAL WETLANDS & 4 OF 48 VERNAL POOLS INSPECTED IN SEC 4. ALSO IN 3 OF 21 SEASONAL WETLANDS INSPECTED IN SEC 5 & 1 OF 3 ROADSIDE DITCHES INSPECTED IN SEC 6. SUGNET RECORD #'S 136, 137, 138 & 139.  
 Owner/Manager: UNKNOWN

Occurrence No. 91      Map Index:33687      ---Dates Last Seen---      Lat/Long: 38°27'11" / 121°20'01"      Township: 07N  
 Occ Rank: Unknown      Element: 1997-02-12      UTM: Zone-10 N4257183 E645412      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1997-02-12      Precision: NON-SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 2,537.5 ac      Elevation: 65 ft  
 Main Source: SUGNET & ASSOC. 1993 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: EAST OF ELK GROVE-FLORIN RD, WEST OF EXCELSIOR RD, NORTH OF SHELDON RD. NNE OF ELK GROVE.  
 Comments:  
 Distribution: VERNAL POOLS LOCATED SOMEWHERE IN SECTIONS 15, 16, 17 & 19. 1997 SURVEY BY D. WOLFF WAS NEAR CENTER OF SECTION 16 BORDERED BY RR TRACKS.  
 Ecological: NATURAL VERNAL POOLS. 1997 IN NORTHERN HARDPAN VERNAL POOLS COMMUNITY.  
 Threat: DEVELOPEMENT, CATTLE GRAZING  
 General: LEPIDURUS PACKARDI OBSERVED IN 29 OF 49 FEATURES INSPECTED IN SEC 15 ON 3/2/93, AND IN 1 FEATURE INSPECTED IN SECTION 16 ON 1/25/93. SUGNET RECORD #'S 140 & 141. 7 OBSERVED IN 1997.  
 Owner/Manager: UNKNOWN

Occurrence No. 94      Map Index:33693      ---Dates Last Seen---      Lat/Long: 38°29'58" / 121°17'00"      Township: 08N  
 Occ Rank: Excellent      Element: 1998-01-28      UTM: Zone-10 N4262430 E649680      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1998-01-28      Precision: SPECIFIC      Section: 35 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 161.9 ac      Elevation: 115 ft  
 Main Source: WHITNEY, K. 1998 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)\*, CARMICHAEL (3812153/512D)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: ARROYO SECO SITE, 0.8 MILE ENE JCT OF EXCELSIOR RD & FLORIN RD, 1.5 MILES WSW OF JCT EAGLES NEST RD & JACKSON RD.  
 Comments:  
 Distribution: ARROYO SECO MITIGATION BANK SITE (PREVIOUSLY DESCRIBED AS: VERNAL POOLS SOMEWHERE IN SECTION 35).  
 Ecological: NATURAL VERNAL POOLS IN A VERNAL POOL COMMUNITY  
 Threat:  
 General: 2 APR 1992: UNKNOWN NUMBER OF LEPIDURUS PACKARDI OBSERVED IN A VERNAL POOL, SUGNET RECORD #150. 100'S OBSERVED IN MITIGATION BANK, SURVEYED 28 JAN 1998.  
 Owner/Manager: PVT

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|  |                       |                              |                       |
|--|-----------------------|------------------------------|-----------------------|
| <i>Lepidurus packardii</i> (cont.)<br>vernal pool tadpole shrimp<br>Element Code: ICBRA10010 | -----List Status----- | -----NDDB Element Ranks----- | -----Other Lists----- |
|  | Federal: Endangered   | Global: G2G3                 | CDFG Status:          |
|  | State: None           | State: S2S3                  |                       |

Occurrence No. 113      Map Index:36874      ---Dates Last Seen---      Lat/Long: 38°30'14" / 121°15'10"      Township: 08N  
 Occ Rank: Good      Element: 2000-03-15      UTM: Zone-10 N4262974 E652346      Range: 07E  
 Origin: Natural/Native occurrence      Site: 2000-03-15      Precision: NON-SPECIFIC      Section: 31 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 587.8 ac      Elevation: 125 ft  
 Main Source: MUTH, D. 1996 (OBS)  
 Quad Summary: CARMICHAEL (3812153/512D)\*, SLOUGHHOUSE (3812142/495B), ELK GROVE (3812143/496A), BUFFALO CREEK (3812152/511C)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: VICINITY OF THE INTERSECTION OF EAGLES NEST ROAD AND HWY 16 (JACKSON ROAD), SOUTH OF MATHER AIR FORCE BASE.  
 -----Comments-----  
 Distribution:  
 Ecological: HABITAT CONSISTS OF NORTHERN HARDPAN VERNAL POOLS, AS WELL AS SCRAPES, SWALES, DEPRESSIONS, AND STOCK PONDS;  
 SURROUNDED BY NON-NATIVE GRASSLAND.  
 Threat: THREATENED BY GRAVEL MINING.  
 General: NUMEROUS FAIRY SHRIMP AND TADPOLE SHRIMP FOUND AT THIS SITE DURING SPRING 1996 SURVEYS. 10 PLUS ADULTS  
 OBSERVED MARCH 2000 IN WESTERN PORTION OF POLYGON.  
 Owner/Manager: PVT

Occurrence No. 165      Map Index:46127      ---Dates Last Seen---      Lat/Long: 38°27'48" / 121°20'10"      Township: 07N  
 Occ Rank: Excellent      Element: 2002-01-21      UTM: Zone-10 N4258335 E645154      Range: 06E  
 Origin: Natural/Native occurrence      Site: 2002-01-21      Precision: NON-SPECIFIC      Section: 17 Qtr NE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 93.8 ac      Elevation: 65 ft  
 Main Source: CAPELL, S. ET AL 2001 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: CHURCHILL DOWNS WETLAND PRESERVE; 4 MILES NNE OF ELK GROVE.  
 -----Comments-----  
 Distribution:  
 Ecological: 1 MILE SOUTH GERBER RD, 0.5 MILE NORTH CALVINE RD & EXTENDING FROM 0.4 MILE WEST BRADSHAW RD. 2001 SURVEY:  
 SE 1/4 OF NE 1/4, SECTION 17. 2002 SURVEY: INDIVIDUALS OBSERVED IN POOL NUMBER CVP1 (NW 1/4 OF THE NE 1/4,  
 SECTION 17).  
 Ecological: SITE IS VERNAL POOL PRESERVE - GRASSLAND. OTHER SPECIES: LINDERIELLA OCCIDENTALIS AND BRANCHINECTA LYNCHI  
 ALSO IN VICINITY. SURROUNDING LAND CONSISTS OF HOMES.  
 Threat:  
 General: 16 MAR 2001: 100'S OF ADULTS OBSERVED. 5 APR 2001: 10'S OF EXOSKELETONS OBSERVED IN POOL - NO LIVE SHRIMP  
 FOUND. 100'S OBS IN 1 POOL ON 21 JAN 2002.  
 Owner/Manager: ELLIOT HOMES

Occurrence No. 173      Map Index:48534      ---Dates Last Seen---      Lat/Long: 38°28'23" / 121°21'32"      Township: 07N  
 Occ Rank: Excellent      Element: 2002-01-21      UTM: Zone-10 N4259383 E643155      Range: 06E  
 Origin: Natural/Native occurrence      Site: 2002-01-21      Precision: NON-SPECIFIC      Section: 07 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 55.4 ac      Elevation: 50 ft  
 Main Source: ECORP CONSULTING, INC. 2002 (LIT)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: CHURCHILL DOWNS WETLAND PRESERVE; 4.5 MILES NORTH OF ELK GROVE.  
 -----Comments-----  
 Distribution:  
 Ecological: 0.5 MILE SOUTH OF GERBER RD, 1.2 MILES NORTH OF CALVINE AND 0.5 MILE EAST OF FLORIN RD. INDIVIDUALS OBSERVED  
 IN POOL NUMBERS 8 AND 34 (NE 1/4 OF THE SE 1/4, SECTION 7).  
 Ecological: HABITAT CONSISTS OF A VERNAL POOL WITHIN A GRASSLAND. LINDERIELLA OCCIDENTALIS AND BRANCHINECT LYNCHI ALSO IN  
 VICINITY.  
 Threat:  
 General: 1000'S OBSERVED IN POOL 8 AND 10'S OBSERVED IN POOL 34 ON 21 JAN 2002  
 Owner/Manager: PVT

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*Desmocerus californicus dimorphus*  
valley elderberry longhorn beetle  
Element Code: IICOL48011

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Threatened Global: G3T2 CDFG Status:  
State: None State: S2

-----Habitat Associations-----

General: OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA, IN ASSOCIATION WITH BLUE ELDERBERRY (SAMBUCUS MEXICANA).  
Micro: PREFERS TO LAY EGGS IN ELDERBERRIES 2-8 INCHES IN DIAMETER; SOME PREFERENCE SHOWN FOR "STRESSED" ELDERBERRIES.

Occurrence No. 163 Map Index:39509 ---Dates Last Seen--- Lat/Long: 38°25'01" / 121°16'17" Township: 99X  
Occ Rank: Unknown Element: 1984-XX-XX UTM: Zone-10 N4253289 E650912 Range: 99X  
Origin: Natural/Native occurrence Site: 1984-XX-XX Precision: NON-SPECIFIC Section: XX Qtr XX  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: X  
Trend: Unknown Area: 403.6 ac Elevation: 60 ft  
Main Source: ARNOLD, R. 1984 (LIT)  
Quad Summary: ELK GROVE (3812143/496A)\*, SLOUGHHOUSE (3812142/495B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: ALONG COSUMNES RIVER, NEAR WILTON.  
-----Comments-----  
Distribution: STREAM MAPPED, FOR ~4 RIVER MILES AROUND WILTON.  
Ecological:  
Threat:  
General: EXIT HOLES OBSERVED DURING MAY AND JUNE SURVEYS, 1984, NO ADULTS OBSERVED.  
Owner/Manager: UNKNOWN

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|   |                       |                              |                       |
|---|-----------------------|------------------------------|-----------------------|
| <i>Downingia pusilla</i><br>dwarf downingia<br>Element Code: PDCAM060C0 | -----List Status----- | -----NDDB Element Ranks----- | -----Other Lists----- |
|   | Federal: None         | Global: G3                   | CNPS List: 2          |
|   | State: None           | State: S3.1                  | R-E-D Code: 1-2-1     |

Habitat Associations

General: VALLEY AND FOOTHILL GRASSLAND (MESIC SITES), VERNAL POOLS.  
Micro: VERNAL LAKE AND POOL MARGINS WITH A VARIETY OF ASSOCIATES. IN SEVERAL TYPES OF VERNAL POOLS. 1-485M.

Occurrence No. 54      Map Index:26056      ---Dates Last Seen---      Lat/Long: 38°25'59" / 121°21'01"      Township: 07N  
 Occ Rank: Fair      Element: 1991-04-26      UTM: Zone-10 N4254958 E643984      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1991-04-26      Precision: SPECIFIC      Section: 29 Qtr NW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 55 ft  
 Main Source: WITHAM, C. 1991 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: SOUTHEAST CORNER OF SHELDON AND WATERMAN ROADS, ELK GROVE.  
 Comments:  
 Distribution: MAPPED BETWEEN LAGUNA CREEK AND WATERMAN ROAD IN THE SW CORNER OF DAIRY PASTURE. WITHIN THE SW 1/4 OF THE NW 1/4 OF SECTION 29.  
 Ecological: VERNAL POOL DOMINATED BY ALLOCARYA STIPITATA MICRANTHA, RANUNCULUS BONARIENSIS TRISEPALUS, AND ERYNGIUM VASEYI VALLICOLA. LEGENERE LIMOSA GROWING IN NEARBY POOL AND SEASONAL WETLAND.  
 Threat: MOST POOLS HEAVILY DAMAGED BY EXHAUSTIVE DAIRY CATTLE GRAZING.  
 General: ABOUT 200 PLANTS OBSERVED IN 1991.  
 Owner/Manager: PVT

Occurrence No. 55      Map Index:26057      ---Dates Last Seen---      Lat/Long: 38°25'38" / 121°21'11"      Township: 07N  
 Occ Rank: Good      Element: 1991-04-XX      UTM: Zone-10 N4254295 E643764      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1991-04-XX      Precision: SPECIFIC      Section: 30 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 12.9 ac      Elevation: 60 ft  
 Main Source: DAINS, V. 1991 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: NORTHWEST CORNER OF BOND ROAD AND WATERMAN ROAD, ELK GROVE.  
 Comments:  
 Distribution: TWO CONCENTRATIONS OF PLANTS MAPPED; ONE ALONG EAST SIDE OF WATERMAN ABOUT 0.2 MILE NORTH OF BOND. THE OTHER IS ABOUT 0.35 MILE WEST OF WATERMAN AND 0.1 MILE NORTH OF BOND.  
 Ecological: 6 POPULATIONS IN NATURAL POOLS; 2 POPULATIONS IN SCRAPED DEPRESSIONS. NATURAL POOLS HAVE A WELL DEVELOPED NATIVE FLORA. LEGENERE LIMOSA CO-OCCURS IN ONE POOL.  
 Threat: CURRENT USE IS GRAZING; DEVELOPMENT PLAN IS BEING PREPARED.  
 General: 300 PLANTS OBSERVED IN 1991. QUALITY OF NATURAL POOLS IS EXCELLENT, QUALITY OF SCRAPED DEPRESSIONS IS FAIR.  
 Owner/Manager: PVT

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|  |   |   |   |
|--|---|---|---|
| <i>Legenere limosa</i><br>legenere<br>Element Code: PDCAM0C010 | -----List Status-----<br>Federal: Species of Concern<br>State: None | -----NDDB Element Ranks-----<br>Global: G2<br>State: S2.2 | -----Other Lists-----<br>CNPS List: 1B<br>R-E-D Code: 2-3-3 |
|--|---|---|---|

-----Habitat Associations-----  
General: VERNAL POOLS. MANY HISTORICAL OCCURRENCES ARE EXTIRPATED.  
Micro: IN BEDS OF VERNAL POOLS. 1-880M.

Occurrence No. 27      Map Index:30207      ---Dates Last Seen---      Lat/Long: 38°25'42" / 121°21'37"      Township: 07N  
Occ Rank: Excellent      Element: 1991-04-XX      UTM: Zone-10 N4254407 E643127      Range: 06E  
Origin: Natural/Native occurrence      Site: 1991-04-XX      Precision: SPECIFIC      Section: 30 Qtr E  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 90.7 ac      Elevation: 50 ft  
Main Source: DAINS, V. 1991 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: NORTHWEST CORNER OF BOND ROAD AND WATERMAN ROAD, ELK GROVE.  
-----Comments-----  
Distribution: FIVE SUB-POPULATIONS FOUND IN NATURAL VERNAL POOLS AND FIVE IN DISTURBED/CREATED SEASONAL DEPRESSIONS.  
Ecological: NATURAL AND CREATED VERNAL POOLS/SEASONAL DEPRESSIONS. ASSOCIATES IN NATURAL POOLS INCLUDE ELEOCHARIS  
MACROSTACHYA, LASTHENIA GLABERRIMA, GRATIOLA HETEROSEPALA, AND DOWNINGIA PUSILLA.  
Threat: CATTLE GRAZING, DEVELOPMENT PLANNED FOR THIS SITE.  
General: 1000'S OF PLANTS OBSERVED AT THIS SITE IN 1991. NATURAL POOLS ARE OF EXCELLENT QUALITY; CREATED DEPRESSIONS  
ARE OF FAIR QUALITY. MOST OF THE LEGENERE POPULATIONS WILL BE PRESERVED ALTHOUGH SOME LESSER QUALITY POOLS  
WILL BE DESTROYED.  
Owner/Manager: PVT

Occurrence No. 28      Map Index:30205      ---Dates Last Seen---      Lat/Long: 38°28'58" / 121°16'59"      Township: 07N  
Occ Rank: Excellent      Element: 1988-03-26      UTM: Zone-10 N4260573 E649753      Range: 06E  
Origin: Natural/Native occurrence      Site: 1988-03-26      Precision: SPECIFIC      Section: 02 Qtr SE  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 18.6 ac      Elevation: 90 ft  
Main Source: DAINS, V. 1988 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: SOUTH FLORIN COUNTY PARK, ABOUT 1 MILE SOUTH OF FLORIN ROAD AND 0.7 MILE EAST OF EXCELSIOR ROAD, NORTHEAST OF  
ELK GROVE.  
-----Comments-----  
Distribution: LOCATED NEAR THE SOUTHERN BORDER OF THE PARK (PRE-DEVELOPMENT). FOUR COLONIES MAPPED WITHIN THE S 1/2 OF THE  
SE 1/4 OF SECTION 2.  
Ecological: VERNAL POOLS. ASSOCIATED WITH ELEOCHARIS MACROSTACHYS AND LASTHENIA GLABERRIMA.  
Threat: PARK SLATED FOR DEVELOPMENT (1988).  
General: ABOUT 100 PLANTS OBSERVED WITHIN THE PARK (INCLUDING OCCURRENCE #29). POPULATION MAY BE LOW DUE TO DRY YEAR.  
SITE IS RELATIVELY UNDISTURBED/UNGRAZED. HIGH QUALITY SEASONAL WETLAND.  
Owner/Manager: SAC COUNTY-PARKS & REC

Occurrence No. 29      Map Index:30204      ---Dates Last Seen---      Lat/Long: 38°29'33" / 121°17'02"      Township: 07N  
Occ Rank: Excellent      Element: 1988-03-26      UTM: Zone-10 N4261641 E649674      Range: 06E  
Origin: Natural/Native occurrence      Site: 1988-03-26      Precision: SPECIFIC      Section: 02 Qtr NE  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 9.7 ac      Elevation: 110 ft  
Main Source: DAINS, V. 1988 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: SOUTH FLORIN COUNTY PARK, ABOUT 0.2 MILE SOUTH OF FLORIN ROAD AND 0.7 MILE EAST OF EXCELSIOR RD, NORTHEAST OF  
ELK GROVE.  
-----Comments-----  
Distribution: LOCATED NEAR THE NORTH-CENTRAL PORTION OF THE PARK (PRE-DEVELOPMENT). TWO COLONIES MAPPED ALONG AN EPHEMERAL  
DRAINAGE IN THE W 1/2 OF THE NE 1/4 OF SECTION 2.  
Ecological: VERNAL POOLS. ASSOCIATED WITH ELEOCHARIS MACROSTACHYA AND LASTHENIA GLABERRIMA.  
Threat: PARK SLATED FOR DEVELOPMENT (1988).  
General: ABOUT 100 PLANTS OBSERVED WITHIN THE PARK (INCLUDING OCCURRENCE #28). POPULATION MAY BE LOW DUE TO DRY YEAR.  
ONLY A FEW PLANTS SEEN AT EACH LOCATION. SITE IS RELATIVELY UNDISTURBED/UNGRAZED. THESE ARE HIGH QUALITY  
SEASONAL WETLANDS.  
Owner/Manager: SAC COUNTY-PARKS & REC

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|  |                             |                              |                       |
|--|-----------------------------|------------------------------|-----------------------|
| <i>Legenere limosa</i> (cont.)<br>legenere<br>Element Code: PDCAM0C010 | -----List Status-----       | -----NDDB Element Ranks----- | -----Other Lists----- |
|  | Federal: Species of Concern | Global: G2                   | CNPS List: 1B         |
|  | State: None                 | State: S2.2                  | R-E-D Code: 2-3-3     |

Occurrence No. 30      Map Index: 30206      ---Dates Last Seen---      Lat/Long: 38°25'57" / 121°20'54"      Township: 07N  
 Occ Rank: Fair      Element: 1991-04-26      UTM: Zone-10 N4254884 E644155      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1991-04-26      Precision: SPECIFIC      Section: 29 Qtr NW  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 18.3 ac      Elevation: 50 ft  
 Main Source: WITHAM, C. 1991 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: SOUTHEAST CORNER OF SHELDON ROAD AND WATERMAN ROAD, ELK GROVE.  
 -----Comments-----  
 Distribution: THREE COLONIES MAPPED AS A SINGLE POLYGON WITHIN THE SW 1/4 OF THE NW 1/4 OF SECTION 29.  
 Ecological: LARGE SEASONAL WETLAND AND VERNAL POOL WITHIN A DAIRY PASTURE. DOMINANTS INCLUDE LASTHENIA GLABERRIMA, ALLOCARYA BRACTEATUS, ELEOCHARIS MACROSTACHYA, AND RANUNCULUS BONARIENSIS TRISEPALUS. DOWNINGIA PUSILLA OCCURS IN A NEARBY VERNAL POOL.  
 Threat: HEAVILY DAMAGED BY CATTLE GRAZING; ADJACENT PROPERTY BEING DEVELOPED FOR HOMES.  
 General: MORE THAN 300 PLANTS OBSERVED IN 1991; COLONIES RANGE IN SIZE FROM 5 TO 300 PLANTS.  
 Owner/Manager: PVT

Occurrence No. 60      Map Index: 50727      ---Dates Last Seen---      Lat/Long: 38°28'25" / 121°21'23"      Township: 07N  
 Occ Rank: Excellent      Element: 2002-05-23      UTM: Zone-10 N4259445 E643356      Range: 06E  
 Origin: Natural/Native occurrence      Site: 2002-05-23      Precision: SPECIFIC      Section: 07 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 100 ft  
 Main Source: STARR, S. 2002 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: CHURCHILL DOWNS PRESERVE, 0.9 AIRMI SOUTHWEST OF GERBER ROAD AT THE CENTRAL CALIFORNIA RAILROAD TRACKS, EAST OF FLORIN.  
 -----Comments-----  
 Distribution: MAPPED WITHIN THE NE 1/4 OF THE SE 1/4 OF SECTION 7.  
 Ecological: PLANTS FOUND IN VERNAL POOLS IN ASSOCIATION WITH ELEOCHARIS MACROSTACHYA, LASTHENIA GLABERRIMA, L. FREMONTII, PLAGIOBOTHRYIS SPITATUS, AND DESCHAMPSIA DANTHIOIDES.  
 Threat: NONE NOTED IN 2002.  
 General: THOUSANDS OF PLANTS OBSERVED IN 2002 BY STARR. PLANTS FOUND WITHIN A PRESERVE. SURROUNDED BY RESIDENTIAL DEVELOPMENT AND OPEN PASTURE.  
 Owner/Manager: PVT-ELLIOT CONSERVANCY

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*Gratiola heterosepala*  
Boggs Lake hedge-hyssop  
Element Code: PDSOR060

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Species of Concern Global: G3 CNPS List: 1B  
State: Endangered State: S3.1 R-E-D Code: 1-2-2

-----Habitat Associations-----

General: MARSHES AND SWAMPS (FRESHWATER), VERNAL POOLS.  
Micro: CLAY SOILS; USUALLY IN VERNAL POOLS, SOMETIMES ON LAKE MARGINS. 5-2400M.

Occurrence No. 33 Map Index:23929 ---Dates Last Seen--- Lat/Long: 38°25'55" / 121°21'41" Township: 07N  
Occ Rank: Fair Element: 1991-05-13 UTM: Zone-10 N4254805 E643029 Range: 06E  
Origin: Natural/Native occurrence Site: 1991-05-13 Precision: SPECIFIC Section: 30 Qtr N  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 45 ft  
Main Source: DAINS, V. 1991 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: 0.75 MI NW OF INTERSECTION OF BOND AND WATERMAN RDS.  
-----Comments-----  
Distribution:  
Ecological: ASSOCIATED WITH ERYNGIUM VASEYI, ELEOCHARIS MACROSTACHYA, DOWNINGIA ORNATISSIMA. MOST PLANTS IN NEARLY BARREN PORTIONS OF POOL. ANOTHER RARE PLANT ALSO HERE: LEGENERE LIMOSA.  
Threat:  
General: 20 PLANTS IN 1991. SITE OWNED BY CAMRAY DEVELOPMENT.  
Owner/Manager: PVT

Occurrence No. 34 Map Index:23930 ---Dates Last Seen--- Lat/Long: 38°27'29" / 121°21'08" Township: 07N  
Occ Rank: Good Element: 1991-05-09 UTM: Zone-10 N4257718 E643767 Range: 06E  
Origin: Natural/Native occurrence Site: 1991-05-09 Precision: SPECIFIC Section: 17 Qtr SW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Decreasing Radius: 80 meters Elevation: 75 ft  
Main Source: WITHAM, C. 1991 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: 0.35 MI N OF INTERSECTION OF CALVINE AND WATERMAN ROADS.  
-----Comments-----  
Distribution:  
Ecological: LARGE VERNAL POOL COMPLEX; GROWING IN SPARSELY VEGETATED DEEPER AREAS OF POOLS. ASSOCIATED WITH ELEOCHARIS MACROSTACHYA, ERYNGIUM VASEYI, G. EBRACTEA, ISOETES NUTTALLII, PLAGIOBOTHRYUS BRACTEATUS, LASTHENIA GLABBERIMA, & ELATINE CA.  
Threat: ADJACENT AREAS SLATED FOR DEVELOPMENT, COULD IMPACT POOLS. TWO-THIRDS OF THE POOL COMPLEX HAS BEEN DISKED.  
General: APPROX 200 PLANTS IN 1991.  
Owner/Manager: PVT

Occurrence No. 35 Map Index:23931 ---Dates Last Seen--- Lat/Long: 38°28'05" / 121°21'24" Township: 07N  
Occ Rank: Excellent Element: 1989-04-28 UTM: Zone-10 N4258831 E643356 Range: 06E  
Origin: Natural/Native occurrence Site: 1989-04-28 Precision: NON-SPECIFIC Section: 17 Qtr XX  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 513.0 ac Elevation: 75 ft  
Main Source: WYMER, N. 1989 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: BETWEEN BRADSHAW RD AND ELK GROVE-FLORIN RD, N OF CALVINE RD, S OF GERBER RD.  
-----Comments-----  
Distribution:  
Ecological: 3 POOLS WITHIN A ROLLING GRASSLAND WITH DOWNINGIA BICORNUTA, PLAGIOBOTHRYUS STIPITATUS MICRANTHA, G. EBRACTEATA, ETC.  
Threat: HORSE TRACKS THROUGH 1 POOL, ORV TRACKS ALSO EVIDENT. FUTURE DEVELOPMENT SITE FOR ELLIOT HOMES.  
General: NEED BETTER MAP OF POPULATION; MAP AT CNDDB IS OF PROJECT SITE. SITE OWNED BY ELLIOT HOMES.  
Owner/Manager: PVT

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*Gratiola heterosepala* (cont.)  
Boggs Lake hedge-hyssop  
Element Code: PDSCRDR060

| —List Status—               | NDDB Element Ranks | —Other Lists—     |
|-----------------------------|--------------------|-------------------|
| Federal: Species of Concern | Global: G3         | CNPS List: 1B     |
| State: Endangered           | State: S3.1        | R-E-D Code: 1-2-2 |

|  |                  |                     |                                  |                    |
|--|------------------|---------------------|----------------------------------|--------------------|
| Occurrence No. 81  | Map Index: 39745 | —Dates Last Seen—   | Lat/Long: 38°27'53" / 121°17'37" | Township: 07N      |
| Occ Rank: None   |                  | Element: 1998-06-05 | UTM: Zone-10 N4258577 E648859    | Range: 06E         |
| Origin: Natural/Native occurrence  |                  | Site: 2002-08-30    | Precision: NON-SPECIFIC          | Section: 14 Qtr NW |
| Presence: Extirpated   |                  |                     | Symbol Type: POLYGON             | Meridian: M        |
| Trend: Unknown   |                  |                     | Area: 62.3 ac                    | Elevation: 100 ft  |
| Main Source: ROBISON, R. 1998 (OBS)  |                  |                     |                                  |                    |
| Quad Summary: ELK GROVE (3812143/496A)   |                  |                     |                                  |                    |
| County Summary: SACRAMENTO   |                  |                     |                                  |                    |
| SNA Summary:   |                  |                     |                                  |                    |
| Location: ON EAST SIDE OF EXSELSIOR ROAD, WEST OF DIERKS ROAD. ABOUT 0.7-1.0 MI NORTH OF CALVINE ROAD. DIERKS RANCH. |                  |                     |                                  |                    |

Comments

Distribution: NW1/4 OF NW1/4 OF SECTION 14.

Ecological: IN A VERNAL POOL WITH GRATIOLA EBRACTEATA.

Threat: PREVIOUSLY DISKED AND PARTIALLY LEVELLED. DEVELOPMENT PLANNED FOR THIS SITE.

General: ONLY 4 PLANTS IN 1998, 1 IN FLOWER, 3 IN FRUIT. SITE DEVELOPED PERMIT 2081, SOIL TRANSPLANTED TO LAGUNA CREEK MITIGATION BANK.

Owner/Manager: PVT



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*Sagittaria sanfordii*  
Sanford's arrowhead  
Element Code: PMALI040Q0

| List Status                 | NDDE Element Ranks | Other Lists       |
|-----------------------------|--------------------|-------------------|
| Federal: Species of Concern | Global: G3         | CNPS List: 1B     |
| State: None                 | State: S3.2        | R-E-D Code: 2-2-3 |

Habitat Associations

General: MARSHES AND SWAMPS.

Micro: IN STANDING OR SLOW-MOVING FRESHWATER PONDS, MARSHES, AND DITCHES.. 0-610M.

Occurrence No. 18      Map Index: 24539      —Dates Last Seen—      Lat/Long: 38°27'06" / 121°23'31"      Township: 07N  
Occ Rank: None      Element: 1993-XX-XX      UTM: Zone-10 N4256949 E640312      Range: 05E  
Origin: Natural/Native occurrence      Site: 1993-XX-XX      Precision: NON-SPECIFIC      Section: 13 Qtr SE  
Presence: Possibly Extirpated      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 121.9 ac      Elevation: 40 ft  
Main Source: MILLER, S. & R. LOPEZ 1991 (PERS)  
Quad Summary: FLORIN (3812144/496B)\*, ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: STRAWBERRY CREEK. NORTHWEST AND SOUTH OF CALVINE RD/ELK GROVE-FLORIN RD INTERSECTION, ELK GROVE.  
Comments:  
Distribution: FIVE COLONIES, 1) EXACT LOCATION UNKNOWN "CHANNEL OFF OF STRAWBERRY CREEK" MAPPED NW OF CALVINE/ELK GROVE-FLORIN RD INTERSECTION 2-4) ALONG CREEK WEST OF ELK GROVE-FLORIN RD 5) ALONG ASSESSORS PARCEL #115013014.  
Ecological: NORTHWEST COLONY IS CEMENT LINED CHANNEL. CENTER COLONIES ALONG DRIED CREEK CHANNEL.  
Threat: NW POP IN CANAL WAS TO BE CLEARED OF VEGETATION IN 1991 OR 1992, DEVELOPMENT PROPOSED FOR CENTER POP.  
General: SACRAMENTO CO PUBLIC WORKS DEPT. TO TRANSPLANT COLONY 1 INTO A GIANT GARTER SNAKE SITE TO MITIGATE FOR CANAL CLEARING ACTIVITIES. WESTERN POP REPLANTED AT SITE AFTER STRAWBERRY CR REALIGNMENT. FIELDWORK NEEDED.  
FORMER EO #19 & #20 HERE.  
Owner/Manager: SAC COUNTY PUBLIC WORKS, PVT

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*Orcuttia tenuis*  
slender orcutt grass  
Element Code: PMPOA4G050

| -----List Status----- | NDDB Element Ranks----- | Other Lists-----  |
|-----------------------|-------------------------|-------------------|
| Federal: Threatened   | Global: G3              | CNPS List: 1B     |
| State: Endangered     | State: S3.1             | R-E-D Code: 2-3-3 |

-----Habitat Associations-----

General: VERNAL POOLS.  
Micro: 30-1735M.

Occurrence No. 16      Map Index: 11658      ---Dates Last Seen---      Lat/Long: 38°28'36" / 121°17'29"      Township: 07N  
Occ Rank: Fair      Element: 1987-05-19      UTM: Zone-10 N4259884 E649036      Range: 06E  
Origin: Natural/Native occurrence      Site: 1987-05-19      Precision: SPECIFIC      Section: 11 Qtr NW  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 110 ft  
Main Source: BIOSYSTEMS ANALYSIS 1988 (LIT)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: WEST SIDE OF LAGUNA CREEK, 0.2 MI E OF EXCELSIOR ROAD. 1.6 MI N OF CALVINE ROAD.  
-----Comments-----  
Distribution:  
Ecological: ELONGATE, NARROW VERNAL POOL SURROUNDED BY ANNUAL GRASSLAND. WITH ELEOCHARIS MACROSTACHYA, ALLOCARYA STIPITATA, DOWNINGIA BICORNUTA, NAVARRETIA LEUCOCEPHALA, PSILOCARPHUS BREVISSIMUS, ERYNGIUM VASEYI, ETC.  
Threat: GRAZING DOES NOT SEEM TO BE ADVERSELY IMPACTING PLANTS. INDUSTRIAL PARK HAS BEEN PROPOSED FOR THIS PARCEL.  
General: HOLLAND REPORTED 10,000+ PLANTS IN 1983. ABUNDANT IN 1986 AND 1987.  
Owner/Manager: PVT

## **Appendix R-2**

### **Special-Status Species Assessment – North Vineyard Greens Unit 3**

Special-Status Species Assessment  
For  
**North Vineyard Greens Unit 3**  
Sacramento County, California

March 31, 2004

*Prepared for:*

**North Vineyard Greens General Partnership**



**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS



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- Attachment B – Rarefind 2 CNDDDB Data Report

## **INTRODUCTION**

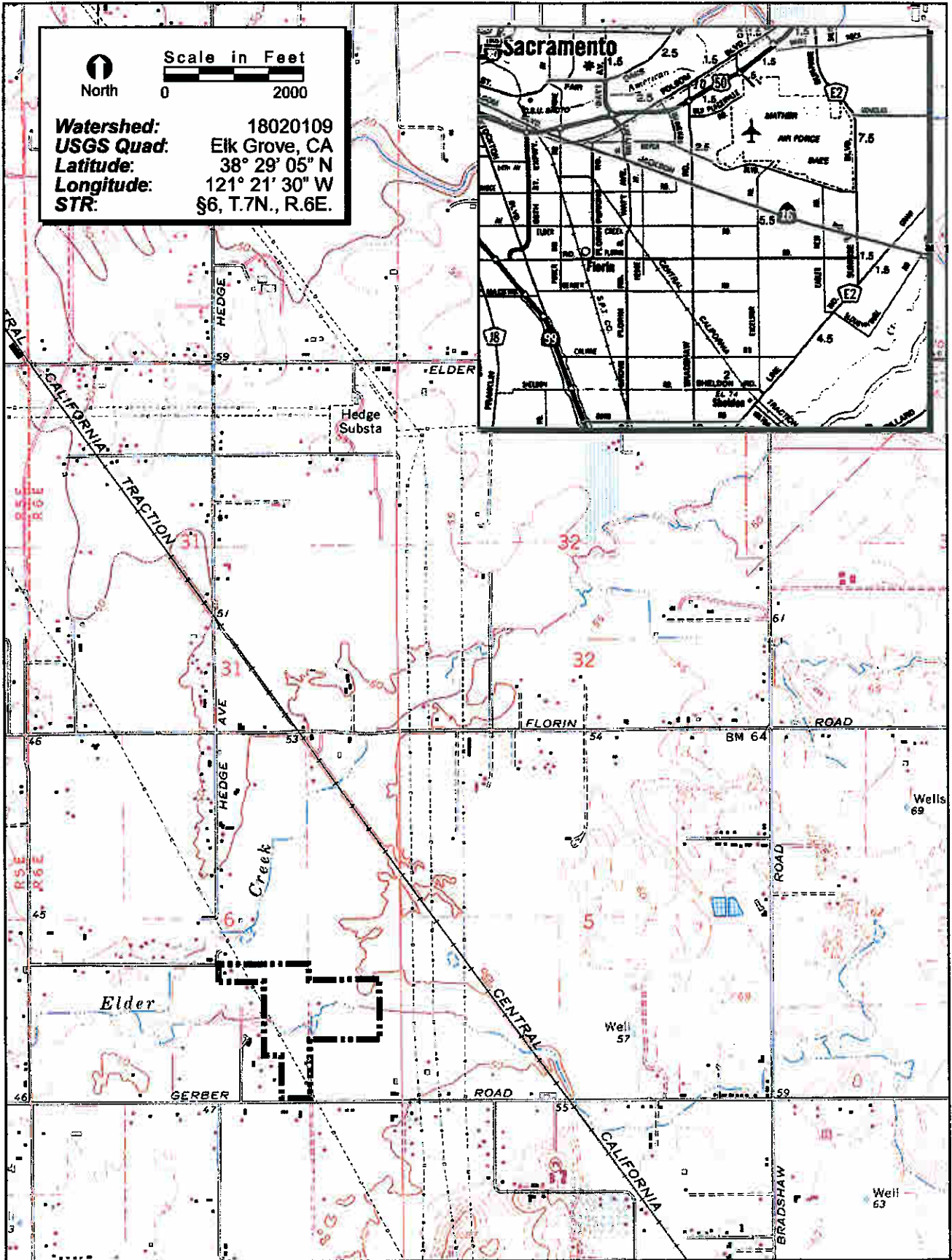
On behalf of the County of Sacramento, ECORP Consulting, Inc. has conducted a special-status species assessment of the 49.4-acre North Vineyard Greens Unit 3 site located in Sacramento County, California.

The North Vineyard Greens Unit 3 site is generally located north of Gerber Road, west of Bradshaw Road, south of Florin Road, and east of Elk Grove-Florin Road (Figure 1 – *Project Site and Vicinity*). The site corresponds to a portion of Section 5 of Township 7 North and Range 6 East of the “Elk Grove, California” 7.5-minute quadrangle (U.S. Department of the Interior, Geological Survey, photorevised 1979).

The purpose of this special-status species assessment is to assess the potential for occurrence of special-status plant and wildlife species and identify unique habitats or natural communities within the project site.

## **METHODOLOGY**

The field investigation for this assessment was conducted concurrent with a wetland delineation field survey on July 10, 2003, during which time ECORP biologist Jinnah Hansen walked the entire project area. The site was visually inspected for the presence of special-status species and potential habitat for regionally occurring special-status species. The special-status species assessment included a taxa specific literature review, a California Department of Fish and Game Natural Diversity Data Base query, and a reconnaissance-level field survey. This assessment of potentially occurring special-status plant and wildlife species does not constitute a determinate-level presence/absence survey, which should be done according to agency approved survey protocol during the appropriate season.



**FIGURE 1. Project Site and Vicinity Map**

For the purposes of this assessment, "special-status" refers to those species which:

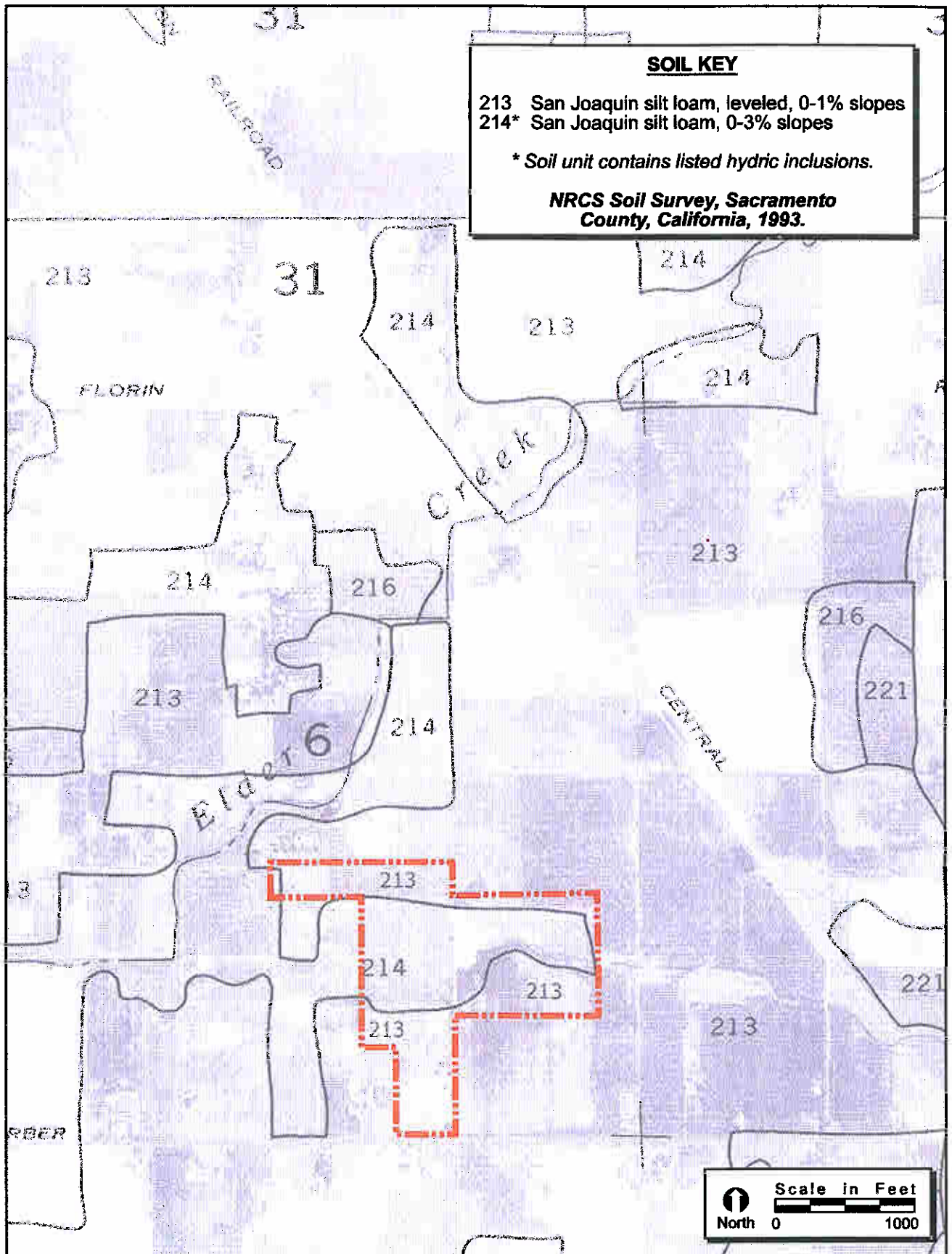
- Have been designated by the California Department of Fish and Game (CDFG) or the U.S. Fish and Wildlife Services (USFWS) as either *rare*, *threatened*, or *endangered*, and are legally protected under the California or federal endangered species acts;
- Are proposed or candidate species being considered for listing under either federal or California Endangered Species Acts; or
- Are of expressly stated interest to resource regulatory agencies, or local jurisdictions, such as CDFG species of special concern, USFWS species of concern, or California Native Plant Society (CNPS) List species.

## **RESULTS**

### **Existing Site Conditions**

The North Vineyard Greens Unit 3 property is comprised of gently rolling terrain situated at an elevation of approximately 50 feet above mean sea level. According to the *Soil Survey of Sacramento County, California* (U.S. Department of Agriculture, Natural Resource Conservation Service 1993), two soil units, or types, have been mapped for the site (Figure 2 – *NRCS Soil Types*). These are: (213) San Joaquin silt loam, leveled, 0-1 percent slopes, and (214) San Joaquin silt loam, 0-3 percent slopes. The San Joaquin silt loam is not considered to be a hydric soil; however, it does contain listed hydric inclusions.





**FIGURE 2. NRCS Soil Types**

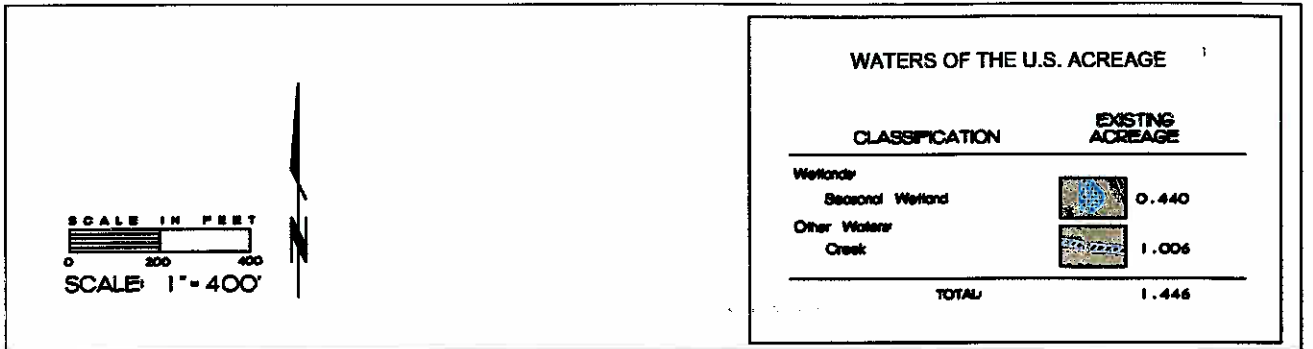
2003-090 North Vineyard Greens Unit 3


The primary vegetation community present on-site is annual grassland. This community is comprised primarily of non-native naturalized Mediterranean grasses, including ripgut brome (*Bromus diandrus*), soft brome (*Bromus hordeaceus*), wild oats (*Avena fatua*), ryegrass (*Lolium multiflorum*), Mediterranean barley (*Hordeum marinum*), and medusahead grass (*Taeniatherum caput-medusae*). Other non-native herbaceous species in this community include hairy hawk-bit (*Leontodon taraxacoides*), filaree (*Erodium botrys*), pineapple weed (*Chamomilla suaveolens*), and yellow star-thistle (*Centaurea solstitialis*).

Within the annual grassland are ephemeral features (i.e., seasonal wetlands and vernal pools) (Figure 3 – *Wetland Delineation*). Gerber Creek meanders through the northern portion of the site. A wetland delineation was conducted concurrent with this assessment and is available under separate cover. There are several native and non-native ornamental trees, shrubs and bushes along the creek and scattered throughout the property.

### **Special-Status Species**

Based upon vegetation communities present on the property, species' known distributive data, and the references cited above, a list of potentially occurring special-status species has been developed for the North Vineyard Greens Unit 3 site. This list is presented in Attachment A. Species include: seven plant species, four invertebrates, one amphibian, two reptiles, ten birds, and four mammals. According to the Natural Diversity Data Base (NDDB), there are no previously documented occurrences of special-status species within the subject area. However, several special-status species have been documented within the vicinity. These include occurrences for white-tailed kite, tricolored blackbird, vernal pool fairy shrimp, and vernal pool tadpole shrimp. The NDDB print out for the Elk Grove, California quadrangle is presented in Attachment B.



SCALE IN FEET  
  
 SCALE: 1" = 400'



**FIGURE 3. Wetland Delineation**

2003-0090 North Vineyard Greens #3

FILENAME: -DWGS\2003-090\nv-3greens.DWG 03/31/04



### *Plants*

Special-status plants that may occur on-site include those that are associated with vernal pools and marshes. The vernal pool species include dwarf downingia (*Downingia pusilla*, CNPS List 2), Boggs Lake hedge-hyssop (*Gratiola heterosepala*, California-endangered and CNPS List 1B), Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*, federal-species of concern and CNPS List 1B), Greene's legenera (*Legenera limosa*, federal-species of concern and CNPS List 1B), slender Orcutt grass (*Orcuttia tenuis*, California-endangered, federal-threatened, and CNPS List 1B) and Sacramento Orcutt grass (*Orcuttia viscida*, California-endangered, federal-endangered, and CNPS List 1B), and the marsh species includes Sanford's arrowhead (*Sagittaria sanfordii*, federal-species of concern and CNPS List 1B). Of these, Boggs Lake hedge-hyssop, slender Orcutt grass, and Sacramento Orcutt grass are listed and protected pursuant to the state and/or federal Endangered Species Acts. Dwarf downingia, Greene's legenera, Ahart's dwarf rush, and Sanford's arrowhead are not listed and protected pursuant to either state or federal Acts. However, these three species may be considered by local jurisdictions during the CEQA review process.

### *Invertebrates*

The seasonal wetlands on-site can provide habitat for the federally-listed vernal pool fairy shrimp (*Branchinecta lynchi*, federal-threatened) and vernal pool tadpole shrimp (*Lepidurus packardii*, federal-endangered), and as such, are often considered by the U.S. Fish and Wildlife Service (USFWS) to represent potentially occupied habitat. Other aquatic special-status aquatic invertebrates that may utilize the on-site seasonal wetlands include the midvalley fairy shrimp (*Branchinecta mesovaliensis*, federal species of concern) and California linderiella (*Linderiella occidentalis*, federal species of concern).

### *Fish*

There are no immediate fish issues within Gerber Creek due to the presence of culverts and spillways or other potential obstructions downstream from the site. However, impacts to the Creek may affect down stream conditions for special-status fish species such as Sacramento

splittail (*Pogonichthys macrolepidotus* CDFG species of concern) and Central Valley Evolutionarily Significant Units (ESU) anadromous salmonids, such as Central Valley steelhead (*Oncorhynchus mykiss* federally threatened), fall and spring-run Chinook salmon (*Oncorhynchus tshawytscha* federal and state threatened).

### *Amphibians*

The seasonal wetlands, and adjacent grasslands on-site represent potentially suitable habitat for the western spadefoot toad (*Spea hammondi*, CDFG species of special concern and federal species of concern). No other special-status amphibians are expected to occur on-site.

### *Reptiles*

Two special-status reptiles may occur on-site, the giant garter snake (*Thamnophis gigas*, California and federally threatened) and northwestern pond turtle (*Clemmys marmorata marmorata*, CDFG species of special concern and California Code of Regulation Title 14 fully protected species). Giant garter snakes typically occupy perennial ponds, marshes, slow-moving streams, and agricultural ditches containing adequate water supply during the spring and summer months. Northwestern pond turtles typically occur within perennial streams, creeks, ponds, and marshes. Gerber Creek represents potentially suitable giant garter snake and northwestern pond turtle habitat.

### *Birds*

The potentially occurring special-status birds on-site include nesting raptors, nesting songbirds, and wintering or migrant birds. The nesting raptors include both tree nesting and ground nesting species. The potential nesting trees are scattered throughout the property and surrounding area. These tree nesting species are white-tailed kite (*Elanus leucurus*, Fish and Game Code fully protected and USFWS bird of management concern), Cooper's hawk (*Accipiter cooperii*, CDFG species of special concern), and Swainson's hawk (*Buteo swainsoni*, California-threatened). Potentially occurring ground-nesting birds on-site include

northern harrier (*Circus cyaneus*, CDFG-species of special concern) and burrowing owl (*Athene cunicularia*, CDFG-species of special concern and federal species of concern).

Special-status songbirds that may nest within the North Vineyard Greens Unit 3 project site include loggerhead shrike (*Lanius ludovicianus*, CDFG species of special concern and USFWS bird of management concern) and tricolored blackbird (*Agelaius tricolor*, CDFG species of special concern and USFWS bird of management concern).

In addition to the special-status birds that may nest on-site, all raptors, including common species such as red-tailed hawks (*Buteo jamaicensis*) and great horned owls (*Bubo virginianus*) and their nests, are protected under Fish and Game Code Section 3503.5.

Other special-status birds that may occur on-site are not known to nest in this region and/or suitable nesting habitat is not present on-site. These are: ferruginous hawk (*Buteo regalis*, CDFG-species of special concern and USFWS-Bird of Management Concern), golden eagle (*Aquila chrysaetos*, Fish and Game Code §3511-fully protected species and CDFG-species of special concern), and Merlin (*Falco columbarius*, CDFG-species of special concern). The grassland and pastures on-site represent potential foraging habitat for these remaining species.

### *Mammals*

Gerber Creek may provide foraging habitat for a variety of special-status bats that are known to occur in this region. These are small-footed myotis (*Myotis ciliolabrum*), long-eared, Yuma myotis (*M. yumanensis*), Townsend's big-eared bat (*Corynorhinus townsendii*), and pallid bat (*Antrozous pallidus*). Typical breeding habitat for these species is not present within the project site but include appropriate sites with minimal human disturbance in cliffs, buildings, caves, mines, and bridges. None of these species are listed and protected pursuant the California or federal Endangered Species Act; they are considered CDFG species of special concern.

## **CONCLUSION**

The vegetation communities observed on-site represent potentially suitable habitat for several regionally occurring special-status species. Plants include dwarf downingia, Boggs Lake hedge-hyssop, Ahart's dwarf rush, Greene's legenera, slender Orcutt grass, Sacramento Orcutt grass, and Sanford's arrowhead. Vernal pool fairy shrimp, midvalley fairy shrimp, California linderiella, and vernal pool tadpole shrimp may occur in seasonal wetlands. These and other wetlands may also provide habitat for the western spadefoot toad. Northern harrier and burrowing owl may nest within open grasslands and pastures on-site. White-tailed kite, Cooper's hawk, and Swainson's hawk may nest in larger trees within the site. Small trees and shrubs represent potential nesting habitat for loggerhead shrike, and tricolored blackbirds are known to nest in marsh and riparian scrub habitats in the vicinity of the subject area. Other potentially occurring birds that do not nest in this region but may be observed within the plan area during migration and/or winter include ferruginous hawk, golden eagle, and Merlin. A number of non-listed special-status bat species may forage on-site.

Determinate-level and pre-construction surveys will be required prior to initiation of project-related activities that may impact the habitats of special-status species. Additional permits may be required pursuant to the federal or state Endangered Species Acts, the CDFG Fish and Game Code, or other local jurisdictional requirements.

## **LIST OF ATTACHMENTS**

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Attachment A – Potentially Occurring Special-Status Species

Attachment B – Rarefind 2 CNDDDB Data Report



## ATTACHMENT A

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Potentially Occurring Special-Status Species

North Vineyard Greens Unit 3 (North Vineyard Station Specific Plan) - Potentially Occurring Special-Status Species

| Common Name                           | Scientific Name                              | Federal Status | State Status | Other Status           | Habitat Description                       | Approximate Survey Dates |
|---------------------------------------|--|----------------|--------------|------------------------|---|--------------------------|
| <b>Plants</b>                         |  |                |              |                        |   |                          |
| Dwarf Downingia                       | <i>Downingia pusilla</i>                     | -              | -            | 2                      | vernal pools/wetlands                     | April                    |
| Boggs Lake hedge-hyssop               | <i>Gratiola heterosepala</i>                 | -              | CE           | 1B                     | vernal pools                              | April-August             |
| Ahart's dwarf rush                    | <i>Juncus leiospemus</i> var. <i>ahartii</i> | -              | -            | FSC, 1B                | vernal pools                              | March-May                |
| Greene's legenere                     | <i>Legenere limosa</i>                       | -              | -            | FSC, 1B                | vernal pools                              | April-June               |
| Slender orcutt grass                  | <i>Orcuttia tenuis</i>                       | FT             | CE           | 1B                     | vernal pools                              | May-October              |
| Sacramento orcutt grass               | <i>Orcuttia viscida</i>                      | FE             | CE           | 1B                     | vernal pools                              | April-July               |
| Sanford's arrowhead                   | <i>Sagittaria sanfordii</i>                  | -              | -            | FSC, 1B                | marsh, creeks, ditches                    | May-October              |
| <b>Invertebrates</b>                  |  |                |              |                        |   |                          |
| Vernal pool fairy shrimp              | <i>Branchinecta lynchi</i>                   | FT             | -            | -                      | vernal pools/wetlands                     | November-April           |
| Midvalley fairy shrimp                | <i>Branchinecta mesovaliensis</i>            | -              | -            | FSC                    | vernal pools/wetlands                     | November-April           |
| Vernal pool tadpole shrimp            | <i>Lepidurus packardii</i>                   | FE             | -            | -                      | vernal pools/wetlands                     | November-April           |
| California linderiella                | <i>Linderiella occidentalis</i>              | -              | -            | FSC                    | vernal pools/wetlands                     | November-April           |
| <b>Amphibians</b>                     |  |                |              |                        |   |                          |
| Western spadefoot toad                | <i>Spea hammondi</i>                         | -              | -            | FSC, CSC, CCR, BLM     | vernal pools, wetlands/adjacent grassland | March-May                |
| <b>Reptiles</b>                       |  |                |              |                        |   |                          |
| Northwestern pond turtle              | <i>Clemmys marmorata marmorata</i>           | -              | -            | FSC, CSC, CCR, FS, BLM | creeks, ponds                             | April-October            |
| Giant garter snake                    | <i>Thamnophis gigas</i>                      | FT             | CT           | CCR                    | ditches, sloughs, marshes                 | April-October            |
| <b>Birds</b>                          |  |                |              |                        |   |                          |
| White-tailed kite (nesting)           | <i>Elanus leucurus</i>                       | -              | -            | FSC, CFP, MNB          | woodland, grassland                       | April-June               |
| Northern harrier (nesting)            | <i>Circus cyaneus</i>                        | -              | -            | CSC                    | marsh, grassland                          | June-July                |
| Cooper's hawk (nesting)               | <i>Accipiter cooperii</i>                    | -              | -            | CSC                    | woodland                                  | April-June               |
| Swainson's hawk (nesting)             | <i>Buteo swainsoni</i>                       | -              | CT           | FS                     | grassland, riparian                       | March-July               |
| Ferruginous hawk (wintering)          | <i>Buteo regalis</i>                         | -              | -            | FSC, CSC, MNB, BLM     | grassland                                 | November-February        |
| Golden eagle (nesting and wintering)  | <i>Aquila chrysaetos</i>                     | -              | -            | CFP, CSC, CDF, BLM     | grassland                                 | November-February        |
| Merlin (wintering)                    | <i>Falco columbarius</i>                     | -              | -            | CSC                    | woodland, grassland                       | September-April          |
| Burrowing owl (burrow sites)          | <i>Athene cucularia</i>                      | -              | -            | FSC, CSC, MNB, BLM     | grassland                                 | April-July               |
| Loggerhead shrike                     | <i>Lanius ludovicianus</i>                   | -              | -            | FSC, CSC, MNB          | grassland, woodland                       | April-May                |
| Tricolored blackbird (nesting colony) | <i>Agelaius tricolor</i>                     | -              | -            | FSC, CSC, MNB, BLM     | marsh, grassland                          | April-June               |

| Common Name              | Scientific Name                           | Federal Status | State Status | Other Status      | Habitat Description   | Approximate Survey Dates |
|--------------------------|---|----------------|--------------|-------------------|---|--------------------------|
| <b>Mammals</b>           |   |                |              |                   |   |                          |
| Small-footed myotis      | <i>Myotis ciliolabrum</i>                 | -              | -            | FSC, BLM          | caves, mines, buildings, bridges, rock crevices, trees                                    | April-September          |
| Yuma myotis              | <i>Myotis yumanensis</i>                  | -              | -            | FSC, CSC, BLM     | Riparian woodland, caves, mines, buildings, bridges, rock crevices, trees                 | April-September          |
| Townsend's big-eared bat | <i>Corynorhinus townsendii townsendii</i> | -              | -            | FSC, CSC, FS, BLM | caves, mines, buildings, rock crevices, trees   | April-September          |
| Pallid bat               | <i>Antrozous pallidus</i>                 | -              | -            | CSC, FS, BLM      | mines, man-made structures, rock outcrops, and woodland near open grasslands for foraging | April-September          |

**Status Codes:**

- FE - Federally listed, Endangered.
- FT - Federally listed, Threatened.
- FSC - U. S. Fish and Wildlife Service Species of Concern
- MNB - U. S. Fish and Wildlife Service Migratory Nongame Birds of Management Concern
- BLM - Bureau of Land Management Sensitive Species
- FS - U. S. Forest Service Sensitive Species
- CE - California listed, Endangered.
- CT - California listed, Threatened.
- CCR - California Code of Regulations Title 14 Fully Protected Species
- CFP - Fish and Game Code of California Fully Protected Species (§3511-birds, §4700-mammals, §5050-reptiles/amphibians).
- CSC - California Department of Fish and Game Species of Special Concern.
- CDF - California Department of Forestry Sensitive Species
- 1B - California Native Plant Society/Rare or Endangered in California and elsewhere

## **ATTACHMENT B**

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Rarefind 2 CNDDDB Data Report

California Department of Fish and Game  
Natural Diversity Data Base

Full Condensed Report - Multiple Records per Page

*Elanus leucurus*  
white-tailed kite  
Element Code: ABNKC06010

-----List Status----- NDDB Element Ranks----- Other Lists-----  
Federal: Species of Concern Global: G5 CDFG Status:  
State: None State: S3

-----Habitat Associations-----

General: (NESTING) ROLLING FOOTHILLS/VALLEY MARGINS W/SCATTERED OAKS & RIVER BOTTOMLANDS OR MARSHES NEXT TO DECIDUOUS WOODLAND  
Micro: OPEN GRASSLANDS, MEADOWS, OR MARSHES FOR FORAGING CLOSE TO ISOLATED, DENSE-TOPPED TREES FOR NESTING AND PERCHING.

Occurrence No. 28 Map Index: 24807 -----Dates Last Seen----- Lat/Long: 38°29'13" / 121°21'51" Township: 07N  
Occ Rank: Fair Element: 1990-06-03 UTM: Zone-10 N4260895 E642670 Range: 06E  
Origin: Natural/Native occurrence Site: 1990-06-03 Precision: SPECIFIC Section: 06 Qtr SW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 50 ft  
Main Source: JOHNSON, D. 1990 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary: Camp Pendleton Southern Coast  
Location: SOUTH SIDE OF MCCOY AVENUE, 0.4 MILE EAST OF ELK GROVE-FLORIN ROAD, SOUTH OF SACRAMENTO.  
-----Comments-----  
Distribution:  
Ecological: NEST TREE IS LOCATED ON RURAL RESIDENTIAL PROPERTY.  
Threat:  
General: 2 ADULTS OBSERVED NESTING IN 1990.  
Owner/Manager: PVT

California Department of Fish and Game  
Natural Diversity Data Base

Full Condensed Report - Multiple Records per Page

*Accipiter cooperii*

Cooper's hawk

Element Code: ABNKCL2040

-----List Status-----

Federal: None

State: None

NDDB Element Ranks-----

Global: G5

State: S3

-----Other Lists-----

CDFG Status: SC

-----Habitat Associations-----

General: (NESTING) WOODLAND, CHIEFLY OF OPEN, INTERRUPTED OR MARGINAL TYPE.

Micro: NEST SITES MAINLY IN RIPARIAN GROWTHS OF DECIDUOUS TREES, AS IN CANYON BOTTOMS ON RIVER FLOOD-PLAINS; ALSO, LIVE OAKS.

Occurrence No. 66      Map Index:36011      ---Dates Last Seen---      Lat/Long: 38°27'49" / 121°19'46"      Township: 07N  
Occ Rank: Good      Element: 1997-05-28      UTM: Zone-10 N4258380 E645757      Range: 06E  
Origin: Natural/Native occurrence      Site: 1997-05-28      Precision: SPECIFIC      Section: 16 Qtr NW  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 65 ft  
Main Source: CURLETTE, J. & R. WALKER 1997 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: SW OF THE INTERSECTION OF CARMENCITA ROAD AND LAGUNA CREEK, 4 MILES NNE OF ELK GROVE.

-----Comments-----

Distribution: NEST TREE IS LOCATED APPROXIMATELY 50 FEET WEST OF CARMENCITA ROAD.

Ecological: NEST TREE IS LOCATED IN A BAND OF VALLEY OAK WOODLAND ADJACENT TO LAGUNA CREEK, WITH AN UNDERSTORY OF ELYTRIGIA AND ANNUAL GRASSES. ADJACENT RIPARIAN WOODLAND FORMS A COMPLETE CANOPY, EXTENDING TO ABOUT 100 FEET FROM THE CHANNEL EDGE.

Threat:

General: 2 ADULTS AND AT LEAST 1 JUVENILE OBSERVED AT NEST ON 28 MAY 1997.

Owner/Manager: PVT

California Department of Fish and Game  
Natural Diversity Data Base

Full Condensed Report - Multiple Records per Page

*Buteo swainsoni*  
Swainson's hawk  
Element Code: ABNKC19070

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Species of Concern Global: G4 CDFG Status:  
State: Threatened State: S2

Habitat Associations

General: (NESTING) BREEDS IN STANDS WITH FEW TREES IN JUNIPER-SAGE FLATS, RIPARIAN AREAS AND IN OAK SAVANNAH.  
Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 131 Map Index:11672 ---Dates Last Seen--- Lat/Long: 38°25'13" / 121°17'08" Township: 07N  
Occ Rank: Excellent Element: 1994-XX-XX UTM: Zone-10 N4253642 E649668 Range: 06E  
Origin: Natural/Native occurrence Site: 1994-XX-XX Precision: SPECIFIC Section: XX Qtr XX  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Stable Radius: 80 meters Elevation: 60 ft  
Main Source: CDFG RAPTOR NEST FILES 1984 (PERS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: DEER CREEK, AT THE INTERSECTION OF WILTON ROAD, 0.5 MILE NW OF COSUMNES RIVER.  
-----Comments-----  
Distribution:  
Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY AGRICULTURAL CROPS AND GRAZING.  
Threat: POSSIBLE THREAT FROM SURROUNDING DEVELOPMENT OF SMALL RANCHETTES.  
General: DFG SWHA #SA013. 2 ADULTS (1 LT, 1 DK) OBSERVED SOARING/ROOSTING HERE IN 1981 AND 1984. NEST OBSERVED DURING A SURVEY OF COSUMNES RIVER IN 1994.  
Owner/Manager: PVT

Occurrence No. 183 Map Index:11621 ---Dates Last Seen--- Lat/Long: 38°22'48" / 121°19'01" Township: 06N  
Occ Rank: Excellent Element: 1994-XX-XX UTM: Zone-10 N4249107 E647020 Range: 06E  
Origin: Natural/Native occurrence Site: 1994-XX-XX Precision: SPECIFIC Section: 10 Qtr XX  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Stable Radius: 80 meters Elevation: 45 ft  
Main Source: CDFG RAPTOR NEST FILES 1984 (PERS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary: Lower Deer Creek  
Location: COSUMNES RIVER, RM-13.4(R), 2 MILES EAST OF THE INTERSECTION OF GRANT LINE ROAD & HWY 99, COSUMNES RIVER PRESERVE.  
-----Comments-----  
Distribution:  
Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY AGRICULTURAL CROPS AND GRAZING.  
Threat: POSSIBLE THREAT FROM DEVELOPMENT OF SMALL RANCHETTES IN THE AREA.  
General: DFG SWHA #SA025. 1 ADULT OBSERVED DIVING ON TURKEY VULTURE (1982); NO NEST FOUND. IN SUMMER 1994, NEST OBSERVED DURING A SURVEY OF COSUMNES RIVER AREA.  
Owner/Manager: TNC-COSUMNES RIVER PRESERVE

Occurrence No. 184 Map Index:11655 ---Dates Last Seen--- Lat/Long: 38°23'00" / 121°18'28" Township: 06N  
Occ Rank: Excellent Element: 1995-06-13 UTM: Zone-10 N4249504 E647797 Range: 06E  
Origin: Natural/Native occurrence Site: 1995-06-13 Precision: SPECIFIC Section: XX Qtr XX  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Stable Radius: 80 meters Elevation: 60 ft  
Main Source: CDFG RAPTOR NEST FILES 1984 (PERS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: NORTH BANK OF COSUMNES RIVER, AT RM-14.9, ESE OF ELK GROVE.  
-----Comments-----  
Distribution: LOCATED ~0.25 MILE UPSTREAM FROM DFG COSUMNES RIVER CONSERVATION EASEMENT.  
Ecological: NEST TREE IS A VALLEY OAK; HABITAT CONSISTS OF RIPARIAN SURROUNDED BY ROW CROPS.  
Threat:  
General: DFG SWHA #SA038. 1 DARK, 1 MEDIUM PHASE OBSERVED SOARING IN 1984; NO NEST FOUND. 2 ADULTS/3 JUVENILES OBSERVED AT THE NEST IN 1987. 2 CHICKS OBSERVED IN THE NEST ON 13 JUNE 1995.  
Owner/Manager: PVT

California Department of Fish and Game  
Natural Diversity Data Base

Full Condensed Report - Multiple Records per Page

*Buteo swainsoni* (cont.)  
Swainson's hawk  
Element Code: ABNKC19070

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Species of Concern Global: G4 CDFG Status:  
State: Threatened State: S2

Occurrence No. 185 Map Index:11725 ---Dates Last Seen--- Lat/Long: 38°22'34" / 121°15'26" Township: 06N  
Occ Rank: Unknown Element: 1984-05-22 UTM: Zone-10 N4248777 E652235 Range: 07E  
Origin: Natural/Native occurrence Site: 1985-05-24 Precision: NON-SPECIFIC Section: 18 Qtr NW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 1/5 mile Elevation: 70 ft  
Main Source: DEPT. OF FISH & GAME 1984 (PERS)  
Quad Summary: ELK GROVE (3812143/496A)\*, GALT (3812133/496D)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: 0.25 MILE SE OF THE INTERSECTION OF DAVIS AND WALMORT ROADS

-----Comments-----  
Distribution:  
Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY AGRICULTURAL FIELDS.  
Threat:  
General: DFG SWHA #SA036. 1 LIGHT AND 1 DARK PHASE OBSERVED SOARING; NO NEST FOUND, BUT NESTING PRESUMED. SITE CHECKED ON 24 MAY 1985, BUT NO NEST AND NO BIRDS WERE OBSERVED.  
Owner/Manager: PVT

Occurrence No. 190 Map Index:11652 ---Dates Last Seen--- Lat/Long: 38°24'55" / 121°17'36" Township: 07N  
Occ Rank: Unknown Element: 1984-05-17 UTM: Zone-10 N4253065 E649001 Range: 06E  
Origin: Natural/Native occurrence Site: 1984-05-17 Precision: NON-SPECIFIC Section: 35 Qtr SW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 1/5 mile Elevation: 60 ft  
Main Source: DEPT. OF FISH & GAME 1984 (PERS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: DEER CREEK, AT WILTON ROAD.

-----Comments-----  
Distribution: AREA UNSURVEYED. SOURCE DOCUMENT SAYS SECTION 35.  
Ecological: NEST TREE IS AN OAK.  
Threat:  
General: DFG SWHA #SA024. 1 ADULT OBSERVED ON NEST.  
Owner/Manager: PVT

Occurrence No. 191 Map Index:11728 ---Dates Last Seen--- Lat/Long: 38°27'28" / 121°15'32" Township: 07N  
Occ Rank: Unknown Element: 1979-06-29 UTM: Zone-10 N4257837 E651918 Range: 07E  
Origin: Natural/Native occurrence Site: 1982-06-28 Precision: NON-SPECIFIC Section: 18 Qtr SW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 1/5 mile Elevation: 90 ft  
Main Source: DEPT. OF FISH & GAME 1984 (PERS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: 0.5 MILE EAST OF GRANT LINE ROAD, ELK GROVE

-----Comments-----  
Distribution: LOCATED ABOUT HALF-WAY BETWEEN CALVINE ROAD AND SLOUGHHOUSE ROAD.  
Ecological:  
Threat:  
General: DFG SWHA #SA002. 2 ADULTS AND YOUNG OBS 1979. NO ACTIVITY IN 1980 OR 1982.  
Owner/Manager: PVT



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Buteo swainsoni (cont.)  
Swainson's hawk  
Element Code: ABNKC19070

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Species of Concern Global: G4 CDFG Status:  
State: Threatened State: S2

Occurrence No. 262 Map Index:11626 ---Dates Last Seen--- Lat/Long: 38°23'51" / 121°18'41" Township: 06N  
Occ Rank: Unknown Element: 1987-XX-XX UTM: Zone-10 N4251063 E647460 Range: 06E  
Origin: Natural/Native occurrence Site: 1987-XX-XX Precision: NON-SPECIFIC Section: 03 Qtr SW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 1/5 mile Elevation: 60 ft  
Main Source: DEPT. OF FISH & GAME 1984 (PERS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary: Lower Deer Creek  
Location: DEER CREEK, 1 MILE SE OF GRANT LINE ROAD  
-----Comments-----  
Distribution:  
Ecological:  
Threat:  
General: DFG SWHA #SA037. 2 DARK PHASE ADULTS; NO NEST FOUND IN 1984. 2 ADULTS/1 JUVENILE OBSERVED AT NEST IN 1987.  
Owner/Manager: PVT

Occurrence No. 662 Map Index:33208 ---Dates Last Seen--- Lat/Long: 38°23'15" / 121°17'54" Township: 06N  
Occ Rank: Excellent Element: 1994-XX-XX UTM: Zone-10 N4249970 E648619 Range: 06E  
Origin: Natural/Native occurrence Site: 1994-XX-XX Precision: SPECIFIC Section: XX Qtr XX  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 50 ft  
Main Source: ROSCOE, T. 1994 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: COSUMNES RIVER, RM-14.6(L), 2.5 MILES SW OF THE INTERSECTION OF WILTON ROAD AND DILLARD ROAD, EAST OF ELK GROVE.  
-----Comments-----  
Distribution:  
Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY AGRICULTURAL CROPS AND GRAZING.  
Threat: POSSIBLE THREAT FROM DEVELOPMENT OF SURROUNDING AREA INTO SMALL RANCHETTES.  
General: ACTIVE NEST OBSERVED DURING A SUMMER 1994 SURVEY OF COSUMNES RIVER AREA.  
Owner/Manager: UNKNOWN

Occurrence No. 663 Map Index:33209 ---Dates Last Seen--- Lat/Long: 38°22'58" / 121°18'49" Township: 06N  
Occ Rank: Excellent Element: 1994-XX-XX UTM: Zone-10 N4249426 E647305 Range: 06E  
Origin: Natural/Native occurrence Site: 1994-XX-XX Precision: SPECIFIC Section: XX Qtr XX  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 45 ft  
Main Source: ROSCOE, T. 1994 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: COSUMNES RIVER, RM-13.6(R), 3 MILES SE OF ELK GROVE.  
-----Comments-----  
Distribution:  
Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY AGRICULTURAL CROPS AND GRAZING.  
Threat: POSSIBLE THREAT FROM DEVELOPMENT OF SURROUNDING AREA INTO SMALL RANCHETTES.  
General: ACTIVE NEST OBSERVED DURING A SUMMER 1994 SURVEY OF THE COSUMNES RIVER AREA.  
Owner/Manager: UNKNOWN

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Buteo swainsoni (cont.)  
Swainson's hawk  
Element Code: ABNKC19070

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Species of Concern Global: G4 CDFG Status:  
State: Threatened State: S2

Occurrence No. 664 Map Index:33210 ---Dates Last Seen--- Lat/Long: 38°22'32" / 121°19'14" Township: 06N  
Occ Rank: Excellent Element: 1994-XX-XX UTM: Zone-10 N4248606 E646716 Range: 06E  
Origin: Natural/Native occurrence Site: 1994-XX-XX Precision: SPECIFIC Section: XX Qtr XX  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 45 ft  
Main Source: ROSCOE, T. 1994 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)\*, GALT (3812133/496D)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: COSUMNES RIVER, RM-13.0(L), 2.5 MILES SE OF ELK GROVE.  
-----Comments-----  
Distribution:  
Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY AGRICULTURAL CROPS AND GRAZING.  
Threat: POSSIBLE THREAT FROM DEVELOPMENT OF SURROUNDING AREA INTO SMALL RANCHETTES.  
General: ACTIVE NEST OBSERVED DURING A SUMMER 1994 SURVEY OF COSUMNES RIVER AREA.  
Owner/Manager: UNKNOWN

Occurrence No. 665 Map Index:33211 ---Dates Last Seen--- Lat/Long: 38°25'00" / 121°16'30" Township: 07N  
Occ Rank: Excellent Element: 1994-XX-XX UTM: Zone-10 N4253242 E650587 Range: 06E  
Origin: Natural/Native occurrence Site: 1994-XX-XX Precision: SPECIFIC Section: XX Qtr XX  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 70 ft  
Main Source: ROSCOE, T. 1994 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: COSUMNES RIVER, RM-17.5(L), 0.5 MILE NW OF WILTON.  
-----Comments-----  
Distribution:  
Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY AGRICULTURAL CROPLANDS AND GRAZING.  
Threat: POSSIBLE THREAT FROM DEVELOPMENT OF SURROUNDING AREA INTO SMALL RANCHETTES.  
General: ACTIVE NEST OBSERVED DURING A SUMMER 1994 SURVEY OF COSUMNES RIVER AREA.  
Owner/Manager: UNKNOWN

Occurrence No. 672 Map Index:33224 ---Dates Last Seen--- Lat/Long: 38°25'22" / 121°15'21" Township: 07N  
Occ Rank: Excellent Element: 1995-06-13 UTM: Zone-10 N4253970 E652248 Range: 07E  
Origin: Natural/Native occurrence Site: 1995-06-13 Precision: SPECIFIC Section: XX Qtr XX  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 70 ft  
Main Source: ROSCOE, T. 1995 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: SOUTH BANK OF COSUMNES RIVER, AT BEITZEL ROAD, ~5 MILES EAST OF ELK GROVE.  
-----Comments-----  
Distribution:  
Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY ROW CROPS.  
Threat: POSSIBLE THREATS INCLUDE DEVELOPMENT AND CONVERSION TO VINEYARDS.  
General: 2 ADULTS OBSERVED COPULATING ON 13 JUNE 1995.  
Owner/Manager: PVT

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Buteo swainsoni (cont.)  
Swainson's hawk  
Element Code: ABNKC19070

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Species of Concern Global: G4 CDFG Status:  
State: Threatened State: S2

Occurrence No. 673 Map Index:33225 ---Dates Last Seen--- Lat/Long: 38°25'06" / 121°16'40" Township: 07N  
Occ Rank: Good Element: 1995-06-13 UTM: Zone-10 N4253422 E650359 Range: 06E  
Origin: Natural/Native occurrence Site: 1995-06-13 Precision: SPECIFIC Section: XX Qtr XX  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 60 ft  
Main Source: ROSCOE, T. 1995 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: NORTH BANK OF COSUMNES RIVER, 0.1 MILE EAST OF WILTON ROAD, ~4 MILES EAST OF ELK GROVE.

-----Comments-----  
Distribution:  
Ecological: NEST TREE IS A COTTONWOOD SNAG; HABITAT CONSISTS OF RIPARIAN SURROUNDED BY ROW CROPS, SAND MINING, AND  
LOW-DENSITY RESIDENTIAL.  
Threat: THREATENED BY DEVELOPMENT.  
General: 1 CHICK OBSERVED IN THE NEST ON 13 JUNE 1995.  
Owner/Manager: PVT

Occurrence No. 674 Map Index:33226 ---Dates Last Seen--- Lat/Long: 38°24'18" / 121°17'17" Township: 06N  
Occ Rank: Good Element: 1995-06-13 UTM: Zone-10 N4251937 E649474 Range: 06E  
Origin: Natural/Native occurrence Site: 1995-06-13 Precision: SPECIFIC Section: XX Qtr XX  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 55 ft  
Main Source: ROSCOE, T. 1995 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: SOUTH BANK OF COSUMNES RIVER, ~1 MILE DOWNSTREAM FROM WILTON ROAD, ~4 MILES EAST OF ELK GROVE.

-----Comments-----  
Distribution:  
Ecological: NEST TREE IS A VALLEY OAK; HABITAT CONSISTS OF RIPARIAN SURROUNDED BY ROW CROPS AND LOW-DENSITY HOUSING.  
Threat: THREATS INCLUDE DEVELOPMENT AND CONVERSION TO VINEYARDS.  
General: ON 13 JUNE 1995, 2 ADULTS WERE OBSERVED SOARING IN THE VICINITY OF THE NEST TREE, FROM WHICH AT LEAST 2 CHICKS  
COULD BE HEARD CALLING.  
Owner/Manager: PVT

Occurrence No. 760 Map Index:41774 ---Dates Last Seen--- Lat/Long: 38°23'07" / 121°19'01" Township: 06N  
Occ Rank: Unknown Element: 1987-XX-XX UTM: Zone-10 N4249707 E646996 Range: 06E  
Origin: Natural/Native occurrence Site: 1987-XX-XX Precision: NON-SPECIFIC Section: 09 Qtr SE  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 1/5 mile Elevation: 35 ft  
Main Source: DEPT. OF FISH & GAME 1994 (PERS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: DEER CREEK, 2.5 MILES EAST OF HIGHWAY 99, SE OF ELK GROVE.

-----Comments-----  
Distribution:  
Ecological: NEST TREE IS AN OAK; SURROUNDED BY A MIX OF RIPARIAN, AGRICULTURAL FIELDS, AND PASTURE.  
Threat:  
General: DFG SWHA #SA056. 2 ADULTS OBSERVED NESTING IN 1987.  
Owner/Manager: PVT

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*Buteo swainsoni* (cont.)  
Swainson's hawk  
Element Code: ABNKC19070

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Species of Concern    Global: G4    CDFG Status:  
State: Threatened                State: S2

Occurrence No. 761      Map Index:41775      ---Dates Last Seen---      Lat/Long: 38°22'22" / 121°19'33"      Township: 06N  
Occ Rank: Unknown      Element: 1987-XX-XX      UTM: Zone-10 N4248315 E646235      Range: 06E  
Origin: Natural/Native occurrence      Site: 1987-XX-XX      Precision: NON-SPECIFIC      Section: 16 Qtr NW  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 1/5 mile      Elevation: 35 ft  
Main Source: DEPT. OF FISH & GAME 1994 (PERS)  
Quad Summary: GALT (3812133/496D)\*, ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: DEER CREEK, 1.7 MILES EAST OF HIGHWAY 99, SE OF ELK GROVE.  
-----Comments-----  
Distribution:  
Ecological: NEST TREE IS AN OAK; SURROUNDED BY A MIX OF RIPARIAN, AGRICULTURAL FIELDS, AND PASTURE.  
Threat:  
General: DFG SWHA #SA057. 2 LIGHT-MORPH ADULTS OBSERVED NESTING IN 1987.  
Owner/Manager: PVT

*Agelaius tricolor*  
tricolored blackbird  
Element Code: ABPXB0020

|                             |                         |                       |
|-----------------------------|-------------------------|-----------------------|
| -----List Status-----       | NDDB Element Ranks----- | -----Other Lists----- |
| Federal: Species of Concern | Global: G2              | CDFG Status: SC       |
| State: None                 | State: S2               |                       |

-----Habitat Associations-----

General: (NESTING COLONY) HIGHLY COLONIAL SPECIES, MOST NUMEROUS IN CENTRAL VALLEY & VICINITY. LARGELY ENDEMIC TO CALIFORNIA.  
Micro: REQUIRES OPEN WATER, PROTECTED NESTING SUBSTRATE, & FORAGING AREA WITH INSECT PREY WITHIN A FEW KM OF THE COLONY.

\* SENSITIVE \*

|                                   |            |                           |              |              |
|-----------------------------------|------------|---------------------------|--------------|--------------|
| Occurrence No. 6                  | Map Index: | -----Dates Last Seen----- | Lat/Long: /  | Township:    |
| Occ Rank: Good                    |            | Element: 1994-XX-XX       | UTM:         | Range:       |
| Origin: Natural/Native occurrence |            | Site: 1994-XX-XX          | Precision:   | Section: Qtr |
| Presence: Presumed Extant         |            |                           | Symbol Type: | Meridian:    |
| Trend: Fluctuating                |            |                           | Radius:      | Elevation:   |

Main Source: HOSEA, R. 1986 (LIT)  
Quad Summary: FLORIN (3812144/496B)\*, ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.

-----Comments-----

Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.

Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES, ADJACENT TO GRASSLAND.

Threat: THREATENED BY ENCROACHING DEVELOPMENT. REALIGNMENT OF STRAWBERRY CREEK DAMAGED THIS SITE.

General:

Owner/Manager:

\* SENSITIVE \*

|                                   |            |                           |              |              |
|-----------------------------------|------------|---------------------------|--------------|--------------|
| Occurrence No. 13                 | Map Index: | -----Dates Last Seen----- | Lat/Long: /  | Township:    |
| Occ Rank: None                    |            | Element: 1981-XX-XX       | UTM:         | Range:       |
| Origin: Natural/Native occurrence |            | Site: 1992-06-16          | Precision:   | Section: Qtr |
| Presence: Possibly Extirpated     |            |                           | Symbol Type: | Meridian:    |
| Trend: Unknown                    |            |                           | Radius:      | Elevation:   |

Main Source: HOSEA, R. 1986 (LIT)  
Quad Summary: ELK GROVE (3812143/496A)\*, CARMICHAEL (3812153/512D)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.

-----Comments-----

Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.

Ecological:

Threat:

General:

Owner/Manager:

\* SENSITIVE \*

|                                   |            |                           |              |              |
|-----------------------------------|------------|---------------------------|--------------|--------------|
| Occurrence No. 156                | Map Index: | -----Dates Last Seen----- | Lat/Long: /  | Township:    |
| Occ Rank: Unknown                 |            | Element: XXXX-XX-XX       | UTM:         | Range:       |
| Origin: Natural/Native occurrence |            | Site: XXXX-XX-XX          | Precision:   | Section: Qtr |
| Presence: Presumed Extant         |            |                           | Symbol Type: | Meridian:    |
| Trend: Unknown                    |            |                           | Radius:      | Elevation:   |

Main Source: DEHAVEN, R. (OBS)  
Quad Summary: ELK GROVE (3812143/496A)\*, GALT (3812133/496D), BRUCEVILLE (3812134/496C), FLORIN (3812144/496B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.

-----Comments-----

Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.

Ecological: NESTING SUBSTRATE CONSISTS OF CATTAILS AND BULRUSH.

Threat:

General:

Owner/Manager:

California Department of Fish and Game  
Natural Diversity Data Base

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*Agelaius tricolor* (cont.)  
tricolored blackbird  
Element Code: ABPBXB0020

|                             |                         |                  |
|-----------------------------|-------------------------|------------------|
| -----List Status-----       | NDDB Element Ranks----- | Other Lists----- |
| Federal: Species of Concern | Global: G2              | CDFG Status: SC  |
| State: None                 | State: S2               |                  |

**\* SENSITIVE \***

|                                   |            |                           |              |              |
|-----------------------------------|------------|---------------------------|--------------|--------------|
| Occurrence No. 157                | Map Index: | -----Dates Last Seen----- | Lat/Long: /  | Township:    |
| Occ Rank: Unknown                 |            | Element: 1972-05-XX       | UTM:         | Range:       |
| Origin: Natural/Native occurrence |            | Site: 1972-05-XX          | Precision:   | Section: Qtr |
| Presence: Presumed Extant         |            |                           | Symbol Type: | Meridian:    |
| Trend: Unknown                    |            |                           | Radius:      | Elevation:   |

Main Source: DEHAVEN, R. (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)\*, SLOUGHHOUSE (3812142/495B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.

-----  
 Comments:  
 Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
 Ecological: NESTING SUBSTRATE IS CATTAILS.  
 Threat:  
 General:  
 Owner/Manager:

**\* SENSITIVE \***

|                                   |            |                           |              |              |
|-----------------------------------|------------|---------------------------|--------------|--------------|
| Occurrence No. 158                | Map Index: | -----Dates Last Seen----- | Lat/Long: /  | Township:    |
| Occ Rank: Unknown                 |            | Element: 1972-XX-XX       | UTM:         | Range:       |
| Origin: Natural/Native occurrence |            | Site: 1972-XX-XX          | Precision:   | Section: Qtr |
| Presence: Presumed Extant         |            |                           | Symbol Type: | Meridian:    |
| Trend: Unknown                    |            |                           | Radius:      | Elevation:   |

Main Source: DEHAVEN, R. (OBS)  
 Quad Summary: CARMICHAEL (3812153/512D)\*, ELK GROVE (3812143/496A), BUFFALO CREEK (3812152/511C)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.

-----  
 Comments:  
 Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
 Ecological: NESTING IN CATTAILS AND TULES.  
 Threat:  
 General:  
 Owner/Manager:

**\* SENSITIVE \***

|                                   |            |                           |              |              |
|-----------------------------------|------------|---------------------------|--------------|--------------|
| Occurrence No. 177                | Map Index: | -----Dates Last Seen----- | Lat/Long: /  | Township:    |
| Occ Rank: Unknown                 |            | Element: 1997-XX-XX       | UTM:         | Range:       |
| Origin: Natural/Native occurrence |            | Site: 1997-XX-XX          | Precision:   | Section: Qtr |
| Presence: Presumed Extant         |            |                           | Symbol Type: | Meridian:    |
| Trend: Fluctuating                |            |                           | Radius:      | Elevation:   |

Main Source: JOHNSON, D. 1990 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)\*, CARMICHAEL (3812153/512D)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.

-----  
 Comments:  
 Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
 Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES ALONG A RESIDENTIAL ROAD; SURROUNDED BY PASTURELAND.  
 Threat: POSSIBLY THREATENED BY DEVELOPMENT OF THE SURROUNDING AREA.  
 General:  
 Owner/Manager:

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*Agelaius tricolor* (cont.)  
tricolored blackbird  
Element Code: ABPBXB0020

|                             |                               |                       |
|-----------------------------|-------------------------------|-----------------------|
| -----List Status-----       | -----NDDDB Element Ranks----- | -----Other Lists----- |
| Federal: Species of Concern | Global: G2                    | CDFG Status: SC       |
| State: None                 | State: S2                     |                       |

**\* SENSITIVE \***

|                                   |            |                           |              |              |
|-----------------------------------|------------|---------------------------|--------------|--------------|
| Occurrence No. 232                | Map Index: | -----Dates Last Seen----- | Lat/Long: /  | Township:    |
| Occ Rank: Good                    |            | Element: 1994-06-XX       | UTM:         | Range:       |
| Origin: Natural/Native occurrence |            | Site: 1994-06-XX          | Precision:   | Section: Qtr |
| Presence: Presumed Extant         |            |                           | Symbol Type: | Meridian:    |
| Trend: Unknown                    |            |                           | Radius:      | Elevation:   |

Main Source: ROSCOE, T. 1992 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.

-----Comments-----

Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES, AND SOME WILD ROSE, ALONG LAGUNA CREEK.  
Threat: FORAGING HABITAT THREATENED BY RESIDENTIAL DEVELOPMENT.  
General:  
Owner/Manager:

**\* SENSITIVE \***

|                                   |            |                           |              |              |
|-----------------------------------|------------|---------------------------|--------------|--------------|
| Occurrence No. 297                | Map Index: | -----Dates Last Seen----- | Lat/Long: /  | Township:    |
| Occ Rank: Unknown                 |            | Element: 1994-04-23       | UTM:         | Range:       |
| Origin: Natural/Native occurrence |            | Site: 1994-04-23          | Precision:   | Section: Qtr |
| Presence: Presumed Extant         |            |                           | Symbol Type: | Meridian:    |
| Trend: Unknown                    |            |                           | Radius:      | Elevation:   |

Main Source: BURKE, C. 1994 (OBS)  
Quad Summary: SLOUGHHOUSE (3812142/495B)\*, ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.

-----Comments-----

Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRY, OCCUPYING ~1 ACRE.  
Threat: POSSIBLE THREATS INCLUDE PROXIMITY TO ROAD/HOUSES AND FERAL CATS.  
General:  
Owner/Manager:

**\* SENSITIVE \***

|                                   |            |                           |              |              |
|-----------------------------------|------------|---------------------------|--------------|--------------|
| Occurrence No. 298                | Map Index: | -----Dates Last Seen----- | Lat/Long: /  | Township:    |
| Occ Rank: Unknown                 |            | Element: 1994-06-XX       | UTM:         | Range:       |
| Origin: Natural/Native occurrence |            | Site: 1994-06-XX          | Precision:   | Section: Qtr |
| Presence: Presumed Extant         |            |                           | Symbol Type: | Meridian:    |
| Trend: Unknown                    |            |                           | Radius:      | Elevation:   |

Main Source: BURKE, C. 1994 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.

-----Comments-----

Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES AND WILLOWS; SURROUNDED BY GRASSLAND AND MOIST FIELDS PROVIDING FACULTATIVE WETLAND VEGETATION.  
Threat:  
General:  
Owner/Manager:

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*Agelaius tricolor* (cont.)  
tricolored blackbird  
Element Code: ABPBXB0020

-----List Status-----NDEB Element Ranks-----Other Lists-----  
Federal: Species of Concern Global: G2 CDFG Status: SC  
State: None State: S2

**\* SENSITIVE \***

Occurrence No. 299 Map Index: ---Dates Last Seen--- Lat/Long: / Township:  
Occ Rank: Good Element: 1994-06-XX UTM: Range:  
Origin: Natural/Native occurrence Site: 1997-XX-XX Precision: Section: Qtr  
Presence: Presumed Extant Symbol Type: Meridian:  
Trend: Unknown Radius: Elevation:  
Main Source: BURKE, C. 1994 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.  
-----Comments-----  
Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRY THICKETS; SURROUNDED BY CATTLE PASTURE ASSOCIATED WITH A DAIRY OPERATION.  
Threat: PROXIMITY OF THIS SITE TO AN ACTIVE DAIRY OPERATION MAY BE A POSSIBLE THREAT.  
General:  
Owner/Manager:

**\* SENSITIVE \***

Occurrence No. 300 Map Index: ---Dates Last Seen--- Lat/Long: / Township:  
Occ Rank: Unknown Element: 1994-04-23 UTM: Range:  
Origin: Natural/Native occurrence Site: 1994-04-23 Precision: Section: Qtr  
Presence: Presumed Extant Symbol Type: Meridian:  
Trend: Unknown Radius: Elevation:  
Main Source: MANOLIS, T. 1994 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.  
-----Comments-----  
Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES; SURROUNDED BY LIGHTLY GRAZED GRASSLAND.  
Threat:  
General:  
Owner/Manager:

**\* SENSITIVE \***

Occurrence No. 301 Map Index: ---Dates Last Seen--- Lat/Long: / Township:  
Occ Rank: Good Element: 1994-05-XX UTM: Range:  
Origin: Natural/Native occurrence Site: 1994-05-XX Precision: Section: Qtr  
Presence: Presumed Extant Symbol Type: Meridian:  
Trend: Unknown Radius: Elevation:  
Main Source: MANOLIS, T. 1994 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.  
-----Comments-----  
Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES IN AN AREA COVERING ~50 ACRES; SURROUNDED BY GRAZED GRASSLAND.  
Threat:  
General:  
Owner/Manager:



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*Agelaius tricolor* (cont.)  
tricolored blackbird  
Element Code: ABPBXB0020

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Species of Concern Global: G2 CDFG Status: SC  
State: None State: S2

**\* SENSITIVE \***

Occurrence No. 319 Map Index: ---Dates Last Seen--- Lat/Long: / Township:  
Occ Rank: Good Element: 1996-06-03 UTM: Range:  
Origin: Natural/Native occurrence Site: 1996-06-03 Precision: Section: Qtr  
Presence: Presumed Extant Symbol Type: Meridian:  
Trend: Unknown Radius: Elevation:  
Main Source: ROSCOE, T. 1996 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.  
-----Comments-----  
Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
Ecological: NESTING SUBSTRATE IS BLACKBERRIES; SURROUNDING HABITAT CONSISTS OF AGRICULTURE, GRAZED PASTURE, AND RURAL RESIDENTIAL.  
Threat: THREATENED BY DEVELOPMENT.  
General:  
Owner/Manager:

**\* SENSITIVE \***

Occurrence No. 321 Map Index: ---Dates Last Seen--- Lat/Long: / Township:  
Occ Rank: Good Element: 1996-06-10 UTM: Range:  
Origin: Natural/Native occurrence Site: 1996-06-10 Precision: Section: Qtr  
Presence: Presumed Extant Symbol Type: Meridian:  
Trend: Unknown Radius: Elevation:  
Main Source: ROSCOE, T. 1996 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.  
-----Comments-----  
Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
Ecological: HABITAT CONSISTS OF BLACKBERRY BRAMBLES GROWING ALONG A ROADSIDE DITCH; SURROUNDING AREA CONSISTS OF RURAL RESIDENTIAL/AGRICULTURE.  
Threat: THREATENED BY DEVELOPMENT.  
General:  
Owner/Manager:

**\* SENSITIVE \***

Occurrence No. 347 Map Index: ---Dates Last Seen--- Lat/Long: / Township:  
Occ Rank: Good Element: 1993-06-XX UTM: Range:  
Origin: Natural/Native occurrence Site: 1993-06-XX Precision: Section: Qtr  
Presence: Presumed Extant Symbol Type: Meridian:  
Trend: Unknown Radius: Elevation:  
Main Source: COOK, L. 1993 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.  
-----Comments-----  
Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES; SURROUNDED BY GRASSLAND, TO THE SOUTH AND EAST.  
Threat:  
General:  
Owner/Manager:

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Agelaius tricolor (cont.)  
tricolored blackbird  
Element Code: ABPBXB0020

| -----List Status-----       | NDDB Element Ranks | -----Other Lists----- |
|-----------------------------|--------------------|-----------------------|
| Federal: Species of Concern | Global: G2         | CDFG Status: SC       |
| State: None                 | State: S2          |                       |

**\* SENSITIVE \***

|  |            |                       |              |              |
|--|------------|-----------------------|--------------|--------------|
| Occurrence No. 351                                     | Map Index: | ---Dates Last Seen--- | Lat/Long: /  | Township:    |
| Occ Rank: Good   |            | Element: 1992-05-XX   | UTM:         | Range:       |
| Origin: Natural/Native occurrence                      |            | Site: 1992-05-XX      | Precision:   | Section: Qtr |
| Presence: Presumed Extant                              |            |                       | Symbol Type: | Meridian:    |
| Trend: Unknown   |            |                       | Radius:      | Elevation:   |
| Main Source: COOK, L. 1992 (OBS)                       |            |                       |              |              |
| Quad Summary: ELK GROVE (3812143/496A)                 |            |                       |              |              |
| County Summary: SACRAMENTO                             |            |                       |              |              |
| SNA Summary:   |            |                       |              |              |
| Location: *SENSITIVE* Location information suppressed. |            |                       |              |              |
| Comments:  |            |                       |              |              |

Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.

Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES; SURROUNDED BY PASTURE.

Threat:

General:

Owner/Manager:

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*Clemmys marmorata marmorata*  
northwestern pond turtle  
Element Code: ARAAD02031

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Species of Concern Global: G3G4T3 CDFG Status: SC  
State: None State: S3

-----Habitat Associations-----

General: ASSOCIATED WITH PERMANENT OR NEARLY PERMANENT WATER IN A WIDE VARIETY OF HABITATS.  
Micro: REQUIRES BASKING SITES. NESTS SITES MAY BE FOUND UP TO 0.5 KM FROM WATER.

Occurrence No. 132 Map Index: 46135 ---Dates Last Seen--- Lat/Long: 38°25'08" / 121°22'05" Township: 07N  
Occ Rank: Fair Element: 2001-07-11 UTM: Zone-10 N4253367 E642468 Range: 06E  
Origin: Natural/Native occurrence Site: 2001-07-11 Precision: SPECIFIC Section: 31 Qtr NW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 35 ft  
Main Source: FULLEN, K. 2001 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: NE ELK GROVE. LAGUNA CK 0.3 MILES SOUTH INTERSECTION ELK GROVE FLORIN/ BOND RD & 0.2 MILES EAST OF ELK GROVE  
FLORIN RD

-----Comments-----

Distribution: OBSERVED BASKING ON WOODY DEBRIS WITHIN CREEK.  
Ecological: HABITAT CONSISTS OF VALLEY-FOOTHILL RIPARIAN PLANT COMMUNITY DOMINATED BY VALLEY OAK WITH UNDERSTORY OF  
HIMALAYAN BLACKBERRY. EMERGENT VEGETATION (CATTAILS, BULRUSH) AND LARGE AMOUNT OF ALGAE IN CREEK.  
Threat: CREEK AND TRAILS EXPERIENCE HEAVY USE BY HUMANS.  
General: 1 ADULT OBSERVED.  
Owner/Manager: ELK GROVE COMMUNITY SERVICES D

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*Thamnophis gigas*

giant garter snake

Element Code: ARADB36150

| List Status         | NDDB Element Ranks | Other Lists  |
|---------------------|--------------------|--------------|
| Federal: Threatened | Global: G2G3       | CDFG Status: |
| State: Threatened   | State: S2S3        |              |

Habitat Associations

General: PREFERS FRESHWATER MARSH AND LOW GRADIENT STREAMS. HAS ADAPTED TO DRAINAGE CANALS & IRRIGATION DITCHES.

Micro: THIS IS THE MOST AQUATIC OF THE GARTER SNAKES IN CALIFORNIA.

|   |                  |                     |                                  |                    |
|---|------------------|---------------------|----------------------------------|--------------------|
| Occurrence No. 169  | Map Index: 47639 | —Dates Last Seen—   | Lat/Long: 38°23'36" / 121°21'05" | Township: 06N      |
| Occ Rank: Fair  |                  | Element: 2002-03-27 | UTM: Zone-10 N4250557 E643957    | Range: 06E         |
| Origin: Natural/Native occurrence   |                  | Site: 2002-03-27    | Precision: SPECIFIC              | Section: 08 Qtr NW |
| Presence: Presumed Extant   |                  |                     | Symbol Type: POINT               | Meridian: M        |
| Trend: Unknown  |                  |                     | Radius: 80 meters                | Elevation: 50 ft   |
| Main Source: HENKE, J. 2002 (OBS)   |                  |                     |                                  |                    |
| Quad Summary: ELK GROVE (3812143/496A)  |                  |                     |                                  |                    |
| County Summary: SACRAMENTO  |                  |                     |                                  |                    |
| SNA Summary:  |                  |                     |                                  |                    |
| Location: EAST SIDE OF WATERMAN ROAD, 0.8 MILE NORTH OF GRANT LINE ROAD, SE OF ELK GROVE  |                  |                     |                                  |                    |
| Comments:   |                  |                     |                                  |                    |
| Distribution: SNAKE OBSERVED AT THE CONFLUENCE OF A WETLAND SWALE AND THE DITCH.  |                  |                     |                                  |                    |
| Ecological: HABITAT CONSISTS OF A ROADSIDE DITCH ALONG WATERMAN ROAD; VEGETATION CONSISTS OF PASPALUM DILATATUM, TYPHA LATIFOLIA, AND CYPERUS ERAGRASTIS. |                  |                     |                                  |                    |
| Threat: THREATENED BY TRAFFIC AND DITCH MAINTENANCE.  |                  |                     |                                  |                    |
| General: 1 ADULT OBSERVED ON 27 MAR 2002.   |                  |                     |                                  |                    |
| Owner/Manager: PVT  |                  |                     |                                  |                    |

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*Branchinecta lynchi*

vernal pool fairy shrimp  
Element Code: ICBRA03030

|                     |                      |               |
|---------------------|----------------------|---------------|
| —List Status—       | —NDDB Element Ranks— | —Other Lists— |
| Federal: Threatened | Global: G2G3         | CDFG Status:  |
| State: None         | State: S2S3          |               |

—Habitat Associations—

General: ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MTNS, AND SOUTH COAST MTNS, IN ASTATIC RAIN-FILLED POOLS.  
Micro: INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Occurrence No. 100      Map Index: 32550      —Dates Last Seen—      Lat/Long: 38°26'48" / 121°21'16"      Township: 07N  
 Occ Rank: Excellent      Element: 1997-02-11      UTM: Zone-10 N4256452 E643600      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1997-03-14      Precision: SPECIFIC      Section: 19 Qtr NE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 29.1 ac      Elevation: 60 ft  
 Main Source: GIBSON, J. & T. SKORDAL 1996 (LIT)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: 0.5 MILE SOUTH OF CALVINE ROAD AND IMMEDIATELY WEST OF WATERMAN ROAD, 2 MILES NORTH OF ELK GROVE.

—Comments—

Distribution: PERRY RANCH MITIGATION AREA IS A 37-ACRE PRESERVE, CONSISTING OF NORTHERN HARDPAN VERNAL POOLS (NATURAL AND CREATED), SEASONAL WETLANDS, WET SWALES, AND NON-NATIVE ANNUAL GRASSLANDS.  
 Ecological: NORTHERN HARDPAN VERNAL POOL HABITAT WITH CONSTRUCTED AND NATURAL POOLS; DOMINANT UPLAND CONSISTING OF NON-NATIVE ANNUAL GRASSLAND. SOIL TYPES: CORNING-REDDING COMPLEX (8-30% SLOPES) AND REDDING GRAVELLY LOAM (0-8% SLOPES).  
 Threat: WETLAND PRESERVE IS PROTECTED BY EXISTING PERIMETER FENCE AND NO DISTURBANCES NOTED.  
 General: 1995: 12/28-OBS IN 25 OF 26 CONSTRUCTED POOLS, 7 OF 10 REFERENCE POOLS. 2/2-OBS IN 2 OF 26 CONSTRUCTED POOLS, 1 OF 10 REFERENCE POOLS. 1996: OBS IN 25 OF 26 CONSTRUCTED POOLS, 3 OF 10 REFERENCE POOLS. 1997: UNKNOWN NUMBER OBS ON 1/8 & 2/11.  
 Owner/Manager: PVT-WINNCREST HOMES

Occurrence No. 160      Map Index: 30622      —Dates Last Seen—      Lat/Long: 38°23'23" / 121°20'41"      Township: 06N  
 Occ Rank: Unknown      Element: 1993-03-02      UTM: Zone-10 N4250133 E644569      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1993-03-02      Precision: NON-SPECIFIC      Section: 08 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 3/5 mile      Elevation: 50 ft  
 Main Source: SUGNET & ASSOC. 1993 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: VICINITY OF GRANT LINE ROAD. ABOUT 1.5 MILES SE OF ELK GROVE.

—Comments—

Distribution: SEASONAL WETLANDS LOCATED SOMEWHERE IN SECTION 8.  
 Ecological: NATURAL SEASONAL WETLANDS.  
 Threat:  
 General: B. LYNCHI OBSERVED IN 1 OF 8 FEATURES INSPECTED ON 2/2/93 AND 3/2/93. SUGNET RECORD #'S 46 & 47.  
 Owner/Manager: UNKNOWN

Occurrence No. 162      Map Index: 33686      —Dates Last Seen—      Lat/Long: 38°29'21" / 121°20'35"      Township: 07N  
 Occ Rank: Unknown      Element: 1993-02-16      UTM: Zone-10 N4261171 E644513      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1993-02-16      Precision: NON-SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 1,920.3 ac      Elevation: 60 ft  
 Main Source: SUGNET & ASSOC. 1993 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: NORTH OF GERBER ROAD, SOUTH OF FLORIN ROAD, EAST OF ELK GROVE-FLORIN ROAD. ABOUT 5 MILES NORTH OF ELK GROVE.

—Comments—

Distribution: SEASONAL WETLANDS, VERNAL POOLS, AND ROADSIDE DITCHES SOMEWHERE IN SECTIONS 4, 5 & 6.  
 Ecological: NATURAL SEASONAL WETLANDS, NATURAL VERNAL POOLS, MANMADE ROADSIDE DITCHES AND MANMADE "OTHER".  
 Threat:  
 General: B. LYNCHI OBSERVED IN 1 OF 3 SEASONAL WETLANDS & 1 OF 48 VERNAL POOLS INSPECTED IN SECTION 4. THEY WERE ALSO OBSERVED IN AN UNDESCRIBED MADMADE FEATURE IN SECTION 5. SUGNET RECORD #'S 58, 59 & 60.  
 Owner/Manager: UNKNOWN

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|   |                       |                              |                       |
|---|-----------------------|------------------------------|-----------------------|
| Branchinecta lynchi (cont.)<br>vernal pool fairy shrimp<br>Element Code: ICBRA03030 | -----List Status----- | -----NDDB Element Ranks----- | -----Other Lists----- |
|   | Federal: Threatened   | Global: G2G3                 | CDFG Status:          |
|   | State: None           | State: S2S3                  |                       |

Occurrence No. 163      Map Index:33687      ---Dates Last Seen---      Lat/Long: 38°27'11" / 121°20'01"      Township: 07N  
 Occ Rank: Unknown      Element: 1993-03-02      UTM: Zone-10 N4257183 E645412      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1993-03-02      Precision: NON-SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 2,537.5 ac      Elevation: 65 ft  
 Main Source: SUGNET & ASSOC. 1993 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: EAST OF ELK GROVE-FLORIN RD, WEST OF EXCELSIOR RD, & NORTH OF SHELDON RD. NNE OF ELK GROVE.  
 ---Comments---  
 Distribution: VERNAL POOLS LOCATED SOMEWHERE IN SECTIONS 15, 16, 17 & 19.  
 Ecological: NATURAL VERNAL POOLS.  
 Threat:  
 General: B. LYNCHI OBSERVED IN 4 OF 49 FEATURES INSPECTED IN SEC 15 ON 3/2/93, IN 1 FEATURE INSPECTED IN SEC 17 ON 1/23/93, AND IN 1 FEATURE INSPECTED IN SEC 19 ON 2/6/93. SUGNET RECORD #'S 61, 62 & 64.  
 Owner/Manager: UNKNOWN

Occurrence No. 164      Map Index:33688      ---Dates Last Seen---      Lat/Long: 38°24'59" / 121°20'34"      Township: 07N  
 Occ Rank: Unknown      Element: 1993-03-02      UTM: Zone-10 N4253115 E644670      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1993-03-02      Precision: NON-SPECIFIC      Section: 32 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 3/5 mile      Elevation: 50 ft  
 Main Source: SUGNET & ASSOC. 1993 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: NORTH OF ELK GROVE BLVD, SOUTH OF BOND RD, EAST OF WATERMAN RD, & WEST OF BRADSHAW RD. EAST OF ELK GROVE.  
 ---Comments---  
 Distribution: VERNAL POOLS AND SEASONAL WETLANDS LOCATED SOMEWHERE IN SECTION 32.  
 Ecological: NATURAL VERNAL POOLS AND NATURAL SEASONAL WETLANDS.  
 Threat:  
 General: B. LYNCHI OBSERVED IN 19 OF 24 INSPECTED VERNAL POOLS AND 2 OF 13 INSPECTED SEASONAL WETLANDS ON 2/2/93, AND IN 1 OF 23 INSPECTED VERNAL POOLS ON 3/2/93. SUGNET RECORD #'S 65, 66, & 67.  
 Owner/Manager: UNKNOWN

Occurrence No. 186      Map Index:36807      ---Dates Last Seen---      Lat/Long: 38°29'07" / 121°16'58"      Township: 07N  
 Occ Rank: Unknown      Element: 1991-04-06      UTM: Zone-10 N4260853 E649773      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1991-04-06      Precision: NON-SPECIFIC      Section: 02 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 158.8 ac      Elevation: 100 ft  
 Main Source: BELK, D. 1991 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: "MULTI-CULTURE PARK" (FORMERLY, FLORIN PARK), SOUTH OF (OLD) MATHER AIR FORCE BASE.  
 ---Comments---  
 Distribution:  
 Ecological:  
 Threat:  
 General: AN UNKNOWN NUMBER COLLECTED BY CHRIS NAGANO AND JAMIE KING ON 6 APRIL 1991; IDENTIFIED BY DENTON BELK (DB #991).  
 Owner/Manager: UNKNOWN

*Branchinecta lynchi* (cont.)  
vernal pool fairy shrimp  
Element Code: ICBRA03030

|                       |                    |                       |
|-----------------------|--------------------|-----------------------|
| -----List Status----- | NDDB Element Ranks | -----Other Lists----- |
| Federal: Threatened   | Global: G2G3       | CDFG Status:          |
| State: None           | State: S2S3        |                       |

Occurrence No. 190      Map Index:36874      ---Dates Last Seen---      Lat/Long: 38°30'14" / 121°15'10"      Township: 08N  
 Occ Rank: Good      Element: 2000-03-15      UTM: Zone-10 N4262974 E652346      Range: 07E  
 Origin: Natural/Native occurrence      Site: 2000-03-15      Precision: NON-SPECIFIC      Section: 31 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 587.8 ac      Elevation: 125 ft  
 Main Source: MUTH, D. 1996 (OBS)  
 Quad Summary: CARMICHAEL (3812153/512D)\*, SLOUGHHOUSE (3812142/495B), ELK GROVE (3812143/496A), BUFFALO CREEK (3812152/511C)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: VICINITY OF THE INTERSECTION OF EAGLES NEST ROAD AND HWY 16 (JACKSON ROAD), SOUTH OF MATHER AIR FORCE BASE.  
 -----Comments-----  
 Distribution:  
 Ecological: HABITAT CONSISTS OF NORTHERN HARDPAN VERNAL POOLS, AS WELL AS SCRAPES, SWALES, DEPRESSIONS, AND STOCK PONDS;  
 SURROUNDED BY NON-NATIVE GRASSLAND.  
 Threat: THREATENED BY GRAVEL MINING.  
 General: NUMEROUS FAIRY SHRIMP FOUND AT THIS SITE DURING SPRING 1996 AND 1997 SURVEYS. OBSERVED 10+ ADULTS MARCH 2000,  
 IN WESTERN PORTION OF POLYGON.  
 Owner/Manager: PVT

Occurrence No. 228      Map Index:33693      ---Dates Last Seen---      Lat/Long: 38°29'58" / 121°17'00"      Township: 08N  
 Occ Rank: Excellent      Element: 1998-01-28      UTM: Zone-10 N4262430 E649680      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1998-01-28      Precision: SPECIFIC      Section: 35 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 161.9 ac      Elevation: 115 ft  
 Main Source: WHITNEY, K. 1998 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)\*, CARMICHAEL (3812153/512D)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: ARROYO SECO SITE, 0.8 MILE ENE JCT OF EXCELSIOR RD & FLORIN RD, 1.5 MILES WSW OF JCT EAGLES NEST RD & JACKSON  
 RD.  
 -----Comments-----  
 Distribution: ARROYO SECO MITIGATION BANK SITE (PREVIOUSLY DESCRIBED AS: VERNAL POOLS SOMEWHERE IN SECTION 35).  
 Ecological: NATURAL VERNAL POOLS IN A VERNAL POOL COMMUNITY  
 Threat:  
 General: 100'S OBSERVED IN MITIGATION BANK, SURVEYED 28 JAN 1998.  
 Owner/Manager: PVT

Occurrence No. 343      Map Index:46127      ---Dates Last Seen---      Lat/Long: 38°27'48" / 121°20'10"      Township: 07N  
 Occ Rank: Excellent      Element: 2002-01-21      UTM: Zone-10 N4258335 E645154      Range: 06E  
 Origin: Natural/Native occurrence      Site: 2002-01-21      Precision: NON-SPECIFIC      Section: 17 Qtr NE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 93.8 ac      Elevation: 65 ft  
 Main Source: ECORP CONSULTING, INC. 2002 (LIT)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: CHURCHILL DOWNS WETLAND PRESERVE; 4 MILES NNE OF ELK GROVE.  
 -----Comments-----  
 Distribution: 1 MILE SOUTH GERBER RD, 0.5 MILE NORTH CALVINE RD & EXTENDING FROM 0.4 MILE WEST BRADSHAW RD. INDIVIDUALS  
 DETECTED IN POOL NUMBERS 12 AND 15 (NE 1/4 OF THE NE 1/4, SECTION 17).  
 Ecological: HABITAT CONSISTS OF A VERNAL POOL IN A GRASSLAND. LINDERIELLA OCCIDENTALIS IN AND LEPIDURUS PACKARDI ALSO IN  
 VICINITY.  
 Threat:  
 General: 10'S OBSERVED IN POOL 12 AND 1000'S OBSERVED IN POOL 15 ON 21 JAN 2002.  
 Owner/Manager: PVT

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*Branchinecta lynchi* (cont.)  
vernal pool fairy shrimp  
Element Code: ICBRA03030

| List Status         | NDDB Element Ranks | Other Lists  |
|---------------------|--------------------|--------------|
| Federal: Threatened | Global: G2G3       | CDFG Status: |
| State: None         | State: S283        |              |

Occurrence No. 344      Map Index: 48534      —Dates Last Seen—      Lat/Long: 38°28'23" / 121°21'32"      Township: 07N  
Occ Rank: Excellent      Element: 2002-01-21      UTM: Zone-10 N4259383 E643155      Range: 06E  
Origin: Natural/Native occurrence      Site: 2002-01-21      Precision: NON-SPECIFIC      Section: 07 Qtr SE  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 55.4 ac      Elevation: 50 ft  
Main Source: ECORP CONSULTING, INC. 2002 (LIT)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: CHURCHILL DOWNS WETLAND PRESERVE; 4.5 MILES NORTH OF ELK GROVE.  
—Comments—  
Distribution: 0.5 MILE SOUTH OF GERBER RD, 1.2 MILES NORTH OF CALVINE AND 0.5 MILE EAST OF ELK GROVE FLORIN RD. INDIVIDUALS  
OBSERVED IN POOL NUMBER 9 (NE 1/4 OF THE SE 1/4, SECTION 7).  
Ecological: HABITAT CONSISTS OF A VERNAL POOL WITHIN A GRASSLAND. LINDERIELLA OCCIDENTALIS AND LEPIDURUS PACKARDI ALSO IN  
VICINITY.  
Threat:  
General: 10'S OBSERVED IN POOL NUMBER 9 ON 21 JAN 2002.  
Owner/Manager: PVT



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*Branchinecta mesovallensis*  
midvalley fairy shrimp  
Element Code: ICBRA03150

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Species of Concern    Global: G2    CDFG Status:  
State: None    State: S2

-----Habitat Associations-----

General: VERNAL POOLS IN THE CENTRAL VALLEY  
Micro: None for this Element

Occurrence No. 29    Map Index: 48318    ---Dates Last Seen---    Lat/Long: 38°27'12" / 121°20'04"    Township: 07N  
Occ Rank: Unknown    Element: 1991-19-03    UTM: Zone-10 N4257241 E645317    Range: 06E  
Origin: Natural/Native occurrence    Site: 1991-19-03    Precision: NON-SPECIFIC    Section: 17 Qtr SE  
Presence: Presumed Extant    Symbol Type: POINT    Meridian: M  
Trend: Unknown    Radius: 1/10 mile    Elevation: 60 ft  
Main Source: BELK, D. & M. FUGATE 2002 (LIT)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: BELMONT ESTATES (OGDEN RANCH) NORTHWEST OF THE INTERSECTION OF BRADSHAW ROAD AND CALVINE ROAD.

-----Comments-----

Distribution:  
Ecological: VERNAL POOLS.  
Threat:  
General: DENTON BELK COLLECTION # 1014 COLLECTED 19 MAR 1991 BY BRENT HELM. UNKNOWN NUMBER OF INDIVIDUALS OBSERVED/COLLECTED AT SITE #003 (D. ROGERS) ON AN UNKNOWN DATE; ROGERS' LOCATION INFORMATION OBTAINED FROM VARIOUS SOURCES.

Owner/Manager: UNKNOWN

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*Linderiella occidentalis*  
California *linderiella*  
Element Code: ICBRA06010

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Species of Concern Global: G2G3 CDFG Status:  
State: None State: S2S3

-----Habitat Associations-----

General: SEASONAL POOLS IN UNFLOWED GRASSLANDS WITH OLD ALLUVIAL SOILS UNDERLAIN BY HARDPAN OR IN SANDSTONE DEPRESSIONS.  
Micro: WATER IN THE POOLS HAS VERY LOW ALKALINITY, CONDUCTIVITY, AND TDS.

Occurrence No. 131 Map Index:34800 -----Dates Last Seen----- Lat/Long: 38°29'46" / 121°21'48" Township: 07N  
Occ Rank: Unknown Element: 1992-04-02 UTM: Zone-10 N4261928 E642726 Range: 06E  
Origin: Natural/Native occurrence Site: 1992-04-02 Precision: SPECIFIC Section: 06 Qtr NW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 48 ft  
Main Source: KOFORD, E. 1992 (PERS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: 0.1 MILES WEST OF HEDGE AVENUE AND SOUTH OF FLORIN ROAD IN A 35 FOOT LONG PUDDLE.  
-----Comments-----  
Distribution:  
Ecological: 35 FOOT LONG PUDDLE.  
Threat:  
General: KOFORD OBSERVED LINDERIELLA IN PUDDLE DURING SURVEY IN SPRING OF 1992.  
Owner/Manager: UNKNOWN

Occurrence No. 132 Map Index:34801 -----Dates Last Seen----- Lat/Long: 38°29'47" / 121°20'02" Township: 07N  
Occ Rank: Unknown Element: 1992-04-02 UTM: Zone-10 N4262000 E645301 Range: 06E  
Origin: Natural/Native occurrence Site: 1992-04-02 Precision: NON-SPECIFIC Section: 05 Qtr NE  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 4/5 mile Elevation: 64 ft  
Main Source: KOFORD, E. 1992 (PERS)  
Quad Summary: ELK GROVE (3812143/496A)\*, CARMICHAEL (3812153/512D)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: ROADSIDE DITCHES NEAR FLORIN ROAD AND BRADSHAW ROAD, BESIDE FLORIN ROAD.  
-----Comments-----  
Distribution: TWO SITES, 0.6 MILES APART.  
Ecological: ROADSIDE DITCHES.  
Threat:  
General: KOFORD OBSERVED LINDERIELLA IN DITCHES DURING SURVEY IN SPRING OF 1992.  
Owner/Manager: UNKNOWN

Occurrence No. 182 Map Index:42726 -----Dates Last Seen----- Lat/Long: 38°28'37" / 121°20'22" Township: 07N  
Occ Rank: Unknown Element: 1993-03-31 UTM: Zone-10 N4259852 E644833 Range: 06E  
Origin: Natural/Native occurrence Site: 1993-03-31 Precision: NON-SPECIFIC Section: 08 Qtr XX  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 156.9 ac Elevation: 60 ft  
Main Source: KIRKPATRICK, G. 1993 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: ALONG CENTRAL CALIFORNIA TRACTION RAILROAD, NORTH OF CALVINE RD, SOUTH OF FLORIN RD, & WEST OF VINEYARD RD.  
-----Comments-----  
Distribution: LONG NARROW RAIN FILLED DEPRESSIONS IN RAILROAD RIGHT-OF-WAY. LAND USE IS GRAZING AND RAILROAD RIGHT-OF-WAY.  
SOME ADJACENT PASTURES HAD REALLY NICE LOOKING VERNAL POOLS.  
Ecological: UNDULATING TOPOGRAPHY, RED CLAY SOILS. POOLS 5 X 10 TO 15 METERS  
Threat: RAILROAD MAINTENENCE, CONVERSION TO RESIDENTIAL, INTENSIVE AGRICULTURE, GRAZING, DUMPING.  
General: NUMEROUS TO FEW ADULTS OBSERVED, HIGHER NUMBERS IN THE MIDDLE SECTION OF MAPPED AREA. ALSO OBSERVED LEPIDURUS  
SP, CLAM SHRIMP, RED COPEPODS.  
Owner/Manager: PVT

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*Linderiella occidentalis* (cont.)  
California *linderiella*  
Element Code: ICBRA06010

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Species of Concern      Global: G2G3      CDFG Status:  
State: None      State: S2S3

Occurrence No. 183      Map Index: 42727      ---Dates Last Seen---      Lat/Long: 38°29'54" / 121°21'32"      Township: 08N  
Occ Rank: Unknown      Element: 1993-04-01      UTM: Zone-10 N4262184 E643088      Range: 06E  
Origin: Natural/Native occurrence      Site: 1993-04-01      Precision: NON-SPECIFIC      Section: 31 Qtr SE  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 27.2 ac      Elevation: 40 ft  
Main Source: KIRKPATRICK, G. 1993 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)\*, CARMICHAEL (3812153/512D)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: ALONG CENTRAL CALIFORNIA TRACTION RAILROAD, BETWEEN HEDGE AVE AND FLORIN ROAD, SACRAMENTO.

-----Comments-----  
Distribution: NARROW RAIN-FILLED DEPRESSION IN RIGHT-OF-WAY ~ 5 METERS IN WIDTH AND 15 METERS IN LENGTH. UNDULATING TOPOGRAPHY ON RED CLAY SOILS.  
Ecological: CLEAR, CLAY BOTTOMED POOL WITH SOME EMERGENT VEGETATION, POOL IS ADJACENT TO SAND LOADER USED FOR RAIL BED MAINTENANCE.  
Threat: RAILROAD MAINTENENCE AND GRADING OF RAILROAD.  
General: MODERATE DENSITY OF REPRODUCTIVE ADULTS OBSERVED; ALSO OBSERVED WESTERN TOAD TADPOLES, 1993.  
Owner/Manager: PVT

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*Lepidurus packardii*  
vernal pool tadpole shrimp  
Element Code: ICBRA10010

-----List Status----- NDDB Element Ranks-----Other Lists-----  
Federal: Endangered Global: G2G3 CDFG Status:  
State: None State: S2S3

-----Habitat Associations-----

General: INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.  
Micro: POOLS COMMONLY FOUND IN GRASS BOTTOMED SWALES OF UNPLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED & HIGHLY TURBID.

Occurrence No. 71 Map Index:34802 ---Dates Last Seen--- Lat/Long: 38°29'53" / 121°17'38" Township: 08N  
Occ Rank: Unknown Element: 1992-04-02 UTM: Zone-10 N4262263 E648784 Range: 06E  
Origin: Natural/Native occurrence Site: 1992-04-02 Precision: NON-SPECIFIC Section: 35 Qtr SW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 1/5 mile Elevation: 110 ft  
Main Source: KOFORD, E. 1992 (PERS)  
Quad Summary: ELK GROVE (3812143/496A)\*, CARMICHAEL (3812153/512D)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: NEAR NORTHEAST CORNER OF EXCELSIOR ROAD AND FLORIN ROAD.  
-----Comments-----  
Distribution:  
Ecological: VERNAL POOL.  
Threat:  
General: KOFORD OBSERVED TADPOLE SHRIMP DURING SURVEY IN SPRING OF 1992.  
Owner/Manager: UNKNOWN

Occurrence No. 85 Map Index:36381 ---Dates Last Seen--- Lat/Long: 38°27'54" / 121°19'24" Township: 07N  
Occ Rank: Fair Element: 1997-02-12 UTM: Zone-10 N4258522 E646281 Range: 06E  
Origin: Natural/Native occurrence Site: 1997-02-12 Precision: SPECIFIC Section: 16 Qtr NE  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 65 ft  
Main Source: WOLFF, D. 1997 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: SOUTH OF LAGUNA CREEK, 0.5 MILE WEST OF VINEYARD BLVD, 4 MILES NE OF ELK GROVE.  
-----Comments-----  
Distribution: SITE IS LOCATED NORTH OF A LARGE SUBDIVISION BETWEEN VINEYARD LANE AND CENTRAL CALIFORNIA TRACTION.  
Ecological: HABITAT CONSISTS OF A GRAZED SEASONAL WETLAND FORMED BY EARTH EXCAVATION, SCRAPING 6 YEARS AGO. SOME VERNAL  
POOL PLANTS PRESENT, BUT MANY WEEDY, NON-NATIVES AS WELL; DOMINANTS: PLAGIOBOTHRYS STIPATATUS, ELEOCHARIS  
MACROSTACHYA.  
Threat:  
General: 7 ADULTS OBSERVED (6 DEAD, 1 ALIVE) ON 12 FEB 1997.  
Owner/Manager: SAC COUNTY-PARKS & REC

Occurrence No. 86 Map Index:30622 ---Dates Last Seen--- Lat/Long: 38°23'23" / 121°20'41" Township: 06N  
Occ Rank: Unknown Element: 1993-03-12 UTM: Zone-10 N4250133 E644569 Range: 06E  
Origin: Natural/Native occurrence Site: 1993-03-12 Precision: NON-SPECIFIC Section: 08 Qtr XX  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 3/5 mile Elevation: 50 ft  
Main Source: SUGNET & ASSOC. 1993 (PERS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: VICINITY OF GRANT LINE ROAD. ABOUT 1.5 MILES SE OF ELK GROVE.  
-----Comments-----  
Distribution: ROADSIDE DITCH LOCATED SOMEWHERE IN SECTION 8.  
Ecological: MANMADE ROADSIDE DITCH.  
Threat:  
General: LEPIDURUS PACKARDI OBSERVED IN THE 1 FEATURE INSPECTED. SUGNET RECORD #129.  
Owner/Manager: UNKNOWN

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*Lepidurus packardii* (cont.)  
vernal pool tadpole shrimp  
Element Code: ICBRA10010

|                       |                              |                       |
|-----------------------|------------------------------|-----------------------|
| -----List Status----- | -----NDDB Element Ranks----- | -----Other Lists----- |
| Federal: Endangered   | Global: G2G3                 | CDFG Status:          |
| State: None           | State: S2S3                  |                       |

Occurrence No. 90      Map Index:33686      ---Dates Last Seen---      Lat/Long: 38°29'21" / 121°20'35"      Township: 07N  
 Occ Rank: Unknown      Element: 1993-02-16      UTM: Zone-10 N4261171 E644513      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1993-02-16      Precision: NON-SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 1,920.3 ac      Elevation: 60 ft  
 Main Source: SUGNET & ASSOC. 1993 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: NORTH OF GERBER ROAD, SOUTH OF FLORIN ROAD, EAST OF ELK GROVE-FLORIN ROAD. ABOUT 5 MILES NORTH OF ELK GROVE.  
 -----Comments-----  
 Distribution: SEASONAL WETLANDS, VERNAL POOLS AND ROADSIDE DITCHES SOMEWHERE IN SECTIONS 4, 5 & 6.  
 Ecological: NATURAL SEASONAL WETLANDS, NATURAL VERNAL POOLS AND MANMADE ROADSIDE DITCHES.  
 Threat:  
 General: LEPIDURUS PACKARDI OBSERVED IN 1 OF 3 SEASONAL WETLANDS & 4 OF 48 VERNAL POOLS INSPECTED IN SEC 4. ALSO IN 3 OF 21 SEASONAL WETLANDS INSPECTED IN SEC 5 & 1 OF 3 ROADSIDE DITCHES INSPECTED IN SEC 6. SUGNET RECORD #'S 136, 137, 138 & 139.  
 Owner/Manager: UNKNOWN

Occurrence No. 91      Map Index:33687      ---Dates Last Seen---      Lat/Long: 38°27'11" / 121°20'01"      Township: 07N  
 Occ Rank: Unknown      Element: 1997-02-12      UTM: Zone-10 N4257183 E645412      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1997-02-12      Precision: NON-SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 2,537.5 ac      Elevation: 65 ft  
 Main Source: SUGNET & ASSOC. 1993 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: EAST OF ELK GROVE-FLORIN RD, WEST OF EXCELSIOR RD, NORTH OF SHELDON RD. NNE OF ELK GROVE.  
 -----Comments-----  
 Distribution: VERNAL POOLS LOCATED SOMEWHERE IN SECTIONS 15, 16, 17 & 19. 1997 SURVEY BY D. WOLFF WAS NEAR CENTER OF SECTION 16 BORDERED BY RR TRACKS.  
 Ecological: NATURAL VERNAL POOLS. 1997 IN NORTHERN HARDPAN VERNAL POOLS COMMUNITY.  
 Threat: DEVELOPEMENT, CATTLE GRAZING  
 General: LEPIDURUS PACKARDI OBSERVED IN 29 OF 49 FEATURES INSPECTED IN SEC 15 ON 3/2/93, AND IN 1 FEATURE INSPECTED IN SECTION 16 ON 1/25/93. SUGNET RECORD #'S 140 & 141. 7 OBSERVED IN 1997.  
 Owner/Manager: UNKNOWN

Occurrence No. 94      Map Index:33693      ---Dates Last Seen---      Lat/Long: 38°29'58" / 121°17'00"      Township: 08N  
 Occ Rank: Excellent      Element: 1998-01-28      UTM: Zone-10 N4262430 E649680      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1998-01-28      Precision: SPECIFIC      Section: 35 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 161.9 ac      Elevation: 115 ft  
 Main Source: WHITNEY, K. 1998 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)\*, CARMICHAEL (3812153/512D)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: ARROYO SECO SITE, 0.8 MILE ENE JCT OF EXCELSIOR RD & FLORIN RD, 1.5 MILES WSW OF JCT EAGLES NEST RD & JACKSON RD.  
 -----Comments-----  
 Distribution: ARROYO SECO MITIGATION BANK SITE (PREVIOUSLY DESCRIBED AS: VERNAL POOLS SOMEWHERE IN SECTION 35).  
 Ecological: NATURAL VERNAL POOLS IN A VERNAL POOL COMMUNITY  
 Threat:  
 General: 2 APR 1992: UNKNOWN NUMBER OF LEPIDURUS PACKARDI OBSERVED IN A VERNAL POOL, SUGNET RECORD #150. 100'S OBSERVED IN MITIGATION BANK, SURVEYED 28 JAN 1998.  
 Owner/Manager: PVT

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|  |                     |                    |               |
|--|---------------------|--------------------|---------------|
| <i>Lepidurus packardii</i> (cont.)<br>vernal pool tadpole shrimp<br>Element Code: ICBRA10010 | —List Status—       | NDDB Element Ranks | —Other Lists— |
|  | Federal: Endangered | Global: G2G3       | CDFG Status:  |
|  | State: None         | State: S2S3        |               |

Occurrence No. 113      Map Index:36874      —Dates Last Seen—      Lat/Long: 38°30'14" / 121°15'10"      Township: 08N  
 Occ Rank: Good      Element: 2000-03-15      UTM: Zone-10 N4262974 E652346      Range: 07E  
 Origin: Natural/Native occurrence      Site: 2000-03-15      Precision: NON-SPECIFIC      Section: 31 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 587.8 ac      Elevation: 125 ft  
 Main Source: MUTH, D. 1996 (OBS)  
 Quad Summary: CARMICHAEL (3812153/512D)\*, SLOUGHHOUSE (3812142/495B), ELK GROVE (3812143/496A), BUFFALO CREEK (3812152/511C)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: VICINITY OF THE INTERSECTION OF EAGLES NEST ROAD AND HWY 16 (JACKSON ROAD), SOUTH OF MATHER AIR FORCE BASE.  
 —Comments—  
 Distribution:  
 Ecological: HABITAT CONSISTS OF NORTHERN HARDPAN VERNAL POOLS, AS WELL AS SCRAPES, SWALES, DEPRESSIONS, AND STOCK PONDS; SURROUNDED BY NON-NATIVE GRASSLAND.  
 Threat: THREATENED BY GRAVEL MINING.  
 General: NUMEROUS FAIRY SHRIMP AND TADPOLE SHRIMP FOUND AT THIS SITE DURING SPRING 1996 SURVEYS. 10 PLUS ADULTS OBSERVED MARCH 2000 IN WESTERN PORTION OF POLYGON.  
 Owner/Manager: PVT

Occurrence No. 165      Map Index:46127      —Dates Last Seen—      Lat/Long: 38°27'48" / 121°20'10"      Township: 07N  
 Occ Rank: Excellent      Element: 2002-01-21      UTM: Zone-10 N4258335 E645154      Range: 06E  
 Origin: Natural/Native occurrence      Site: 2002-01-21      Precision: NON-SPECIFIC      Section: 17 Qtr NE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 93.8 ac      Elevation: 65 ft  
 Main Source: CAPELL, S. ET AL 2001 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: CHURCHILL DOWNS WETLAND PRESERVE; 4 MILES NNE OF ELK GROVE.  
 —Comments—  
 Distribution: 1 MILE SOUTH GERBER RD, 0.5 MILE NORTH CALVINE RD & EXTENDING FROM 0.4 MILE WEST BRADSHAW RD. 2001 SURVEY: SE 1/4 OF NE 1/4, SECTION 17. 2002 SURVEY: INDIVIDUALS OBSERVED IN POOL NUMBER CVPI (NW 1/4 OF THE NE 1/4, SECTION 17).  
 Ecological: SITE IS VERNAL POOL PRESERVE - GRASSLAND. OTHER SPECIES: LINDERIELLA OCCIDENTALIS AND BRANCHINECTA LYNCHI ALSO IN VICINITY. SURROUNDING LAND CONSISTS OF HOMES.  
 Threat:  
 General: 16 MAR 2001: 100'S OF ADULTS OBSERVED. 5 APR 2001: 10'S OF EXOSKELETONS OBSERVED IN POOL - NO LIVE SHRIMP FOUND. 100'S OBS IN 1 POOL ON 21 JAN 2002.  
 Owner/Manager: ELLIOT HOMES

Occurrence No. 173      Map Index:48534      —Dates Last Seen—      Lat/Long: 38°28'23" / 121°21'32"      Township: 07N  
 Occ Rank: Excellent      Element: 2002-01-21      UTM: Zone-10 N4259383 E643155      Range: 06E  
 Origin: Natural/Native occurrence      Site: 2002-01-21      Precision: NON-SPECIFIC      Section: 07 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 55.4 ac      Elevation: 50 ft  
 Main Source: ECORP CONSULTING, INC. 2002 (LIT)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: CHURCHILL DOWNS WETLAND PRESERVE; 4.5 MILES NORTH OF ELK GROVE.  
 —Comments—  
 Distribution: 0.5 MILE SOUTH OF GERBER RD, 1.2 MILES NORTH OF CALVINE AND 0.5 MILE EAST OF FLORIN RD. INDIVIDUALS OBSERVED IN POOL NUMBERS 8 AND 34 (NE 1/4 OF THE SE 1/4, SECTION 7).  
 Ecological: HABITAT CONSISTS OF A VERNAL POOL WITHIN A GRASSLAND. LINDERIELLA OCCIDENTALIS AND BRANCHINECTA LYNCHI ALSO IN VICINITY.  
 Threat:  
 General: 1000'S OBSERVED IN POOL 8 AND 10'S OBSERVED IN POOL 34 ON 21 JAN 2002  
 Owner/Manager: PVT

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*Desmocerus californicus dimorphus*  
valley elderberry longhorn beetle  
Element Code: IICOL48011

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Threatened Global: G3T2 CDFG Status:  
State: None State: S2

-----Habitat Associations-----

General: OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA, IN ASSOCIATION WITH BLUE ELDERBERRY (SAMBUCUS MEXICANA).  
Micro: PREFERS TO LAY EGGS IN ELDERBERRIES 2-8 INCHES IN DIAMETER; SOME PREFERENCE SHOWN FOR "STRESSED" ELDERBERRIES.

Occurrence No. 163 Map Index:39509 ---Dates Last Seen--- Lat/Long: 38°25'01" / 121°16'17" Township: 99X  
Occ Rank: Unknown Element: 1984-XX-XX UTM: Zone-10 N4253289 E650912 Range: 99X  
Origin: Natural/Native occurrence Site: 1984-XX-XX Precision: NON-SPECIFIC Section: XX Qtr XX  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: X  
Trend: Unknown Area: 403.6 ac Elevation: 60 ft  
Main Source: ARNOLD, R. 1984 (LIT)  
Quad Summary: ELK GROVE (3812143/496A)\*, SLOUGHHOUSE (3812142/495B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: ALONG COSUMNES RIVER, NEAR WILTON.  
-----Comments-----  
Distribution: STREAM MAPPED, FOR ~4 RIVER MILES AROUND WILTON.  
Ecological:  
Threat:  
General: EXIT HOLES OBSERVED DURING MAY AND JUNE SURVEYS, 1984, NO ADULTS OBSERVED.  
Owner/Manager: UNKNOWN

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*Downingia pusilla*  
dwarf downingia  
Element Code: PDCAM060C0

|                       |                         |                   |
|-----------------------|-------------------------|-------------------|
| -----List Status----- | NDDB Element Ranks----- | Other Lists-----  |
| Federal: None         | Global: G3              | CNPS List: 2      |
| State: None           | State: S3.1             | R-E-D Code: 1-2-1 |

-----Habitat Associations-----

General: VALLEY AND FOOTHILL GRASSLAND (MESIC SITES), VERNAL POOLS.  
Micro: VERNAL LAKE AND POOL MARGINS WITH A VARIETY OF ASSOCIATES. IN SEVERAL TYPES OF VERNAL POOLS. 1-485M.

|  |                 |                           |                                  |                    |
|--|-----------------|---------------------------|----------------------------------|--------------------|
| Occurrence No. 54  | Map Index:26056 | -----Dates Last Seen----- | Lat/Long: 38°25'59" / 121°21'01" | Township: 07N      |
| Occ Rank: Fair   |                 | Element: 1991-04-26       | UTM: Zone-10 N4254958 E643984    | Range: 06E         |
| Origin: Natural/Native occurrence                                    |                 | Site: 1991-04-26          | Precision: SPECIFIC              | Section: 29 Qtr NW |
| Presence: Presumed Extant  |                 |                           | Symbol Type: POINT               | Meridian: M        |
| Trend: Unknown   |                 |                           | Radius: 80 meters                | Elevation: 55 ft   |
| Main Source: WITHAM, C. 1991 (OBS)                                   |                 |                           |                                  |                    |
| Quad Summary: ELK GROVE (3812143/496A)                               |                 |                           |                                  |                    |
| County Summary: SACRAMENTO   |                 |                           |                                  |                    |
| SNA Summary:   |                 |                           |                                  |                    |
| Location: SOUTHEAST CORNER OF SHELDON AND WATERMAN ROADS, ELK GROVE. |                 |                           |                                  |                    |

-----Comments-----

Distribution: MAPPED BETWEEN LAGUNA CREEK AND WATERMAN ROAD IN THE SW CORNER OF DAIRY PASTURE. WITHIN THE SW 1/4 OF THE NW 1/4 OF SECTION 29.  
Ecological: VERNAL POOL DOMINATED BY ALLOCARYA STIPITATA MICRANTHA, RANUNCULUS BONARIENSIS TRISEPALUS, AND ERYNGIUM VASEYI VALLICOLA. LEGENERE LIMOSA GROWING IN NEARBY POOL AND SEASONAL WETLAND.  
Threat: MOST POOLS HEAVILY DAMAGED BY EXHAUSTIVE DAIRY CATTLE GRAZING.  
General: ABOUT 200 PLANTS OBSERVED IN 1991.  
Owner/Manager: PVT

|   |                 |                           |                                  |                    |
|---|-----------------|---------------------------|----------------------------------|--------------------|
| Occurrence No. 55   | Map Index:26057 | -----Dates Last Seen----- | Lat/Long: 38°25'38" / 121°21'11" | Township: 07N      |
| Occ Rank: Good  |                 | Element: 1991-04-XX       | UTM: Zone-10 N4254295 E643764    | Range: 06E         |
| Origin: Natural/Native occurrence                                     |                 | Site: 1991-04-XX          | Precision: SPECIFIC              | Section: 30 Qtr SE |
| Presence: Presumed Extant   |                 |                           | Symbol Type: POLYGON             | Meridian: M        |
| Trend: Unknown  |                 |                           | Area: 12.9 ac                    | Elevation: 60 ft   |
| Main Source: DAINS, V. 1991 (OBS)                                     |                 |                           |                                  |                    |
| Quad Summary: ELK GROVE (3812143/496A)                                |                 |                           |                                  |                    |
| County Summary: SACRAMENTO  |                 |                           |                                  |                    |
| SNA Summary:  |                 |                           |                                  |                    |
| Location: NORTHWEST CORNER OF BOND ROAD AND WATERMAN ROAD, ELK GROVE. |                 |                           |                                  |                    |

-----Comments-----

Distribution: TWO CONCENTRATIONS OF PLANTS MAPPED; ONE ALONG EAST SIDE OF WATERMAN ABOUT 0.2 MILE NORTH OF BOND. THE OTHER IS ABOUT 0.35 MILE WEST OF WATERMAN AND 0.1 MILE NORTH OF BOND.  
Ecological: 6 POPULATIONS IN NATURAL POOLS; 2 POPULATIONS IN SCRAPED DEPRESSIONS. NATURAL POOLS HAVE A WELL DEVELOPED NATIVE FLORA. LEGENERE LIMOSA CO-OCCURS IN ONE POOL.  
Threat: CURRENT USE IS GRAZING; DEVELOPMENT PLAN IS BEING PREPARED.  
General: 300 PLANTS OBSERVED IN 1991. QUALITY OF NATURAL POOLS IS EXCELLENT, QUALITY OF SCRAPED DEPRESSIONS IS FAIR.  
Owner/Manager: PVT



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*Legenere limosa*

legenere

Element Code: PDCAM0C010

|                             |                              |                       |
|-----------------------------|------------------------------|-----------------------|
| -----List Status-----       | -----NDDB Element Ranks----- | -----Other Lists----- |
| Federal: Species of Concern | Global: G2                   | CNPS List: 1B         |
| State: None                 | State: S2.2                  | R-E-D Code: 2-3-3     |

-----Habitat Associations-----

General: VERNAL POOLS. MANY HISTORICAL OCCURRENCES ARE EXTIRPATED.

Micro: IN BEDS OF VERNAL POOLS. 1-880M.

|   |                 |                           |                                  |                   |
|---|-----------------|---------------------------|----------------------------------|-------------------|
| Occurrence No. 27   | Map Index:30207 | -----Dates Last Seen----- | Lat/Long: 38°25'42" / 121°21'37" | Township: 07N     |
| Occ Rank: Excellent   |                 | Element: 1991-04-XX       | UTM: Zone-10 N4254407 E643127    | Range: 06E        |
| Origin: Natural/Native occurrence                                     |                 | Site: 1991-04-XX          | Precision: SPECIFIC              | Section: 30 Qtr E |
| Presence: Presumed Extant   |                 |                           | Symbol Type: POLYGON             | Meridian: M       |
| Trend: Unknown  |                 |                           | Area: 90.7 ac                    | Elevation: 50 ft  |
| Main Source: DAINS, V. 1991 (OBS)                                     |                 |                           |                                  |                   |
| Quad Summary: ELK GROVE (3812143/496A)                                |                 |                           |                                  |                   |
| County Summary: SACRAMENTO  |                 |                           |                                  |                   |
| SNA Summary:  |                 |                           |                                  |                   |
| Location: NORTHWEST CORNER OF BOND ROAD AND WATERMAN ROAD, ELK GROVE. |                 |                           |                                  |                   |

-----Comments-----

Distribution: FIVE SUB-POPULATIONS FOUND IN NATURAL VERNAL POOLS AND FIVE IN DISTURBED/CREATED SEASONAL DEPRESSIONS.  
Ecological: NATURAL AND CREATED VERNAL POOLS/SEASONAL DEPRESSIONS. ASSOCIATES IN NATURAL POOLS INCLUDE ELEOCHARIS MACROSTACHYA, LASTHENIA GLABERRIMA, GRATIOLA HETEROSEPALA, AND DOWNINGIA PUSILLA.

Threat: CATTLE GRAZING, DEVELOPMENT PLANNED FOR THIS SITE.

General: 1000'S OF PLANTS OBSERVED AT THIS SITE IN 1991. NATURAL POOLS ARE OF EXCELLENT QUALITY; CREATED DEPRESSIONS ARE OF FAIR QUALITY. MOST OF THE LEGENERE POPULATIONS WILL BE PRESERVED ALTHOUGH SOME LESSER QUALITY POOLS WILL BE DESTROYED.

Owner/Manager: PVT

|  |                 |                           |                                  |                    |
|--|-----------------|---------------------------|----------------------------------|--------------------|
| Occurrence No. 28  | Map Index:30205 | -----Dates Last Seen----- | Lat/Long: 38°28'58" / 121°16'59" | Township: 07N      |
| Occ Rank: Excellent  |                 | Element: 1988-03-26       | UTM: Zone-10 N4260573 E649753    | Range: 06E         |
| Origin: Natural/Native occurrence  |                 | Site: 1988-03-26          | Precision: SPECIFIC              | Section: 02 Qtr SE |
| Presence: Presumed Extant  |                 |                           | Symbol Type: POLYGON             | Meridian: M        |
| Trend: Unknown   |                 |                           | Area: 18.6 ac                    | Elevation: 90 ft   |
| Main Source: DAINS, V. 1988 (OBS)  |                 |                           |                                  |                    |
| Quad Summary: ELK GROVE (3812143/496A)   |                 |                           |                                  |                    |
| County Summary: SACRAMENTO   |                 |                           |                                  |                    |
| SNA Summary:   |                 |                           |                                  |                    |
| Location: SOUTH FLORIN COUNTY PARK, ABOUT 1 MILE SOUTH OF FLORIN ROAD AND 0.7 MILE EAST OF EXCELSIOR ROAD, NORTHEAST OF ELK GROVE. |                 |                           |                                  |                    |

-----Comments-----

Distribution: LOCATED NEAR THE SOUTHERN BORDER OF THE PARK (PRE-DEVELOPMENT). FOUR COLONIES MAPPED WITHIN THE S 1/2 OF THE SE 1/4 OF SECTION 2.

Ecological: VERNAL POOLS. ASSOCIATED WITH ELEOCHARIS MACROSTACHYS AND LASTHENIA GLABERRIMA.

Threat: PARK SLATED FOR DEVELOPMENT (1988).

General: ABOUT 100 PLANTS OBSERVED WITHIN THE PARK (INCLUDING OCCURRENCE #29). POPULATION MAY BE LOW DUE TO DRY YEAR. SITE IS RELATIVELY UNDISTURBED/UNGRAZED. HIGH QUALITY SEASONAL WETLAND.

Owner/Manager: SAC COUNTY-PARKS & REC

|  |                 |                           |                                  |                    |
|--|-----------------|---------------------------|----------------------------------|--------------------|
| Occurrence No. 29  | Map Index:30204 | -----Dates Last Seen----- | Lat/Long: 38°29'33" / 121°17'02" | Township: 07N      |
| Occ Rank: Excellent  |                 | Element: 1988-03-26       | UTM: Zone-10 N4261641 E649674    | Range: 06E         |
| Origin: Natural/Native occurrence  |                 | Site: 1988-03-26          | Precision: SPECIFIC              | Section: 02 Qtr NE |
| Presence: Presumed Extant  |                 |                           | Symbol Type: POLYGON             | Meridian: M        |
| Trend: Unknown   |                 |                           | Area: 9.7 ac                     | Elevation: 110 ft  |
| Main Source: DAINS, V. 1988 (OBS)  |                 |                           |                                  |                    |
| Quad Summary: ELK GROVE (3812143/496A)   |                 |                           |                                  |                    |
| County Summary: SACRAMENTO   |                 |                           |                                  |                    |
| SNA Summary:   |                 |                           |                                  |                    |
| Location: SOUTH FLORIN COUNTY PARK, ABOUT 0.2 MILE SOUTH OF FLORIN ROAD AND 0.7 MILE EAST OF EXCELSIOR RD, NORTHEAST OF ELK GROVE. |                 |                           |                                  |                    |

-----Comments-----

Distribution: LOCATED NEAR THE NORTH-CENTRAL PORTION OF THE PARK (PRE-DEVELOPMENT). TWO COLONIES MAPPED ALONG AN EPHEMERAL DRAINAGE IN THE W 1/2 OF THE NE 1/4 OF SECTION 2.

Ecological: VERNAL POOLS. ASSOCIATED WITH ELEOCHARIS MACROSTACHYA AND LASTHENIA GLABERRIMA.

Threat: PARK SLATED FOR DEVELOPMENT (1988).

General: ABOUT 100 PLANTS OBSERVED WITHIN THE PARK (INCLUDING OCCURRENCE #28). POPULATION MAY BE LOW DUE TO DRY YEAR. ONLY A FEW PLANTS SEEN AT EACH LOCATION. SITE IS RELATIVELY UNDISTURBED/UNGRAZED. THESE ARE HIGH QUALITY SEASONAL WETLANDS.

Owner/Manager: SAC COUNTY-PARKS & REC

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|                                |                             |                    |                       |
|--------------------------------|-----------------------------|--------------------|-----------------------|
| <i>Legenere limosa</i> (cont.) | -----List Status-----       | NDDB Element Ranks | -----Other Lists----- |
| legenera                       | Federal: Species of Concern | Global: G2         | CNPS List: 1B         |
| Element Code: PDCAM0C010       | State: None                 | State: S2.2        | R-E-D Code: 2-3-3     |

Occurrence No. 30      Map Index:30206      ---Dates Last Seen---      Lat/Long: 38°25'57" / 121°20'54"      Township: 07N  
 Occ Rank: Fair      Element: 1991-04-26      UTM: Zone-10 N4254884 E644155      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1991-04-26      Precision: SPECIFIC      Section: 29 Qtr NW  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 18.3 ac      Elevation: 50 ft  
 Main Source: WITHAM, C. 1991 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: SOUTHEAST CORNER OF SHELDON ROAD AND WATERMAN ROAD, ELK GROVE.  
 ---Comments---  
 Distribution: THREE COLONIES MAPPED AS A SINGLE POLYGON WITHIN THE SW 1/4 OF THE NW 1/4 OF SECTION 29.  
 Ecological: LARGE SEASONAL WETLAND AND VERNAL POOL WITHIN A DAIRY PASTURE. DOMINANTS INCLUDE LASTHENIA GLABERRIMA, ALLOCARYA BRACTEATUS, ELEOCHARIS MACROSTACHYA, AND RANUNCULUS BONARIENSIS TRISEPALUS. DOWNINGIA PUSILLA OCCURS IN A NEARBY VERNAL POOL.  
 Threat: HEAVILY DAMAGED BY CATTLE GRAZING; ADJACENT PROPERTY BEING DEVELOPED FOR HOMES.  
 General: MORE THAN 300 PLANTS OBSERVED IN 1991; COLONIES RANGE IN SIZE FROM 5 TO 300 PLANTS.  
 Owner/Manager: PVT

Occurrence No. 60      Map Index:50727      ---Dates Last Seen---      Lat/Long: 38°28'25" / 121°21'23"      Township: 07N  
 Occ Rank: Excellent      Element: 2002-05-23      UTM: Zone-10 N4259445 E643356      Range: 06E  
 Origin: Natural/Native occurrence      Site: 2002-05-23      Precision: SPECIFIC      Section: 07 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 100 ft  
 Main Source: STARR, S. 2002 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: CHURCHILL DOWNS PRESERVE, 0.9 AIRMI SOUTHWEST OF GERBER ROAD AT THE CENTRAL CALIFORNIA RAILROAD TRACKS, EAST OF FLORIN.  
 ---Comments---  
 Distribution: MAPPED WITHIN THE NE 1/4 OF THE SE 1/4 OF SECTION 7.  
 Ecological: PLANTS FOUND IN VERNAL POOLS IN ASSOCIATION WITH ELEOCHARIS MACROSTACHYA, LASTHENIA GLABERRIMA, L. FREMONTII, PLAGIOBOTHRYIS SPITATUS, AND DESCHAMPSIA DANTHIOIDES.  
 Threat: NONE NOTED IN 2002.  
 General: THOUSANDS OF PLANTS OBSERVED IN 2002 BY STARR. PLANTS FOUND WITHIN A PRESERVE. SURROUNDED BY RESIDENTIAL DEVELOPMENT AND OPEN PASTURE.  
 Owner/Manager: PVT-ELLIOT CONSERVANCY

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*Gratiola heterosepala*  
Boggs Lake hedge-hyssop  
Element Code: PDSCR0R060

|                             |                              |                       |
|-----------------------------|------------------------------|-----------------------|
| -----List Status-----       | -----NDDB Element Ranks----- | -----Other Lists----- |
| Federal: Species of Concern | Global: G3                   | CNPS List: 1B         |
| State: Endangered           | State: S3.1                  | R-E-D Code: 1-2-2     |

-----Habitat Associations-----

General: MARSHES AND SWAMPS (FRESHWATER), VERNAL POOLS.  
Micro: CLAY SOILS; USUALLY IN VERNAL POOLS, SOMETIMES ON LAKE MARGINS. 5-2400M.

Occurrence No. 33      Map Index:23929      ---Dates Last Seen---      Lat/Long: 38°25'55" / 121°21'41"      Township: 07N  
Occ Rank: Fair      Element: 1991-05-13      UTM: Zone-10 N4254805 E643029      Range: 06E  
Origin: Natural/Native occurrence      Site: 1991-05-13      Precision: SPECIFIC      Section: 30 Qtr N  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 45 ft  
Main Source: DAINS, V. 1991 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: 0.75 MI NW OF INTERSECTION OF BOND AND WATERMAN RDS.  
-----Comments-----  
Distribution:  
Ecological: ASSOCIATED WITH ERYNGIUM VASEYI, ELEOCHARIS MACROSTACHYA, DOWNINGIA ORNATISSIMA. MOST PLANTS IN NEARLY BARREN PORTIONS OF POOL. ANOTHER RARE PLANT ALSO HERE: LEGENERE LIMOSA.  
Threat:  
General: 20 PLANTS IN 1991. SITE OWNED BY CAMRAY DEVELOPMENT.  
Owner/Manager: PVT

Occurrence No. 34      Map Index:23930      ---Dates Last Seen---      Lat/Long: 38°27'29" / 121°21'08"      Township: 07N  
Occ Rank: Good      Element: 1991-05-09      UTM: Zone-10 N4257718 E643767      Range: 06E  
Origin: Natural/Native occurrence      Site: 1991-05-09      Precision: SPECIFIC      Section: 17 Qtr SW  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Decreasing      Radius: 80 meters      Elevation: 75 ft  
Main Source: WITHAM, C. 1991 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: 0.35 MI N OF INTERSECTION OF CALVINE AND WATERMAN ROADS.  
-----Comments-----  
Distribution:  
Ecological: LARGE VERNAL POOL COMPLEX; GROWING IN SPARSELY VEGETATED DEEPER AREAS OF POOLS. ASSOCIATED WITH ELEOCHARIS MACROSTACHYA, ERYNGIUM VASEYI, G. EBRACTEA, ISOETES NUTTALLII, PLAGIOBOTHRYUS BRACTEATUS, LASTHENIA GLABBERIMA, & ELATINE CA.  
Threat: ADJACENT AREAS SLATED FOR DEVELOPMENT, COULD IMPACT POOLS. TWO-THIRDS OF THE POOL COMPLEX HAS BEEN DISKED.  
General: APPROX 200 PLANTS IN 1991.  
Owner/Manager: PVT

Occurrence No. 35      Map Index:23931      ---Dates Last Seen---      Lat/Long: 38°28'05" / 121°21'24"      Township: 07N  
Occ Rank: Excellent      Element: 1989-04-28      UTM: Zone-10 N4258831 E643356      Range: 06E  
Origin: Natural/Native occurrence      Site: 1989-04-28      Precision: NON-SPECIFIC      Section: 17 Qtr XX  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 513.0 ac      Elevation: 75 ft  
Main Source: WYMER, N. 1989 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: BETWEEN BRADSHAW RD AND ELK GROVE-FLORIN RD, N OF CALVINE RD, S OF GERBER RD.  
-----Comments-----  
Distribution:  
Ecological: 3 POOLS WITHIN A ROLLING GRASSLAND WITH DOWNINGIA BICORNUTA, PLAGIOBOTHRYUS STIPITATUS MICRANTHA, G. EBRACTEATA, ETC.  
Threat: HORSE TRACKS THROUGH 1 POOL, ORV TRACKS ALSO EVIDENT. FUTURE DEVELOPMENT SITE FOR ELLIOT HOMES.  
General: NEED BETTER MAP OF POPULATION; MAP AT CNDDDB IS OF PROJECT SITE. SITE OWNED BY ELLIOT HOMES.  
Owner/Manager: PVT

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*Gratiola heterosepala* (cont.)  
Boggs Lake hedge-hyssop  
Element Code: PDSCR0R060

| List Status                 | NDDB Element Ranks | Other Lists       |
|-----------------------------|--------------------|-------------------|
| Federal: Species of Concern | Global: G3         | CNPS List: 1B     |
| State: Endangered           | State: S3.1        | R-E-D Code: 1-2-2 |

Occurrence No. 81      Map Index: 39745      ---Dates Last Seen---      Lat/Long: 38°27'53" / 121°17'37"      Township: 07N  
Occ Rank: None      Element: 1998-06-05      UTM: Zone-10 N4258577 E648859      Range: 06E  
Origin: Natural/Native occurrence      Site: 2002-08-30      Precision: NON-SPECIFIC      Section: 14 Qtr NW  
Presence: Extirpated      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 62.3 ac      Elevation: 100 ft  
Main Source: ROBISON, R. 1998 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: ON EAST SIDE OF EXSELSIOR ROAD, WEST OF DIERKS ROAD. ABOUT 0.7-1.0 MI NORTH OF CALVINE ROAD. DIERKS RANCH.  
---Comments---  
Distribution: NW1/4 OF NW1/4 OF SECTION 14.  
Ecological: IN A VERNAL POOL WITH GRATIOLA EBRACTEATA.  
Threat: PREVIOUSLY DISKED AND PARTIALLY LEVELLED. DEVELOPMENT PLANNED FOR THIS SITE.  
General: ONLY 4 PLANTS IN 1998, 1 IN FLOWER, 3 IN FRUIT. SITE DEVELOPED PERMIT 2081, SOIL TRANSPLANTED TO LAGUNA CREEK MITIGATION BANK.  
Owner/Manager: PVT

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|  |   |   |   |
|--|---|---|---|
| <i>Sagittaria sanfordii</i><br>Sanford's arrowhead<br>Element Code: PMALI040Q0 | -----List Status-----<br>Federal: Species of Concern<br>State: None | -----NDDB Element Ranks-----<br>Global: G3<br>State: S3.2 | -----Other Lists-----<br>CNPS List: 1B<br>R-E-D Code: 2-2-3 |
|--|---|---|---|

-----Habitat Associations-----  
General: MARSHES AND SWAMPS.  
Micro: IN STANDING OR SLOW-MOVING FRESHWATER PONDS, MARSHES, AND DITCHES.. 0-610M.

Occurrence No. 18      Map Index:24539      ---Dates Last Seen---      Lat/Long: 38°27'06" / 121°23'31"      Township: 07N  
Occ Rank: None      Element: 1993-XX-XX      UTM: Zone-10 N4256949 E640312      Range: 05E  
Origin: Natural/Native occurrence      Site: 1993-XX-XX      Precision: NON-SPECIFIC      Section: 13 Qtr SE  
Presence: Possibly Extirpated      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 121.9 ac      Elevation: 40 ft  
Main Source: MILLER, S. & R. LOPEZ 1991 (PERS)  
Quad Summary: FLORIN (3812144/496B)\*, ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: STRAWBERRY CREEK. NORTHWEST AND SOUTH OF CALVINE RD/ELK GROVE-FLORIN RD INTERSECTION, ELK GROVE.

-----Comments-----  
Distribution: FIVE COLONIES, 1) EXACT LOCATION UNKNOWN "CHANNEL OFF OF STRAWBERRY CREEK" MAPPED NW OF CALVINE/ELK GROVE-FLORIN RD INTERSECTION 2-4) ALONG CREEK WEST OF ELK GROVE-FLORIN RD 5) ALONG ASSESSORS PARCEL #115013014.  
Ecological: NORTHWEST COLONY IS CEMENT LINED CHANNEL. CENTER COLONIES ALONG DRIED CREEK CHANNEL.  
Threat: NW POP IN CANAL WAS TO BE CLEARED OF VEGETATION IN 1991 OR 1992, DEVELOPMENT PROPOSED FOR CENTER POP.  
General: SACRAMENTO CO PUBLIC WORKS DEPT. TO TRANSPLANT COLONY 1 INTO A GIANT GARTER SNAKE SITE TO MITIGATE FOR CANAL CLEARING ACTIVITIES. WESTERN POP REPLANTED AT SITE AFTER STRAWBERRY CR REALIGNMENT. FIELDWORK NEEDED.  
FORMER EO #19 & #20 HERE.  
Owner/Manager: SAC COUNTY PUBLIC WORKS, PVT

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*Orcuttia tenuis*

slender orcutt grass  
Element Code: PMPOA4G050

| List Status         | NDDB Element Ranks | Other Lists       |
|---------------------|--------------------|-------------------|
| Federal: Threatened | Global: G3         | CNPS List: 1B     |
| State: Endangered   | State: S3.1        | R-E-D Code: 2-3-3 |

Habitat Associations

General: VERNAL POOLS.  
Micro: 30-1735M.

|   |                  |                     |                                  |                    |
|---|------------------|---------------------|----------------------------------|--------------------|
| Occurrence No. 16                           | Map Index: 11658 | Dates Last Seen     | Lat/Long: 38°28'36" / 121°17'29" | Township: 07N      |
| Occ Rank: Fair                              |                  | Element: 1987-05-19 | UTM: Zone-10 N4259884 E649036    | Range: 06E         |
| Origin: Natural/Native occurrence           |                  | Site: 1987-05-19    | Precision: SPECIFIC              | Section: 11 Qtr NW |
| Presence: Presumed Extant                   |                  |                     | Symbol Type: POINT               | Meridian: M        |
| Trend: Unknown                              |                  |                     | Radius: 80 meters                | Elevation: 110 ft  |
| Main Source: BIOSYSTEMS ANALYSIS 1988 (LIT) |                  |                     |                                  |                    |
| Quad Summary: ELK GROVE (3812143/496A)      |                  |                     |                                  |                    |
| County Summary: SACRAMENTO                  |                  |                     |                                  |                    |

SNA Summary:

Location: WEST SIDE OF LAGUNA CREEK, 0.2 MI E OF EXCELSIOR ROAD. 1.6 MI N OF CALVINE ROAD.

Comments

Distribution:

Ecological: ELONGATE, NARROW VERNAL POOL SURROUNDED BY ANNUAL GRASSLAND. WITH ELEOCHARIS MACROSTACHYA, ALLOCARYA STIPITATA, DOWNINGIA BICORNUTA, NAVARRETIA LEUCOCEPHALA, PSILOCARPHUS BREVISSIMUS, ERYNGIUM VASEYI, ETC.

Threat: GRAZING DOES NOT SEEM TO BE ADVERSELY IMPACTING PLANTS. INDUSTRIAL PARK HAS BEEN PROPOSED FOR THIS PARCEL.

General: HOLLAND REPORTED 10,000+ PLANTS IN 1983. ABUNDANT IN 1986 AND 1987.

Owner/Manager: PVT

## **Appendix R-3**

# **Special-Status Species Assessment – Gosal Estates**

Special-Status Species Assessment  
For  
**Gosal Estates**  
Sacramento County, California

March 31, 2004



*Prepared for:*

**North Vineyard Greens General Partnership**





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**SPECIAL-STATUS SPECIES SURVEY**

GOSAL ESTATES

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## **INTRODUCTION**

At the request of the North Vineyard Greens General Partnership, ECORP Consulting, Inc. has conducted a special-status species assessment of the 10.2 acre Gosal Estates site located in Sacramento County, California.

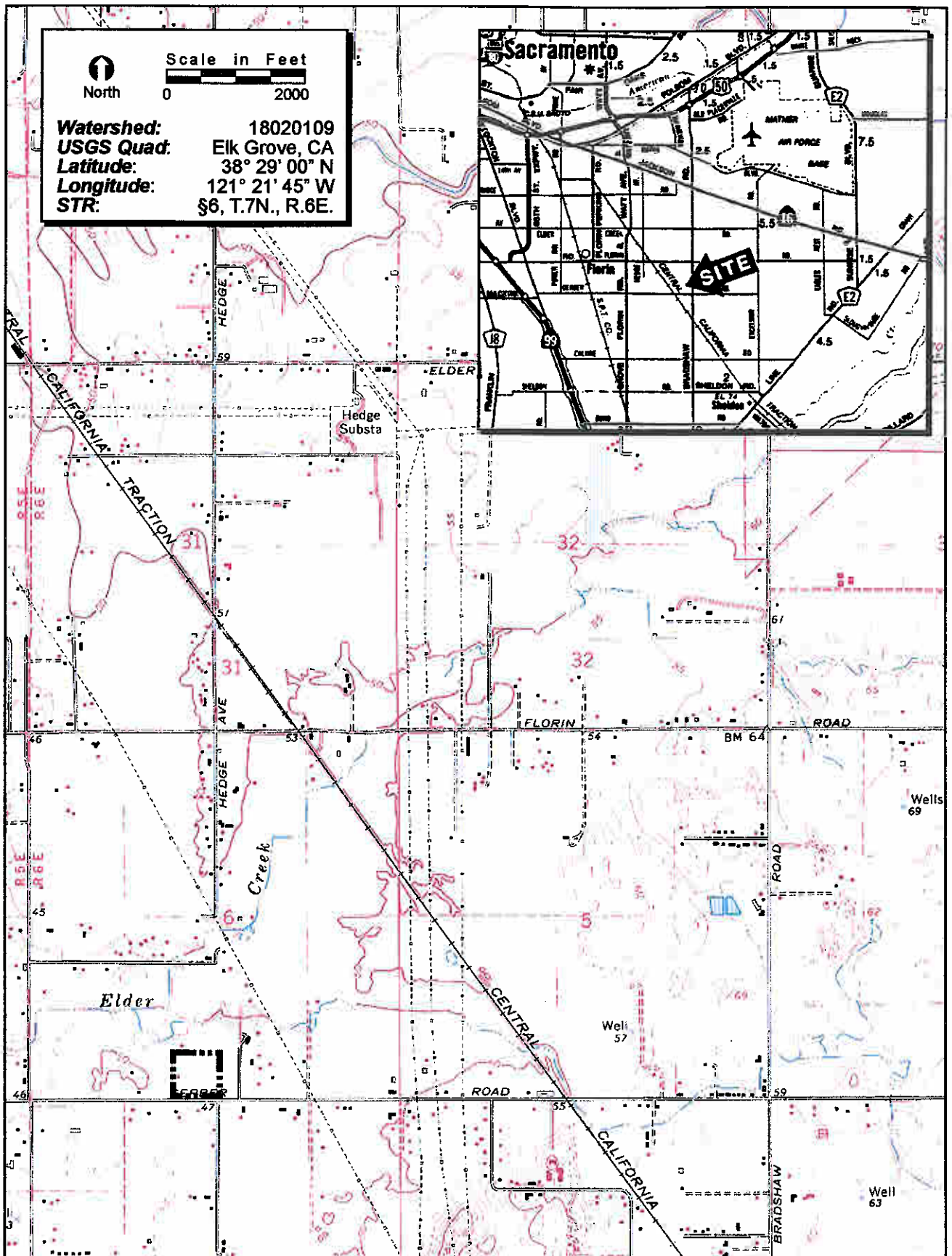
The proposed Gosal Estates project area is located north of Gerber Road, west of Passallis Lane, south of Florin Road, and east of Elk Grove Florin Road (Figure 1 – *Project Site and Vicinity*). Gerber Road represents the southern boundary of the site. The site corresponds to a portion of Section 6 of Township 7 North and Range 6 East, "Elk Grove, California" 7.5-minute quadrangle (U.S. Department of the Interior, Geological Survey, photorevised 1979).

The purpose of this assessment is to assess the potential for occurrence of special-status plant and wildlife species and identify unique habitats and natural communities within the project site.

## **METHODOLOGY**

The field investigation for this assessment was conducted concurrent with a wetland delineation field survey on July 10, 2003, during which time ECORP biologist Jinnah Hansen walked the entire project area. The site was visually inspected for the presence of special-status species and potential habitat for regionally occurring special-status species.

The special-status species assessment included a taxa specific literature review, a California Department of Fish and Game Natural Diversity Data Base query, and a reconnaissance-level field survey. This assessment of potentially occurring special-status plant and wildlife species does not constitute a determinate-level presence/absence survey, which should be done according to agency-approved survey protocol during the appropriate season.



**FIGURE 1. Project Site and Vicinity Map**

For the purposes of this assessment, "special-status" refers to those species which:

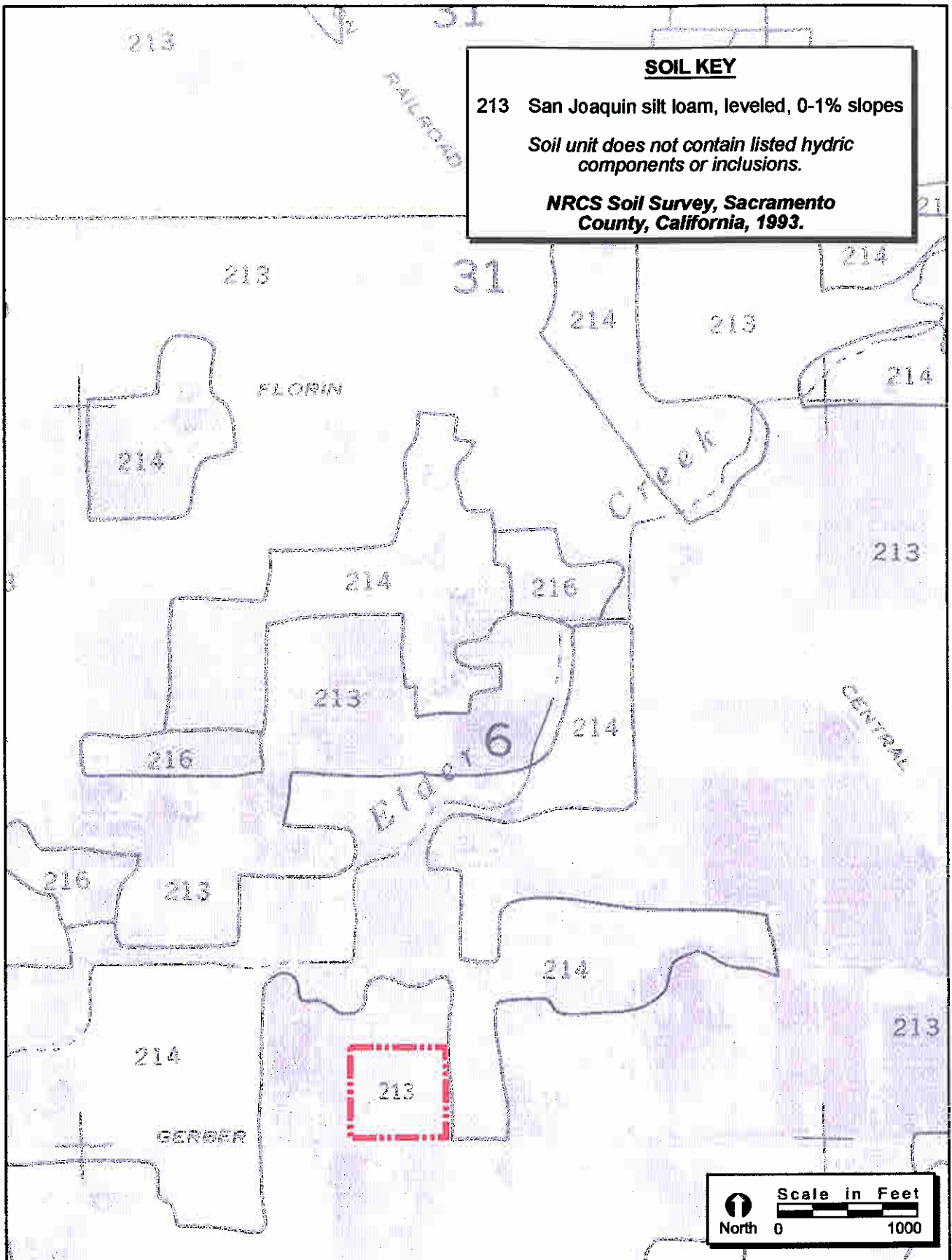
- Have been designated by the California Department of Fish and Game (CDFG) or the U.S. Fish and Wildlife Services (USFWS) as either *rare*, *threatened*, or *endangered*; and are legally protected under the California or federal endangered species acts;
- Are proposed or candidate species being considered for listing under either federal or California Endangered Species Acts; or
- Are of expressly stated interest to resource regulatory agencies, or local jurisdictions, such as CDFG species of special concern, USFWS species of concern, or California Native Plant Society (CNPS) List species.

## RESULTS

### Existing Site Conditions

The Gosal Estate project area is comprised of level terrain situated at an elevation of approximately 50 feet above mean sea level. According to the *Soil Survey of Sacramento County, California* (U.S. Department of Agriculture, Natural Resource Conservation Service 1993), one soil unit, or type, has been mapped for the site, (213) San Joaquin silt loam, leveled, 0-1 percent slopes (Figure 2 – *NRCS Soil Types*).

The primary vegetation community present on-site is annual grassland. Much of the Gosal Estates site has been historically leveled and/or farmed, but it is currently fallow and does not appear to have been cultivated for some time. The annual grassland community is comprised primarily of non-native naturalized Mediterranean grasses. These include ripgut brome (*Bromus diandrus*), soft brome (*Bromus hordeaceus*), wild oats (*Avena fatua*), ryegrass (*Lolium multiflorum*), Mediterranean barley (*Hordeum marinum*), and medusahead grass (*Taeniatherum caput-medusae*). Other non-native herbaceous species in this community include hairy hawk-bit (*Leontodon taraxacoides*), filaree (*Erodium botrys*),



**FIGURE 2. NRCS Soil Types**

pineapple weed (*Chamomilla suaveolens*), and yellow-star thistle (*Centaurea solstitialis*). Several blue gum (*Eucalyptus globulus*) trees are situated at the western boundary of the site alongside the unpaved access road.

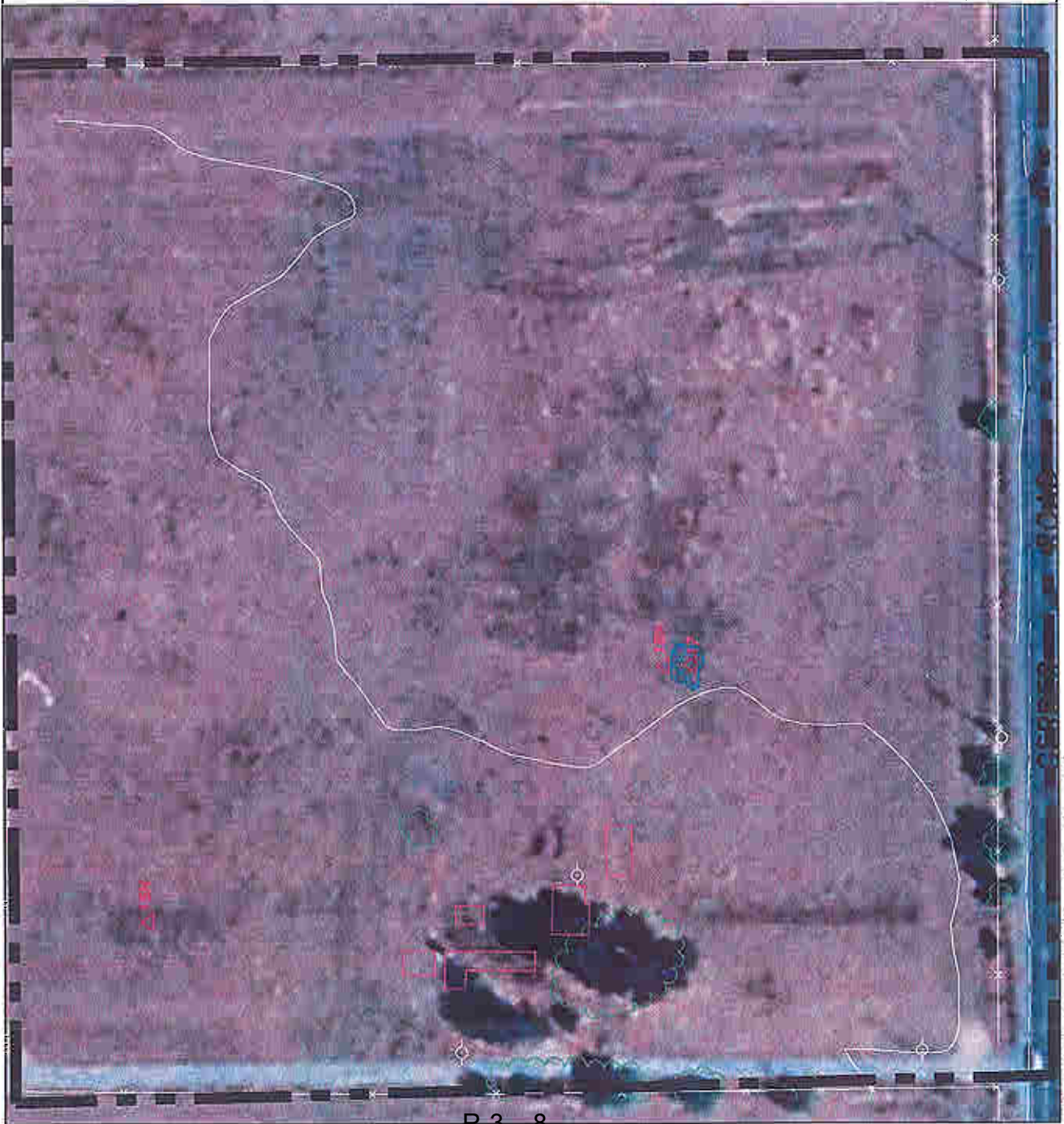
One seasonal wetland feature was mapped on-site (Figure 3 – *Wetland Delineation*). A wetland delineation was conducted concurrent with this assessment and is available under separate cover. The seasonal wetland that has been mapped on-site is comprised primarily of facultative grasses that include ryegrass (*Lolium multiflorum*) and Mediterranean barley (*Hordeum marinum*) with scattered non-native herbaceous plants that include morning glory (*Convolvulus arvensis*), turkey mullein (*Eremocarpus setigerus*), and hyssop loosestrife (*Lythrum hyssopifolium*).

### **Special-Status Species**

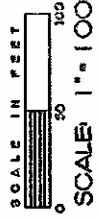
Based upon vegetation communities present on the property, species' known distributive data, and the references cited above, a list of potentially occurring special-status species has been developed for the Gosal Estates area. This list is presented in Attachment A. Species include: four plants, four invertebrates, nine birds and four mammals. According to the Natural Diversity Data Base (NDDB), there are no previously documented occurrences of special-status species within the site. However, several special-status species have been documented in the vicinity of the site, and these include occurrences for white-tailed kite, tricolored blackbird, vernal pool fairy shrimp, and vernal pool tadpole shrimp. The NDDB print out for the "Elk Grove, California" quadrangle is presented in Attachment B.

#### *Plants*

Special-status plants that may occur on-site include those that are associated with vernal pools and marshes. The vernal pool species include dwarf downingia (*Downingia pusilla*, CNPS List 2), Boggs Lake hedge-hyssop (*Gratiola heterosepala*, California-endangered and CNPS List 1B), Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*, federal-species of concern and CNPS List 1B), and Greene's legenera (*Legenera limosa*, federal-species of concern and CNPS List 1B). Of these, Boggs Lake hedge-hyssop, is listed and protected pursuant to the



| CLASSIFICATION   | EXISTING<br>ACREAGE |
|------------------|---------------------|
| Seasonal Wetland | 0.010               |
| <b>TOTAL:</b>    | <b>0.010</b>        |



FILENAME: -DWGS\2003-091\gosal-wd.dwg 3/31/04



FIGURE 3. Wetland Delineation

state and/or federal Endangered Species Acts. Dwarf downingia, Greene's legenera, and Ahart's dwarf rush, are not listed and protected pursuant to either state or federal Acts. However, these three species may be considered by local jurisdictions during the CEQA review process.

### *Invertebrates*

The seasonal wetland mapped on-site represents potentially suitable habitat for four special-status aquatic invertebrates. These include the vernal pool fairy shrimp (*Branchinecta lynchi*, federally-threatened), midvalley fairy shrimp (*B. mesoaliensis*, USFWS-species of concern), California linderiella (*Linderiella occidentalis*, USFWS-species of concern), and vernal pool tadpole shrimp (*Lepidurus packardi*, federally-endangered).

### *Birds*

The potentially occurring special-status birds on-site include nesting raptors, nesting songbirds, and wintering or migrant birds. The nesting raptors include both tree nesting and ground nesting species. The potential nesting trees within the Gosal Estates site are limited to the blue gum trees along the western boundary. These tree nesting species are white-tailed kite (*Elanus leucurus*, Fish and Game Code fully protected and USFWS bird of management concern), Cooper's hawk (*Accipiter cooperii*, CDFG species of special concern), and Swainson's hawk (*Buteo swainsoni*, California-threatened). Potentially occurring ground-nesting raptors on-site include northern harrier (*Circus cyaneus*, CDFG-species of special concern) and burrowing owl (*Athene cunicularia*, CDFG-species of special concern and federal species of concern).

One special-status songbird may nest within the Gosal Estates area, the loggerhead shrike (*Lanius ludovicianus*, CDFG species of special concern and USFWS bird of management concern). Loggerhead shrike may nest within the trees along the western boundary of the site.



Other special-status birds that may occur on-site are not known to nest in this region and/or suitable nesting habitat is not present on-site. The grassland and pastures on-site represent potential foraging habitat for these remaining species. These are: ferruginous hawk (*Buteo regalis*, CDFG-species of special concern and USFWS-Bird of Management Concern), Merlin (*Falco columbarius*, CDFG-species of special concern), and tricolored blackbird (*Agelaius tricolor*, USFWS-migratory nongame bird of management concern, Federal-species of concern, CDFG-species of special concern, and BLM-sensitive species).

In addition to the special-status birds that may nest on-site, all raptors, including common species such as red-tailed hawks (*Buteo jamaicensis*) and great horned owls (*Bubo virginianus*) and their nests, are protected under Fish and Game Code Section 3503.5. As such, the trees along the western boundary represent potential nesting habitat for these species, as well.

### *Mammals*

The annual grassland community on-site may provide foraging habitat for a variety of special-status bats that are known to occur in this region. These are small-footed myotis (*Myotis ciliolabrum*), Yuma myotis (*M. yumanensis*), Townsend's big-eared bat (*Corynorhinus townsendii*), and pallid bat (*Antrozous pallidus*). Typical breeding habitat for these species is not present within the project site but include appropriate sites with minimal human disturbance in cliffs, buildings, caves, mines, and bridges. None of these species are listed and protected pursuant the California or federal Endangered Species Act; they are considered CDFG species of special concern.

## **CONCLUSION**

The habitats and vegetation communities on-site represent potentially suitable habitat for several regionally occurring special-status aquatic invertebrate, bird, and mammal species. The seasonal wetland on-site represent potential habitat for the vernal pool fairy shrimp, midvalley fairy shrimp, California linderiella, and vernal pool tadpole shrimp. Northern harrier and burrowing owl may nest within the open grassland on-site. White-tailed kite,

Cooper's hawk, and Swainson's hawk may nest in larger trees within the site. Small trees and shrubs represent potential nesting habitat for loggerhead shrike. Other potentially occurring birds do not nest in this region but may be observed within the property boundaries during migration and/or winter includes ferruginous hawk and Merlin. There is no suitable nesting habitat (i.e., emergent marsh, blackberry scrub) for tricolored blackbirds, but they are known to nest in the surrounding area within marsh and riparian scrub habitats and may forage on-site. A number of non-listed, special-status bat species may also forage on-site.

Determinate-level and pre-construction surveys will be required prior to initiation of project-related activities that may impact the habitats of special-status species. Additional permits may be required pursuant to the federal or state Endangered Species Acts, the CDFG Fish and Game Code, or other local jurisdictional requirements.

## **LIST OF ATTACHMENTS**

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Attachment A – Potentially Occurring Special-Status Species

Attachment B – Rarefind 2 CNDDDB Data Report

**ATTACHMENT A**

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Potentially Occurring Special-Status Species

Gosal Estates (North Vineyard Station Specific Plan Area) - Potentially Occurring Special-Status Species

| Common Name                           | Scientific Name                               | Federal Status | State Status | Other Status       | Habitat Description   | Approximate Survey Dates |
|---------------------------------------|---|----------------|--------------|--------------------|---|--------------------------|
| <b>Plants</b>                         |   |                |              |                    |   |                          |
| Dwarf Downingia                       | <i>Downingia pusilla</i>                      | -              | -            | 2                  | vernal pools/wetlands   | April                    |
| Boggs Lake hedge-hyssop               | <i>Gratiola heterosepala</i>                  | -              | CE           | 1B                 | vernal pools  | April-August             |
| Ahart's dwarf rush                    | <i>Juncus leiospermus</i> var. <i>ahartii</i> | -              | -            | FSC, 1B            | vernal pools  | March-May                |
| Greene's legenere                     | <i>Legenere limosa</i>                        | -              | -            | FSC, 1B            | vernal pools  | April-June               |
| <b>Invertebrates</b>                  |   |                |              |                    |   |                          |
| Vernal pool fairy shrimp              | <i>Branchinecta lynchi</i>                    | FT             | -            | -                  | vernal pools/wetlands   | November-April           |
| Midvalley fairy shrimp                | <i>Branchinecta mesovalliensis</i>            | -              | -            | FSC                | vernal pools/wetlands   | November-April           |
| Vernal pool tadpole shrimp            | <i>Lepidurus packardii</i>                    | FE             | -            | -                  | vernal pools/wetlands   | November-April           |
| California linderiella                | <i>Linderiella occidentalis</i>               | -              | -            | FSC                | vernal pools/wetlands   | November-April           |
| <b>Birds</b>                          |   |                |              |                    |   |                          |
| White-tailed kite (nesting)           | <i>Elanus leucurus</i>                        | -              | -            | FSC, CFP, MNB      | woodland, grassland   | April-June               |
| Northern harrier (nesting)            | <i>Circus cyaneus</i>                         | -              | -            | CSC                | marsh, grassland  | June-July                |
| Cooper's hawk (nesting)               | <i>Accipiter cooperii</i>                     | -              | -            | CSC                | woodland  | April-June               |
| Swainson's hawk (nesting)             | <i>Buteo swainsoni</i>                        | -              | CT           | FS                 | grassland, riparian   | March-July               |
| Ferruginous hawk (wintering)          | <i>Buteo regalis</i>                          | -              | -            | FSC, CSC, MNB, BLM | grassland   | November-February        |
| Merlin (wintering)                    | <i>Falco columbarius</i>                      | -              | -            | CSC                | woodland, grassland   | September-April          |
| Burrowing owl (burrow sites)          | <i>Athene cunicularia</i>                     | -              | -            | FSC, CSC, MNB, BLM | grassland   | April-July               |
| Loggerhead shrike                     | <i>Lanius ludovicianus</i>                    | -              | -            | FSC, CSC, MNB      | grassland, woodland   | April-May                |
| Tricolored blackbird (nesting colony) | <i>Agelaius tricolor</i>                      | -              | -            | FSC, CSC, MNB, BLM | marsh, grassland  | April-June               |
| <b>Mammals</b>                        |   |                |              |                    |   |                          |
| Small-footed myotis                   | <i>Myotis ciliolabrum</i>                     | -              | -            | FSC, BLM           | caves, mines, buildings, bridges, rock crevices, trees                                    | April-September          |
| Yuma myotis                           | <i>Myotis yumanensis</i>                      | -              | -            | FSC, CSC, BLM      | Riparian woodland, caves, mines, buildings, bridges, rock crevices, trees                 | April-September          |
| Townsend's big-eared bat              | <i>Corynorhinus townsendii townsendii</i>     | -              | -            | FSC, CSC, FS, BLM  | caves, mines, buildings, rock crevices, trees   | April-September          |
| Pallid bat                            | <i>Antrozous pallidus</i>                     | -              | -            | CSC, FS, BLM       | mines, man-made structures, rock outcrops, and woodland near open grasslands for foraging | April-September          |

**Status Codes:**

- FE - Federally listed, Endangered.
- FT - Federally listed, Threatened.
- FC - Candidate for federal listing as Threatened or Endangered.
- FSC - U. S. Fish and Wildlife Service Species of Concern
- MNB - U. S. Fish and Wildlife Service Migratory Nongame Birds of Management Concern
- BLM - Bureau of Land Management Sensitive Species
- FS - U. S. Forest Service Sensitive Species
- CT - California listed, Threatened.
- CCR - California Code of Regulations Title 14 Fully Protected Species
- CFP - Fish and Game Code of California Fully Protected Species (§3511-birds, §4700-mammals, §5050-reptiles/amphibians).
- CSC - California Department of Fish and Game Species of Special Concern.
- CDF - California Department of Forestry Sensitive Species
- 1B - California Native Plant Society/Rare or Endangered in California and elsewhere

**ATTACHMENT B**

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Rarefind 2 CNDDDB Data Report

California Department of Fish and Game  
Natural Diversity Data Base

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*Elanus leucurus*

white-tailed kite

Element Code: ABNKC06010

| List Status                 | NDDE Element Ranks | Other Lists  |
|-----------------------------|--------------------|--------------|
| Federal: Species of Concern | Global: G5         | CDFG Status: |
| State: None                 | State: S3          |              |

Habitat Associations

General: (NESTING) ROLLING FOOTHILLS/VALLEY MARGINS W/SCATTERED OAKS & RIVER BOTTOMLANDS OR MARSHES NEXT TO DECIDUOUS WOODLAND  
Micro: OPEN GRASSLANDS, MEADOWS, OR MARSHES FOR FORAGING CLOSE TO ISOLATED, DENSE-TOPPED TREES FOR NESTING AND PERCHING.

|  |                  |                     |                                  |                    |
|--|------------------|---------------------|----------------------------------|--------------------|
| Occurrence No. 28  | Map Index: 24807 | Dates Last Seen     | Lat/Long: 38°29'13" / 121°21'51" | Township: 07N      |
| Occ Rank: Fair   |                  | Element: 1990-06-03 | UTM: Zone-10 N4260895 E642670    | Range: 06E         |
| Origin: Natural/Native occurrence  |                  | Site: 1990-06-03    | Precision: SPECIFIC              | Section: 06 Qtr SW |
| Presence: Presumed Extant  |                  |                     | Symbol Type: POINT               | Meridian: M        |
| Trend: Unknown   |                  |                     | Radius: 80 meters                | Elevation: 50 ft   |
| Main Source: JOHNSON, D. 1990 (OBS)  |                  |                     |                                  |                    |
| Quad Summary: ELK GROVE (3812143/496A)   |                  |                     |                                  |                    |
| County Summary: SACRAMENTO   |                  |                     |                                  |                    |
| SNA Summary: Camp Pendleton Southern Coast   |                  |                     |                                  |                    |
| Location: SOUTH SIDE OF MCCOY AVENUE, 0.4 MILE EAST OF ELK GROVE-FLORIN ROAD, SOUTH OF SACRAMENTO. |                  |                     |                                  |                    |

Comments

Distribution:  
Ecological: NEST TREE IS LOCATED ON RURAL RESIDENTIAL PROPERTY.  
Threat:  
General: 2 ADULTS OBSERVED NESTING IN 1990.  
Owner/Manager: PVT



California Department of Fish and Game  
Natural Diversity Data Base

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*Accipiter cooperii*

Cooper's hawk

Element Code: ABNKC12040

-----List Status-----

Federal: None

State: None

-----NDDB Element Ranks-----

Global: G5

State: S3

-----Other Lists-----

CDFG Status: SC

-----Habitat Associations-----

General: (NESTING) WOODLAND, CHIEFLY OF OPEN, INTERRUPTED OR MARGINAL TYPE.

Micro: NEST SITES MAINLY IN RIPARIAN GROWTHS OF DECIDUOUS TREES, AS IN CANYON BOTTOMS ON RIVER FLOOD-PLAINS; ALSO, LIVE OAKS.

Occurrence No. 66      Map Index:36011      ---Dates Last Seen---      Lat/Long: 38°27'49" / 121°19'46"      Township: 07N  
Occ Rank: Good      Element: 1997-05-28      UTM: Zone-10 N4258380 E645757      Range: 06E  
Origin: Natural/Native occurrence      Site: 1997-05-28      Precision: SPECIFIC      Section: 16 Qtr NW  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 65 ft  
Main Source: CURLETTE, J. & R. WALKER 1997 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO

SNA Summary:

Location: SW OF THE INTERSECTION OF CARMENCITA ROAD AND LAGUNA CREEK, 4 MILES NNE OF ELK GROVE.

-----Comments-----

Distribution: NEST TREE IS LOCATED APPROXIMATELY 50 FEET WEST OF CARMENCITA ROAD.

Ecological: NEST TREE IS LOCATED IN A BAND OF VALLEY OAK WOODLAND ADJACENT TO LAGUNA CREEK, WITH AN UNDERSTORY OF ELYTRIGIA AND ANNUAL GRASSES. ADJACENT RIPARIAN WOODLAND FORMS A COMPLETE CANOPY, EXTENDING TO ABOUT 100 FEET FROM THE CHANNEL EDGE.

Threat:

General: 2 ADULTS AND AT LEAST 1 JUVENILE OBSERVED AT NEST ON 28 MAY 1997.

Owner/Manager: PVT

California Department of Fish and Game  
Natural Diversity Data Base

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|   |   |   |  |
|---|---|---|--|
| <i>Buteo swainsoni</i><br>Swainson's hawk<br>Element Code: ABNKC19070 | <p>-----List Status-----</p> <p>Federal: Species of Concern<br/>State: Threatened</p> | <p>-----NDDB Element Ranks-----</p> <p>Global: G4<br/>State: S2</p> | <p>-----Other Lists-----</p> <p>CDFG Status:</p> |
|---|---|---|--|

-----Habitat Associations-----  
 General: (NESTING) BREEDS IN STANDS WITH FEW TREES IN JUNIPER-SAGE FLATS, RIPARIAN AREAS AND IN OAK SAVANNAH.  
 Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 131      Map Index:11672      ---Dates Last Seen---      Lat/Long: 38°25'13" / 121°17'08"      Township: 07N  
 Occ Rank: Excellent      Element: 1994-XX-XX      UTM: Zone-10 N4253642 E649668      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1994-XX-XX      Precision: SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Stable      Radius: 80 meters      Elevation: 60 ft  
 Main Source: CDFG RAPTOR NEST FILES 1984 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: DEER CREEK, AT THE INTERSECTION OF WILTON ROAD, 0.5 MILE NW OF COSUMNES RIVER.  
 -----Comments-----  
 Distribution:  
 Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY AGRICULTURAL CROPS AND GRAZING.  
 Threat: POSSIBLE THREAT FROM SURROUNDING DEVELOPMENT OF SMALL RANCHETTES.  
 General: DFG SWHA #SA013. 2 ADULTS (1 LT, 1 DK) OBSERVED SOARING/ROOSTING HERE IN 1981 AND 1984. NEST OBSERVED DURING A SURVEY OF COSUMNES RIVER IN 1994.  
 Owner/Manager: PVT

Occurrence No. 183      Map Index:11621      ---Dates Last Seen---      Lat/Long: 38°22'48" / 121°19'01"      Township: 06N  
 Occ Rank: Excellent      Element: 1994-XX-XX      UTM: Zone-10 N4249107 E647020      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1994-XX-XX      Precision: SPECIFIC      Section: 10 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Stable      Radius: 80 meters      Elevation: 45 ft  
 Main Source: CDFG RAPTOR NEST FILES 1984 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary: Lower Deer Creek  
 Location: COSUMNES RIVER, RM-13.4(R), 2 MILES EAST OF THE INTERSECTION OF GRANT LINE ROAD & HWY 99, COSUMNES RIVER PRESERVE.  
 -----Comments-----  
 Distribution:  
 Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY AGRICULTURAL CROPS AND GRAZING.  
 Threat: POSSIBLE THREAT FROM DEVELOPMENT OF SMALL RANCHETTES IN THE AREA.  
 General: DFG SWHA #SA025. 1 ADULT OBSERVED DIVING ON TURKEY VULTURE (1982); NO NEST FOUND. IN SUMMER 1994, NEST OBSERVED DURING A SURVEY OF COSUMNES RIVER AREA.  
 Owner/Manager: TNC-COSUMNES RIVER PRESERVE

Occurrence No. 184      Map Index:11655      ---Dates Last Seen---      Lat/Long: 38°23'00" / 121°18'28"      Township: 06N  
 Occ Rank: Excellent      Element: 1995-06-13      UTM: Zone-10 N4249504 E647797      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1995-06-13      Precision: SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Stable      Radius: 80 meters      Elevation: 60 ft  
 Main Source: CDFG RAPTOR NEST FILES 1984 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: NORTH BANK OF COSUMNES RIVER, AT RM-14.9, ESE OF ELK GROVE.  
 -----Comments-----  
 Distribution: LOCATED ~0.25 MILE UPSTREAM FROM DFG COSUMNES RIVER CONSERVATION EASEMENT.  
 Ecological: NEST TREE IS A VALLEY OAK; HABITAT CONSISTS OF RIPARIAN SURROUNDED BY ROW CROPS.  
 Threat:  
 General: DFG SWHA #SA038. 1 DARK, 1 MEDIUM PHASE OBSERVED SOARING IN 1984; NO NEST FOUND. 2 ADULTS/3 JUVENILES OBSERVED AT THE NEST IN 1987. 2 CHICKS OBSERVED IN THE NEST ON 13 JUNE 1995.  
 Owner/Manager: PVT

California Department of Fish and Game  
Natural Diversity Data Base

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|  |   |   |                                       |
|--|---|---|---------------------------------------|
| Buteo swainsoni (cont.)<br>Swainson's hawk<br>Element Code: ABNKC19070 | -----List Status-----<br>Federal: Species of Concern<br>State: Threatened | -----NDDB Element Ranks-----<br>Global: G4<br>State: S2 | -----Other Lists-----<br>CDFG Status: |
|--|---|---|---------------------------------------|

Occurrence No. 185      Map Index:11725      ---Dates Last Seen---      Lat/Long: 38°22'34" / 121°15'26"      Township: 06N  
 Occ Rank: Unknown      Element: 1984-05-22      UTM: Zone-10 N4248777 E652235      Range: 07E  
 Origin: Natural/Native occurrence      Site: 1985-05-24      Precision: NON-SPECIFIC      Section: 18 Qtr NW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 1/5 mile      Elevation: 70 ft  
 Main Source: DEPT. OF FISH & GAME 1984 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)\*, GALT (3812133/496D)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: 0.25 MILE SE OF THE INTERSECTION OF DAVIS AND WALMORT ROADS  
 ---Comments---  
 Distribution:  
 Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY AGRICULTURAL FIELDS.  
 Threat:  
 General: DFG SWHA #SA036. 1 LIGHT AND 1 DARK PHASE OBSERVED SOARING; NO NEST FOUND, BUT NESTING PRESUMED. SITE CHECKED ON 24 MAY 1985, BUT NO NEST AND NO BIRDS WERE OBSERVED.  
 Owner/Manager: PVT

Occurrence No. 190      Map Index:11652      ---Dates Last Seen---      Lat/Long: 38°24'55" / 121°17'36"      Township: 07N  
 Occ Rank: Unknown      Element: 1984-05-17      UTM: Zone-10 N4253065 E649001      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1984-05-17      Precision: NON-SPECIFIC      Section: 35 Qtr SW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 1/5 mile      Elevation: 60 ft  
 Main Source: DEPT. OF FISH & GAME 1984 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: DEER CREEK, AT WILTON ROAD.  
 ---Comments---  
 Distribution: AREA UNSURVEYED. SOURCE DOCUMENT SAYS SECTION 35.  
 Ecological: NEST TREE IS AN OAK.  
 Threat:  
 General: DFG SWHA #SA024. 1 ADULT OBSERVED ON NEST.  
 Owner/Manager: PVT

Occurrence No. 191      Map Index:11728      ---Dates Last Seen---      Lat/Long: 38°27'28" / 121°15'32"      Township: 07N  
 Occ Rank: Unknown      Element: 1979-06-29      UTM: Zone-10 N4257837 E651918      Range: 07E  
 Origin: Natural/Native occurrence      Site: 1982-06-28      Precision: NON-SPECIFIC      Section: 18 Qtr SW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 1/5 mile      Elevation: 90 ft  
 Main Source: DEPT. OF FISH & GAME 1984 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: 0.5 MILE EAST OF GRANT LINE ROAD, ELK GROVE  
 ---Comments---  
 Distribution: LOCATED ABOUT HALF-WAY BETWEEN CALVINE ROAD AND SLOUGHHOUSE ROAD.  
 Ecological:  
 Threat:  
 General: DFG SWHA #SA002. 2 ADULTS AND YOUNG OBS 1979. NO ACTIVITY IN 1980 OR 1982.  
 Owner/Manager: PVT

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|   |                             |                              |                       |
|---|-----------------------------|------------------------------|-----------------------|
| <i>Buteo swainsoni</i> (cont.)<br>Swainson's hawk<br>Element Code: ABNKC19070 | -----List Status-----       | -----NDDE Element Ranks----- | -----Other Lists----- |
|   | Federal: Species of Concern | Global: G4                   | CDFG Status:          |
|   | State: Threatened           | State: S2                    |                       |

Occurrence No. 262      Map Index: 11626      ---Dates Last Seen---      Lat/Long: 38°23'51" / 121°18'41"      Township: 06N  
 Occ Rank: Unknown      Element: 1987-XX-XX      UTM: Zone-10 N4251063 E647460      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1987-XX-XX      Precision: NON-SPECIFIC      Section: 03 Qtr SW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 1/5 mile      Elevation: 60 ft  
 Main Source: DEPT. OF FISH & GAME 1984 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary: Lower Deer Creek  
 Location: DEER CREEK, 1 MILE SE OF GRANT LINE ROAD  
 -----Comments-----  
 Distribution:  
 Ecological:  
 Threat:  
 General: DFG SWHA #SA037. 2 DARK PHASE ADULTS; NO NEST FOUND IN 1984. 2 ADULTS/1 JUVENILE OBSERVED AT NEST IN 1987.  
 Owner/Manager: PVT

Occurrence No. 662      Map Index: 33208      ---Dates Last Seen---      Lat/Long: 38°23'15" / 121°17'54"      Township: 06N  
 Occ Rank: Excellent      Element: 1994-XX-XX      UTM: Zone-10 N4249970 E648619      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1994-XX-XX      Precision: SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 50 ft  
 Main Source: ROSCOE, T. 1994 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: COSUMNES RIVER, RM-14.6(L), 2.5 MILES SW OF THE INTERSECTION OF WILTON ROAD AND DILLARD ROAD, EAST OF ELK GROVE.  
 -----Comments-----  
 Distribution:  
 Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY AGRICULTURAL CROPS AND GRAZING.  
 Threat: POSSIBLE THREAT FROM DEVELOPMENT OF SURROUNDING AREA INTO SMALL RANCHETTES.  
 General: ACTIVE NEST OBSERVED DURING A SUMMER 1994 SURVEY OF COSUMNES RIVER AREA.  
 Owner/Manager: UNKNOWN

Occurrence No. 663      Map Index: 33209      ---Dates Last Seen---      Lat/Long: 38°22'58" / 121°18'49"      Township: 06N  
 Occ Rank: Excellent      Element: 1994-XX-XX      UTM: Zone-10 N4249426 E647305      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1994-XX-XX      Precision: SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 45 ft  
 Main Source: ROSCOE, T. 1994 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: COSUMNES RIVER, RM-13.6(R), 3 MILES SE OF ELK GROVE.  
 -----Comments-----  
 Distribution:  
 Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY AGRICULTURAL CROPS AND GRAZING.  
 Threat: POSSIBLE THREAT FROM DEVELOPMENT OF SURROUNDING AREA INTO SMALL RANCHETTES.  
 General: ACTIVE NEST OBSERVED DURING A SUMMER 1994 SURVEY OF THE COSUMNES RIVER AREA.  
 Owner/Manager: UNKNOWN

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|   |   |   |                                       |
|---|---|---|---------------------------------------|
| <i>Buteo swainsoni</i> (cont.)<br>Swainson's hawk<br>Element Code: ABNKC19070 | -----List Status-----<br>Federal: Species of Concern<br>State: Threatened | -----NDDB Element Ranks-----<br>Global: G4<br>State: S2 | -----Other Lists-----<br>CDFG Status: |
|---|---|---|---------------------------------------|

Occurrence No. 664      Map Index:33210      ---Dates Last Seen---      Lat/Long: 38°22'32" / 121°19'14"      Township: 06N  
 Occ Rank: Excellent      Element: 1994-XX-XX      UTM: Zone-10 N4248606 E646716      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1994-XX-XX      Precision: SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 45 ft  
 Main Source: ROSCOE, T. 1994 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)\*, GALT (3812133/496D)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: COSUMNES RIVER, RM-13.0(L), 2.5 MILES SE OF ELK GROVE.  
 ---Comments---  
 Distribution:  
 Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY AGRICULTURAL CROPS AND GRAZING.  
 Threat: POSSIBLE THREAT FROM DEVELOPMENT OF SURROUNDING AREA INTO SMALL RANCHETTES.  
 General: ACTIVE NEST OBSERVED DURING A SUMMER 1994 SURVEY OF COSUMNES RIVER AREA.  
 Owner/Manager: UNKNOWN

Occurrence No. 665      Map Index:33211      ---Dates Last Seen---      Lat/Long: 38°25'00" / 121°16'30"      Township: 07N  
 Occ Rank: Excellent      Element: 1994-XX-XX      UTM: Zone-10 N4253242 E650587      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1994-XX-XX      Precision: SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 70 ft  
 Main Source: ROSCOE, T. 1994 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: COSUMNES RIVER, RM-17.5(L), 0.5 MILE NW OF WILTON.  
 ---Comments---  
 Distribution:  
 Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY AGRICULTURAL CROPLANDS AND GRAZING.  
 Threat: POSSIBLE THREAT FROM DEVELOPMENT OF SURROUNDING AREA INTO SMALL RANCHETTES.  
 General: ACTIVE NEST OBSERVED DURING A SUMMER 1994 SURVEY OF COSUMNES RIVER AREA.  
 Owner/Manager: UNKNOWN

Occurrence No. 672      Map Index:33224      ---Dates Last Seen---      Lat/Long: 38°25'22" / 121°15'21"      Township: 07N  
 Occ Rank: Excellent      Element: 1995-06-13      UTM: Zone-10 N4253970 E652248      Range: 07E  
 Origin: Natural/Native occurrence      Site: 1995-06-13      Precision: SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 70 ft  
 Main Source: ROSCOE, T. 1995 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: SOUTH BANK OF COSUMNES RIVER, AT BEITZEL ROAD, ~5 MILES EAST OF ELK GROVE.  
 ---Comments---  
 Distribution:  
 Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY ROW CROPS.  
 Threat: POSSIBLE THREATS INCLUDE DEVELOPMENT AND CONVERSION TO VINEYARDS.  
 General: 2 ADULTS OBSERVED COPULATING ON 13 JUNE 1995.  
 Owner/Manager: PVT

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|   |                             |                              |                       |
|---|-----------------------------|------------------------------|-----------------------|
| <i>Buteo swainsoni</i> (cont.)<br>Swainson's hawk<br>Element Code: ABNKC19070 | -----List Status-----       | -----NDDB Element Ranks----- | -----Other Lists----- |
|   | Federal: Species of Concern | Global: G4                   | CDFG Status:          |
|   | State: Threatened           | State: S2                    |                       |
|   |                             |                              |                       |

Occurrence No. 673      Map Index:33225      ---Dates Last Seen---      Lat/Long: 38°25'06" / 121°16'40"      Township: 07N  
 Occ Rank: Good      Element: 1995-06-13      UTM: Zone-10 N4253422 E650359      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1995-06-13      Precision: SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 60 ft  
 Main Source: ROSCOE, T. 1995 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: NORTH BANK OF COSUMNES RIVER, 0.1 MILE EAST OF WILTON ROAD, ~4 MILES EAST OF ELK GROVE.  
 -----Comments-----  
 Distribution:  
 Ecological: NEST TREE IS A COTTONWOOD SNAG; HABITAT CONSISTS OF RIPARIAN SURROUNDED BY ROW CROPS, SAND MINING, AND LOW-DENSITY RESIDENTIAL.  
 Threat: THREATENED BY DEVELOPMENT.  
 General: 1 CHICK OBSERVED IN THE NEST ON 13 JUNE 1995.  
 Owner/Manager: PVT

Occurrence No. 674      Map Index:33226      ---Dates Last Seen---      Lat/Long: 38°24'18" / 121°17'17"      Township: 06N  
 Occ Rank: Good      Element: 1995-06-13      UTM: Zone-10 N4251937 E649474      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1995-06-13      Precision: SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 55 ft  
 Main Source: ROSCOE, T. 1995 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: SOUTH BANK OF COSUMNES RIVER, ~1 MILE DOWNSTREAM FROM WILTON ROAD, ~4 MILES EAST OF ELK GROVE.  
 -----Comments-----  
 Distribution:  
 Ecological: NEST TREE IS A VALLEY OAK; HABITAT CONSISTS OF RIPARIAN SURROUNDED BY ROW CROPS AND LOW-DENSITY HOUSING.  
 Threat: THREATS INCLUDE DEVELOPMENT AND CONVERSION TO VINEYARDS.  
 General: ON 13 JUNE 1995, 2 ADULTS WERE OBSERVED SOARING IN THE VICINITY OF THE NEST TREE, FROM WHICH AT LEAST 2 CHICKS COULD BE HEARD CALLING.  
 Owner/Manager: PVT

Occurrence No. 760      Map Index:41774      ---Dates Last Seen---      Lat/Long: 38°23'07" / 121°19'01"      Township: 06N  
 Occ Rank: Unknown      Element: 1987-XX-XX      UTM: Zone-10 N4249707 E646996      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1987-XX-XX      Precision: NON-SPECIFIC      Section: 09 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 1/5 mile      Elevation: 35 ft  
 Main Source: DEPT. OF FISH & GAME 1994 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: DEER CREEK, 2.5 MILES EAST OF HIGHWAY 99, SE OF ELK GROVE.  
 -----Comments-----  
 Distribution:  
 Ecological: NEST TREE IS AN OAK; SURROUNDED BY A MIX OF RIPARIAN, AGRICULTURAL FIELDS, AND PASTURE.  
 Threat:  
 General: DFG SWHA #SA056. 2 ADULTS OBSERVED NESTING IN 1987.  
 Owner/Manager: PVT

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*Buteo swainsoni* (cont.)

Swainson's hawk

Element Code: ABNKC19070

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Species of Concern    Global: G4    CDFG Status:  
State: Threatened                State: S2

Occurrence No. 761    Map Index:41775    ---Dates Last Seen---    Lat/Long: 38°22'22" / 121°19'33"    Township: 06N  
Occ Rank: Unknown    Element: 1987-XX-XX    UTM: Zone-10 N4248315 E646235    Range: 06E  
Origin: Natural/Native occurrence    Site: 1987-XX-XX    Precision: NON-SPECIFIC    Section: 16 Qtr NW  
Presence: Presumed Extant    Symbol Type: POINT    Meridian: M  
Trend: Unknown    Radius: 1/5 mile    Elevation: 35 ft

Main Source: DEPT. OF FISH & GAME 1994 (PERS)

Quad Summary: GALT (3812133/496D)\*, ELK GROVE (3812143/496A)

County Summary: SACRAMENTO

SNA Summary:

Location: DEER CREEK, 1.7 MILES EAST OF HIGHWAY 99, SE OF ELK GROVE.

-----Comments-----

Distribution:

Ecological: NEST TREE IS AN OAK; SURROUNDED BY A MIX OF RIPARIAN, AGRICULTURAL FIELDS, AND PASTURE.

Threat:

General: DFG SWHA #SA057. 2 LIGHT-MORPH ADULTS OBSERVED NESTING IN 1987.

Owner/Manager: PVT

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*Agelaius tricolor*  
tricolored blackbird  
Element Code: ABPBXB0020

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Species of Concern Global: G2 CDFG Status: SC  
State: None State: S2

-----Habitat Associations-----

General: (NESTING COLONY) HIGHLY COLONIAL SPECIES, MOST NUMEROUS IN CENTRAL VALLEY & VICINITY. LARGELY ENDEMIC TO CALIFORNIA.  
Micro: REQUIRES OPEN WATER, PROTECTED NESTING SUBSTRATE, & FORAGING AREA WITH INSECT PREY WITHIN A FEW KM OF THE COLONY.

\* SENSITIVE \*

Occurrence No. 6 Map Index: -----Dates Last Seen----- Lat/Long: / Township:  
Occ Rank: Good Element: 1994-XX-XX UTM: Range:  
Origin: Natural/Native occurrence Site: 1994-XX-XX Precision: Section: Qtr  
Presence: Presumed Extant Symbol Type: Meridian:  
Trend: Fluctuating Radius: Elevation:  
Main Source: HOSEA, R. 1986 (LIT)  
Quad Summary: FLORIN (3812144/496B)\*, ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.  
-----Comments-----  
Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES, ADJACENT TO GRASSLAND.  
Threat: THREATENED BY ENCROACHING DEVELOPMENT. REALIGNMENT OF STRAWBERRY CREEK DAMAGED THIS SITE.  
General:  
Owner/Manager:

\* SENSITIVE \*

Occurrence No. 13 Map Index: -----Dates Last Seen----- Lat/Long: / Township:  
Occ Rank: None Element: 1981-XX-XX UTM: Range:  
Origin: Natural/Native occurrence Site: 1992-06-16 Precision: Section: Qtr  
Presence: Possibly Extirpated Symbol Type: Meridian:  
Trend: Unknown Radius: Elevation:  
Main Source: HOSEA, R. 1986 (LIT)  
Quad Summary: ELK GROVE (3812143/496A)\*, CARMICHAEL (3812153/512D)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.  
-----Comments-----  
Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
Ecological:  
Threat:  
General:  
Owner/Manager:

\* SENSITIVE \*

Occurrence No. 156 Map Index: -----Dates Last Seen----- Lat/Long: / Township:  
Occ Rank: Unknown Element: XXXX-XX-XX UTM: Range:  
Origin: Natural/Native occurrence Site: XXXX-XX-XX Precision: Section: Qtr  
Presence: Presumed Extant Symbol Type: Meridian:  
Trend: Unknown Radius: Elevation:  
Main Source: DEHAVEN, R. (OBS)  
Quad Summary: ELK GROVE (3812143/496A)\*, GALT (3812133/496D), BRUCEVILLE (3812134/496C), FLORIN (3812144/496B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: \*SENSITIVE\* Location information suppressed.  
-----Comments-----  
Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
Ecological: NESTING SUBSTRATE CONSISTS OF CATTAILS AND BULRUSH.  
Threat:  
General:  
Owner/Manager:



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|   |   |   |   |
|---|---|---|---|
| Agelaius tricolor (cont.)<br>tricolored blackbird<br>Element Code: ABPBXB0020 | <p>-----List Status-----</p> <p>Federal: Species of Concern<br/>State: None</p> | <p>-----NDDB Element Ranks-----</p> <p>Global: G2<br/>State: S2</p> | <p>-----Other Lists-----</p> <p>CDFG Status: SC</p> |
|---|---|---|---|

**\* SENSITIVE \***

Occurrence No. 157      Map Index:      ---Dates Last Seen---      Lat/Long: /      Township:  
 Occ Rank: Unknown      Element: 1972-05-XX      UTM:      Range:  
 Origin: Natural/Native occurrence      Site: 1972-05-XX      Precision:      Section:      Qtr  
 Presence: Presumed Extant      Symbol Type:      Meridian:  
 Trend: Unknown      Radius:      Elevation:

Main Source: DEHAVEN, R. (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)\*, SLOUGHHOUSE (3812142/495B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.

-----Comments-----  
 Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
 Ecological: NESTING SUBSTRATE IS CATTAILS.  
 Threat:  
 General:  
 Owner/Manager:

**\* SENSITIVE \***

Occurrence No. 158      Map Index:      ---Dates Last Seen---      Lat/Long: /      Township:  
 Occ Rank: Unknown      Element: 1972-XX-XX      UTM:      Range:  
 Origin: Natural/Native occurrence      Site: 1972-XX-XX      Precision:      Section:      Qtr  
 Presence: Presumed Extant      Symbol Type:      Meridian:  
 Trend: Unknown      Radius:      Elevation:

Main Source: DEHAVEN, R. (OBS)  
 Quad Summary: CARMICHAEL (3812153/512D)\*, ELK GROVE (3812143/496A), BUFFALO CREEK (3812152/511C)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.

-----Comments-----  
 Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
 Ecological: NESTING IN CATTAILS AND TULE.  
 Threat:  
 General:  
 Owner/Manager:

**\* SENSITIVE \***

Occurrence No. 177      Map Index:      ---Dates Last Seen---      Lat/Long: /      Township:  
 Occ Rank: Unknown      Element: 1997-XX-XX      UTM:      Range:  
 Origin: Natural/Native occurrence      Site: 1997-XX-XX      Precision:      Section:      Qtr  
 Presence: Presumed Extant      Symbol Type:      Meridian:  
 Trend: Fluctuating      Radius:      Elevation:

Main Source: JOHNSON, D. 1990 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)\*, CARMICHAEL (3812153/512D)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.

-----Comments-----  
 Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
 Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES ALONG A RESIDENTIAL ROAD; SURROUNDED BY PASTURELAND.  
 Threat: POSSIBLY THREATENED BY DEVELOPMENT OF THE SURROUNDING AREA.  
 General:  
 Owner/Manager:

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|   |   |   |  |
|---|---|---|--|
| Agelaius tricolor (cont.)<br>tricolored blackbird<br>Element Code: ABPBXB0020 | -----List Status-----<br>Federal: Species of Concern<br>State: None | -----NDDE Element Ranks-----<br>Global: G2<br>State: S2 | -----Other Lists-----<br>CDFG Status: SC |
|---|---|---|--|

**\* SENSITIVE \***

Occurrence No. 232      Map Index:      ---Dates Last Seen---      Lat/Long: /      Township:  
 Occ Rank: Good      Element: 1994-06-XX      UTM:      Range:  
 Origin: Natural/Native occurrence      Site: 1994-06-XX      Precision:      Section:      Qtr  
 Presence: Presumed Extant      Symbol Type:      Meridian:  
 Trend: Unknown      Radius:      Elevation:

Main Source: ROSCOE, T. 1992 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.

-----Comments-----  
 Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
 Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES, AND SOME WILD ROSE, ALONG LAGUNA CREEK.  
 Threat: FORAGING HABITAT THREATENED BY RESIDENTIAL DEVELOPMENT.  
 General:  
 Owner/Manager:

**\* SENSITIVE \***

Occurrence No. 297      Map Index:      ---Dates Last Seen---      Lat/Long: /      Township:  
 Occ Rank: Unknown      Element: 1994-04-23      UTM:      Range:  
 Origin: Natural/Native occurrence      Site: 1994-04-23      Precision:      Section:      Qtr  
 Presence: Presumed Extant      Symbol Type:      Meridian:  
 Trend: Unknown      Radius:      Elevation:

Main Source: BURKE, C. 1994 (OBS)  
 Quad Summary: SLOUGHHOUSE (3812142/495B)\*, ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.

-----Comments-----  
 Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
 Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRY, OCCUPYING ~1 ACRE.  
 Threat: POSSIBLE THREATS INCLUDE PROXIMITY TO ROAD/HOUSES AND FERAL CATS.  
 General:  
 Owner/Manager:

**\* SENSITIVE \***

Occurrence No. 298      Map Index:      ---Dates Last Seen---      Lat/Long: /      Township:  
 Occ Rank: Unknown      Element: 1994-06-XX      UTM:      Range:  
 Origin: Natural/Native occurrence      Site: 1994-06-XX      Precision:      Section:      Qtr  
 Presence: Presumed Extant      Symbol Type:      Meridian:  
 Trend: Unknown      Radius:      Elevation:

Main Source: BURKE, C. 1994 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.

-----Comments-----  
 Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
 Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES AND WILLOWS; SURROUNDED BY GRASSLAND AND MOIST FIELDS PROVIDING FACULTATIVE WETLAND VEGETATION.  
 Threat:  
 General:  
 Owner/Manager:

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Agelaius tricolor (cont.)  
tricolored blackbird  
Element Code: ABPEXB0020

|                             |                              |                       |
|-----------------------------|------------------------------|-----------------------|
| -----List Status-----       | -----NDDB Element Ranks----- | -----Other Lists----- |
| Federal: Species of Concern | Global: G2                   | CDFG Status: SC       |
| State: None                 | State: S2                    |                       |

\* SENSITIVE \*

Occurrence No. 299      Map Index:      ---Dates Last Seen---      Lat/Long: /      Township:  
 Occ Rank: Good      Element: 1994-06-XX      UTM:      Range:  
 Origin: Natural/Native occurrence      Site: 1997-XX-XX      Precision:      Section:      Qtr  
 Presence: Presumed Extant      Symbol Type:      Meridian:  
 Trend: Unknown      Radius:      Elevation:  
 Main Source: BURKE, C. 1994 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.  
 -----  
 Comments:  
 Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
 Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRY THICKETS; SURROUNDED BY CATTLE PASTURE ASSOCIATED WITH A DAIRY OPERATION.  
 Threat: PROXIMITY OF THIS SITE TO AN ACTIVE DAIRY OPERATION MAY BE A POSSIBLE THREAT.  
 General:  
 Owner/Manager:

\* SENSITIVE \*

Occurrence No. 300      Map Index:      ---Dates Last Seen---      Lat/Long: /      Township:  
 Occ Rank: Unknown      Element: 1994-04-23      UTM:      Range:  
 Origin: Natural/Native occurrence      Site: 1994-04-23      Precision:      Section:      Qtr  
 Presence: Presumed Extant      Symbol Type:      Meridian:  
 Trend: Unknown      Radius:      Elevation:  
 Main Source: MANOLIS, T. 1994 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.  
 -----  
 Comments:  
 Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
 Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES; SURROUNDED BY LIGHTLY GRAZED GRASSLAND.  
 Threat:  
 General:  
 Owner/Manager:

\* SENSITIVE \*

Occurrence No. 301      Map Index:      ---Dates Last Seen---      Lat/Long: /      Township:  
 Occ Rank: Good      Element: 1994-05-XX      UTM:      Range:  
 Origin: Natural/Native occurrence      Site: 1994-05-XX      Precision:      Section:      Qtr  
 Presence: Presumed Extant      Symbol Type:      Meridian:  
 Trend: Unknown      Radius:      Elevation:  
 Main Source: MANOLIS, T. 1994 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.  
 -----  
 Comments:  
 Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
 Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES IN AN AREA COVERING ~50 ACRES; SURROUNDED BY GRAZED GRASSLAND.  
 Threat:  
 General:  
 Owner/Manager:

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Agelaius tricolor (cont.)  
tricolored blackbird  
Element Code: ABPBXB0020

|                             |                              |                       |
|-----------------------------|------------------------------|-----------------------|
| -----List Status-----       | -----NDDB Element Ranks----- | -----Other Lists----- |
| Federal: Species of Concern | Global: G2                   | CDFG Status: SC       |
| State: None                 | State: S2                    |                       |

**\* SENSITIVE \***

Occurrence No. 319      Map Index:      ---Dates Last Seen---      Lat/Long: /      Township:  
 Occ Rank: Good      Element: 1996-06-03      UTM:      Range:  
 Origin: Natural/Native occurrence      Site: 1996-06-03      Precision:      Section:      Qtr  
 Presence: Presumed Extant      Symbol Type:      Meridian:  
 Trend: Unknown      Radius:      Elevation:  
 Main Source: ROSCOE, T. 1996 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.  
 -----Comments-----  
 Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more  
 information: (916) 324-3812.  
 Ecological: NESTING SUBSTRATE IS BLACKBERRIES; SURROUNDING HABITAT CONSISTS OF AGRICULTURE, GRAZED PASTURE, AND RURAL  
 RESIDENTIAL.  
 Threat: THREATENED BY DEVELOPMENT.  
 General:  
 Owner/Manager:

**\* SENSITIVE \***

Occurrence No. 321      Map Index:      ---Dates Last Seen---      Lat/Long: /      Township:  
 Occ Rank: Good      Element: 1996-06-10      UTM:      Range:  
 Origin: Natural/Native occurrence      Site: 1996-06-10      Precision:      Section:      Qtr  
 Presence: Presumed Extant      Symbol Type:      Meridian:  
 Trend: Unknown      Radius:      Elevation:  
 Main Source: ROSCOE, T. 1996 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.  
 -----Comments-----  
 Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more  
 information: (916) 324-3812.  
 Ecological: HABITAT CONSISTS OF BLACKBERRY BRAMBLES GROWING ALONG A ROADSIDE DITCH; SURROUNDING AREA CONSISTS OF RURAL  
 RESIDENTIAL/AGRICULTURE.  
 Threat: THREATENED BY DEVELOPMENT.  
 General:  
 Owner/Manager:

**\* SENSITIVE \***

Occurrence No. 347      Map Index:      ---Dates Last Seen---      Lat/Long: /      Township:  
 Occ Rank: Good      Element: 1993-06-XX      UTM:      Range:  
 Origin: Natural/Native occurrence      Site: 1993-06-XX      Precision:      Section:      Qtr  
 Presence: Presumed Extant      Symbol Type:      Meridian:  
 Trend: Unknown      Radius:      Elevation:  
 Main Source: COOK, L. 1993 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.  
 -----Comments-----  
 Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more  
 information: (916) 324-3812.  
 Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES; SURROUNDED BY GRASSLAND, TO THE SOUTH AND EAST.  
 Threat:  
 General:  
 Owner/Manager:

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Agelaius tricolor (cont.)  
tricolored blackbird  
Element Code: ABPBXB0020

|                             |                              |                       |
|-----------------------------|------------------------------|-----------------------|
| -----List Status-----       | -----NDDB Element Ranks----- | -----Other Lists----- |
| Federal: Species of Concern | Global: G2                   | CDFG Status: SC       |
| State: None                 | State: S2                    |                       |

\* SENSITIVE \*

|   |            |                           |              |              |
|---|------------|---------------------------|--------------|--------------|
| Occurrence No. 351  | Map Index: | -----Dates Last Seen----- | Lat/Long: /  | Township:    |
| Occ Rank: Good  |            | Element: 1992-05-XX       | UTM:         | Range:       |
| Origin: Natural/Native occurrence   |            | Site: 1992-05-XX          | Precision:   | Section: Qtr |
| Presence: Presumed Extant   |            |                           | Symbol Type: | Meridian:    |
| Trend: Unknown  |            |                           | Radius:      | Elevation:   |
| Main Source: COOK, L. 1992 (OBS)  |            |                           |              |              |
| Quad Summary: ELK GROVE (3812143/496A)  |            |                           |              |              |
| County Summary: SACRAMENTO  |            |                           |              |              |
| SNA Summary:  |            |                           |              |              |
| Location: *SENSITIVE* Location information suppressed.  |            |                           |              |              |
| Comments:   |            |                           |              |              |
| Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812. |            |                           |              |              |
| Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES; SURROUNDED BY PASTURE.  |            |                           |              |              |
| Threat:   |            |                           |              |              |
| General:  |            |                           |              |              |
| Owner/Manager:  |            |                           |              |              |

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*Clemmys marmorata marmorata*  
northwestern pond turtle  
Element Code: ARAAD02031

| List Status                 | NDDB Element Ranks | Other Lists     |
|-----------------------------|--------------------|-----------------|
| Federal: Species of Concern | Global: G3G4T3     | CDFG Status: SC |
| State: None                 | State: S3          |                 |

Habitat Associations

General: ASSOCIATED WITH PERMANENT OR NEARLY PERMANENT WATER IN A WIDE VARIETY OF HABITATS.  
Micro: REQUIRES BASKING SITES. NESTS SITES MAY BE FOUND UP TO 0.5 KM FROM WATER.

|  |                  |                     |                                  |                    |
|--|------------------|---------------------|----------------------------------|--------------------|
| Occurrence No. 132   | Map Index: 46135 | Dates Last Seen     | Lat/Long: 38°25'08" / 121°22'05" | Township: 07N      |
| Occ Rank: Fair   |                  | Element: 2001-07-11 | UTM: Zone-10 N4253367 E642468    | Range: 06E         |
| Origin: Natural/Native occurrence  |                  | Site: 2001-07-11    | Precision: SPECIFIC              | Section: 31 Qtr NW |
| Presence: Presumed Extant  |                  |                     | Symbol Type: POINT               | Meridian: M        |
| Trend: Unknown   |                  |                     | Radius: 80 meters                | Elevation: 35 ft   |
| Main Source: FULLEN, K. 2001 (OBS)   |                  |                     |                                  |                    |
| Quad Summary: ELK GROVE (3812143/496A)   |                  |                     |                                  |                    |
| County Summary: SACRAMENTO   |                  |                     |                                  |                    |
| SNA Summary:   |                  |                     |                                  |                    |
| Location: NE ELK GROVE. LAGUNA CK 0.3 MILES SOUTH INTERSECTION ELK GROVE FLORIN/ BOND RD & 0.2 MILES EAST OF ELK GROVE FLORIN RD |                  |                     |                                  |                    |

Comments

Distribution: OBSERVED BASKING ON WOODY DEBRIS WITHIN CREEK.  
Ecological: HABITAT CONSISTS OF VALLEY-FOOTHILL RIPARIAN PLANT COMMUNITY DOMINATED BY VALLEY OAK WITH UNDERSTORY OF HIMALAYAN BLACKBERRY. EMERGENT VEGETATION (CATTAILS, BULRUSH) AND LARGE AMOUNT OF ALGAE IN CREEK.  
Threat: CREEK AND TRAILS EXPERIENCE HEAVY USE BY HUMANS.  
General: 1 ADULT OBSERVED.  
Owner/Manager: ELK GROVE COMMUNITY SERVICES D

California Department of Fish and Game  
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*Thamnophis gigas*

giant garter snake

Element Code: ARADB36150

-----List Status-----  
Federal: Threatened  
State: Threatened

-----NDDB Element Ranks-----  
Global: G2G3  
State: S2S3

-----Other Lists-----  
CDFG Status:

-----Habitat Associations-----

General: PREFERS FRESHWATER MARSH AND LOW GRADIENT STREAMS. HAS ADAPTED TO DRAINAGE CANALS & IRRIGATION DITCHES.  
Micro: THIS IS THE MOST AQUATIC OF THE GARTER SNAKES IN CALIFORNIA.

Occurrence No. 169      Map Index: 47639      ---Dates Last Seen---      Lat/Long: 38°23'36" / 121°21'05"      Township: 06N  
Occ Rank: Fair      Element: 2002-03-27      UTM: Zone-10 N4250557 E643957      Range: 06E  
Origin: Natural/Native occurrence      Site: 2002-03-27      Precision: SPECIFIC      Section: 08 Qtr NW  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 50 ft  
Main Source: HENKE, J. 2002 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: EAST SIDE OF WATERMAN ROAD, 0.8 MILE NORTH OF GRANT LINE ROAD, SE OF ELK GROVE

-----Comments-----

Distribution: SNAKE OBSERVED AT THE CONFLUENCE OF A WETLAND SWALE AND THE DITCH.  
Ecological: HABITAT CONSISTS OF A ROADSIDE DITCH ALONG WATERMAN ROAD; VEGETATION CONSISTS OF PASPALUM DILATATUM, TYPHA LATIFOLIA, AND CYPERUS ERAGRASTIS.  
Threat: THREATENED BY TRAFFIC AND DITCH MAINTENANCE.  
General: 1 ADULT OBSERVED ON 27 MAR 2002.  
Owner/Manager: PVT

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*Branchinecta lynchi*  
vernal pool fairy shrimp  
Element Code: ICBRA03030

|                     |                      |               |
|---------------------|----------------------|---------------|
| —List Status—       | —NDDB Element Ranks— | —Other Lists— |
| Federal: Threatened | Global: G2G3         | CDFG Status:  |
| State: None         | State: S2S3          |               |

—Habitat Associations—

General: ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MTNS, AND SOUTH COAST MTNS, IN ASTATIC RAIN-FILLED POOLS.  
Micro: INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Occurrence No. 100      Map Index:32550      —Dates Last Seen—      Lat/Long: 38°26'48" / 121°21'16"      Township: 07N  
Occ Rank: Excellent      Element: 1997-02-11      UTM: Zone-10 N4256452 E643600      Range: 06E  
Origin: Natural/Native occurrence      Site: 1997-03-14      Precision: SPECIFIC      Section: 19 Qtr NE  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 29.1 ac      Elevation: 60 ft  
Main Source: GIBSON, J. & T. SKORDAL 1996 (LIT)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: 0.5 MILE SOUTH OF CALVINE ROAD AND IMMEDIATELY WEST OF WATERMAN ROAD, 2 MILES NORTH OF ELK GROVE.  
—Comments—  
Distribution: PERRY RANCH MITIGATION AREA IS A 37-ACRE PRESERVE, CONSISTING OF NORTHERN HARDPAN VERNAL POOLS (NATURAL AND CREATED), SEASONAL WETLANDS, WET SWALES, AND NON-NATIVE ANNUAL GRASSLANDS.  
Ecological: NORTHERN HARDPAN VERNAL POOL HABITAT WITH CONSTRUCTED AND NATURAL POOLS; DOMINANT UPLAND CONSISTING OF NON-NATIVE ANNUAL GRASSLAND. SOIL TYPES: CORNING-REDDING COMPLEX (8-30% SLOPES) AND REDDING GRAVELLY LOAM (0-8% SLOPES).  
Threat: WETLAND PRESERVE IS PROTECTED BY EXISTING PERIMETER FENCE AND NO DISTURBANCES NOTED.  
General: 1995: 12/28-OBS IN 25 OF 26 CONSTRUCTED POOLS, 7 OF 10 REFERENCE POOLS. 2/2-OBS IN 2 OF 26 CONSTRUCTED POOLS, 1 OF 10 REFERENCE POOLS. 1996: OBS IN 25 OF 26 CONSTRUCTED POOLS, 3 OF 10 REFERENCE POOLS. 1997: UNKNOWN NUMBER OBS ON 1/8 & 2/11.  
Owner/Manager: PVT-WINNCREST HOMES

Occurrence No. 160      Map Index:30622      —Dates Last Seen—      Lat/Long: 38°23'23" / 121°20'41"      Township: 06N  
Occ Rank: Unknown      Element: 1993-03-02      UTM: Zone-10 N4250133 E644569      Range: 06E  
Origin: Natural/Native occurrence      Site: 1993-03-02      Precision: NON-SPECIFIC      Section: 08 Qtr XX  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 3/5 mile      Elevation: 50 ft  
Main Source: SUGNET & ASSOC. 1993 (PERS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: VICINITY OF GRANT LINE ROAD. ABOUT 1.5 MILES SE OF ELK GROVE.  
—Comments—  
Distribution: SEASONAL WETLANDS LOCATED SOMEWHERE IN SECTION 8.  
Ecological: NATURAL SEASONAL WETLANDS.  
Threat:  
General: B. LYNCHI OBSERVED IN 1 OF 8 FEATURES INSPECTED ON 2/2/93 AND 3/2/93. SUGNET RECORD #'S 46 & 47.  
Owner/Manager: UNKNOWN

Occurrence No. 162      Map Index:33686      —Dates Last Seen—      Lat/Long: 38°29'21" / 121°20'35"      Township: 07N  
Occ Rank: Unknown      Element: 1993-02-16      UTM: Zone-10 N4261171 E644513      Range: 06E  
Origin: Natural/Native occurrence      Site: 1993-02-16      Precision: NON-SPECIFIC      Section: XX Qtr XX  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 1,920.3 ac      Elevation: 60 ft  
Main Source: SUGNET & ASSOC. 1993 (PERS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: NORTH OF GERBER ROAD, SOUTH OF FLORIN ROAD, EAST OF ELK GROVE-FLORIN ROAD. ABOUT 5 MILES NORTH OF ELK GROVE.  
—Comments—  
Distribution: SEASONAL WETLANDS, VERNAL POOLS, AND ROADSIDE DITCHES SOMEWHERE IN SECTIONS 4, 5 & 6.  
Ecological: NATURAL SEASONAL WETLANDS, NATURAL VERNAL POOLS, MANMADE ROADSIDE DITCHES AND MANMADE "OTHER".  
Threat:  
General: B. LYNCHI OBSERVED IN 1 OF 3 SEASONAL WETLANDS & 1 OF 48 VERNAL POOLS INSPECTED IN SECTION 4. THEY WERE ALSO OBSERVED IN AN UNDESCRIBED MADMADE FEATURE IN SECTION 5. SUGNET RECORD #'S 58, 59 & 60.  
Owner/Manager: UNKNOWN



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|   |                       |                              |                       |
|---|-----------------------|------------------------------|-----------------------|
| Branchinecta lynchi (cont.)<br>vernal pool fairy shrimp<br>Element Code: ICBRA03030 | -----List Status----- | -----NDDB Element Ranks----- | -----Other Lists----- |
|   | Federal: Threatened   | Global: G2G3                 | CDFG Status:          |
|   | State: None           | State: S2S3                  |                       |

Occurrence No. 163      Map Index:33687      ---Dates Last Seen---      Lat/Long: 38°27'11" / 121°20'01"      Township: 07N  
 Occ Rank: Unknown      Element: 1993-03-02      UTM: Zone-10 N4257183 E645412      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1993-03-02      Precision: NON-SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 2,537.5 ac      Elevation: 65 ft  
 Main Source: SUGNET & ASSOC. 1993 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: EAST OF ELK GROVE-FLORIN RD, WEST OF EXCELSIOR RD, & NORTH OF SHELDON RD. NNE OF ELK GROVE.  
 -----Comments-----  
 Distribution: VERNAL POOLS LOCATED SOMEWHERE IN SECTIONS 15, 16, 17 & 19.  
 Ecological: NATURAL VERNAL POOLS.  
 Threat:  
 General: B. LYNCHI OBSERVED IN 4 OF 49 FEATURES INSPECTED IN SEC 15 ON 3/2/93, IN 1 FEATURE INSPECTED IN SEC 17 ON 1/23/93, AND IN 1 FEATURE INSPECTED IN SEC 19 ON 2/6/93. SUGNET RECORD #'S 61, 62 & 64.  
 Owner/Manager: UNKNOWN

Occurrence No. 164      Map Index:33688      ---Dates Last Seen---      Lat/Long: 38°24'59" / 121°20'34"      Township: 07N  
 Occ Rank: Unknown      Element: 1993-03-02      UTM: Zone-10 N4253115 E644670      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1993-03-02      Precision: NON-SPECIFIC      Section: 32 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 3/5 mile      Elevation: 50 ft  
 Main Source: SUGNET & ASSOC. 1993 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: NORTH OF ELK GROVE BLVD, SOUTH OF BOND RD, EAST OF WATERMAN RD, & WEST OF BRADSHAW RD. EAST OF ELK GROVE.  
 -----Comments-----  
 Distribution: VERNAL POOLS AND SEASONAL WETLANDS LOCATED SOMEWHERE IN SECTION 32.  
 Ecological: NATURAL VERNAL POOLS AND NATURAL SEASONAL WETLANDS.  
 Threat:  
 General: B. LYNCHI OBSERVED IN 19 OF 24 INSPECTED VERNAL POOLS AND 2 OF 13 INSPECTED SEASONAL WETLANDS ON 2/2/93, AND IN 1 OF 23 INSPECTED VERNAL POOLS ON 3/2/93. SUGNET RECORD #'S 65, 66, & 67.  
 Owner/Manager: UNKNOWN

Occurrence No. 186      Map Index:36807      ---Dates Last Seen---      Lat/Long: 38°29'07" / 121°16'58"      Township: 07N  
 Occ Rank: Unknown      Element: 1991-04-06      UTM: Zone-10 N4260853 E649773      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1991-04-06      Precision: NON-SPECIFIC      Section: 02 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 158.8 ac      Elevation: 100 ft  
 Main Source: BELK, D. 1991 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: "MULTI-CULTURE PARK" (FORMERLY, FLORIN PARK), SOUTH OF (OLD) MATHER AIR FORCE BASE.  
 -----Comments-----  
 Distribution:  
 Ecological:  
 Threat:  
 General: AN UNKNOWN NUMBER COLLECTED BY CHRIS NAGANO AND JAMIE KING ON 6 APRIL 1991; IDENTIFIED BY DENTON BELK (DB #991).  
 Owner/Manager: UNKNOWN

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*Branchinecta lynchi* (cont.)  
vernal pool fairy shrimp  
Element Code: ICBRA03030

|                     |                      |               |
|---------------------|----------------------|---------------|
| —List Status—       | —NDDB Element Ranks— | —Other Lists— |
| Federal: Threatened | Global: G2G3         | CDFG Status:  |
| State: None         | State: S2S3          |               |

Occurrence No. 190      Map Index:36874      —Dates Last Seen—      Lat/Long: 38°30'14" / 121°15'10"      Township: 08N  
 Occ Rank: Good      Element: 2000-03-15      UTM: Zone-10 N4262974 E652346      Range: 07E  
 Origin: Natural/Native occurrence      Site: 2000-03-15      Precision: NON-SPECIFIC      Section: 31 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 587.8 ac      Elevation: 125 ft  
 Main Source: MUTH, D. 1996 (OBS)  
 Quad Summary: CARMICHAEL (3812153/512D)\*, SLOUGHHOUSE (3812142/495B), ELK GROVE (3812143/496A), BUFFALO CREEK (3812152/511C)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: VICINITY OF THE INTERSECTION OF EAGLES NEST ROAD AND HWY 16 (JACKSON ROAD), SOUTH OF MATHER AIR FORCE BASE.  
 —Comments—  
 Distribution:  
 Ecological: HABITAT CONSISTS OF NORTHERN HARDPAN VERNAL POOLS, AS WELL AS SCRAPES, SWALES, DEPRESSIONS, AND STOCK PONDS; SURROUNDED BY NON-NATIVE GRASSLAND.  
 Threat: THREATENED BY GRAVEL MINING.  
 General: NUMEROUS FAIRY SHRIMP FOUND AT THIS SITE DURING SPRING 1996 AND 1997 SURVEYS. OBSERVED 10+ ADULTS MARCH 2000, IN WESTERN PORTION OF POLYGON.  
 Owner/Manager: PVT

Occurrence No. 228      Map Index:33693      —Dates Last Seen—      Lat/Long: 38°29'58" / 121°17'00"      Township: 08N  
 Occ Rank: Excellent      Element: 1998-01-28      UTM: Zone-10 N4262430 E649680      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1998-01-28      Precision: SPECIFIC      Section: 35 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 161.9 ac      Elevation: 115 ft  
 Main Source: WHITNEY, K. 1998 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)\*, CARMICHAEL (3812153/512D)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: ARROYO SECO SITE, 0.8 MILE ENE JCT OF EXCELSIOR RD & FLORIN RD, 1.5 MILES WSW OF JCT EAGLES NEST RD & JACKSON RD.  
 —Comments—  
 Distribution: ARROYO SECO MITIGATION BANK SITE (PREVIOUSLY DESCRIBED AS: VERNAL POOLS SOMEWHERE IN SECTION 35).  
 Ecological: NATURAL VERNAL POOLS IN A VERNAL POOL COMMUNITY  
 Threat:  
 General: 100'S OBSERVED IN MITIGATION BANK, SURVEYED 28 JAN 1998.  
 Owner/Manager: PVT

Occurrence No. 343      Map Index:46127      —Dates Last Seen—      Lat/Long: 38°27'48" / 121°20'10"      Township: 07N  
 Occ Rank: Excellent      Element: 2002-01-21      UTM: Zone-10 N4258335 E645154      Range: 06E  
 Origin: Natural/Native occurrence      Site: 2002-01-21      Precision: NON-SPECIFIC      Section: 17 Qtr NE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 93.8 ac      Elevation: 65 ft  
 Main Source: ECORP CONSULTING, INC. 2002 (LIT)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: CHURCHILL DOWNS WETLAND PRESERVE; 4 MILES NNE OF ELK GROVE.  
 —Comments—  
 Distribution: 1 MILE SOUTH GERBER RD, 0.5 MILE NORTH CALVINE RD & EXTENDING FROM 0.4 MILE WEST BRADSHAW RD. INDIVIDUALS DETECTED IN POOL NUMBERS 12 AND 15 (NE 1/4 OF THE NE 1/4, SECTION 17).  
 Ecological: HABITAT CONSISTS OF A VERNAL POOL IN A GRASSLAND. LINDERIELLA OCCIDENTALIS IN AND LEPIDURUS PACKARDI ALSO IN VICINITY.  
 Threat:  
 General: 10'S OBSERVED IN POOL 12 AND 1000'S OBSERVED IN POOL 15 ON 21 JAN 2002.  
 Owner/Manager: PVT

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*Branchinecta lynchi* (cont.)  
vernal pool fairy shrimp  
Element Code: ICBRA03030

| List Status         | NDDB Element Ranks | Other Lists  |
|---------------------|--------------------|--------------|
| Federal: Threatened | Global: G2G3       | CDPG Status: |
| State: None         | State: S2S3        |              |

Occurrence No. 344      Map Index: 48534      —Dates Last Seen—      Lat/Long: 38°28'23" / 121°21'32"      Township: 07N  
Occ Rank: Excellent      Element: 2002-01-21      UTM: Zone-10 N4259383 E643155      Range: 06E  
Origin: Natural/Native occurrence      Site: 2002-01-21      Precision: NON-SPECIFIC      Section: 07 Qtr SE  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 55.4 ac      Elevation: 50 ft  
Main Source: ECORP CONSULTING, INC. 2002 (LIT)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: CHURCHILL DOWNS WETLAND PRESERVE; 4.5 MILES NORTH OF ELK GROVE.  
Comments:  
Distribution: 0.5 MILE SOUTH OF GERBER RD, 1.2 MILES NORTH OF CALVINE AND 0.5 MILE EAST OF ELK GROVE FLORIN RD. INDIVIDUALS OBSERVED IN POOL NUMBER 9 (NE 1/4 OF THE SE 1/4, SECTION 7).  
Ecological: HABITAT CONSISTS OF A VERNAL POOL WITHIN A GRASSLAND. LINDERIELLA OCCIDENTALIS AND LEPIDURUS PACKARDI ALSO IN VICINITY.  
Threat:  
General: 10'S OBSERVED IN POOL NUMBER 9 ON 21 JAN 2002.  
Owner/Manager: PVT

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*Branchinecta mesovallensis*  
midvalley fairy shrimp  
Element Code: ICBRA03150

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Species of Concern      Global: G2      CDFG Status:  
State: None      State: S2

-----Habitat Associations-----

General: VERNAL POOLS IN THE CENTRAL VALLEY  
Micro: None for this Element

Occurrence No. 29      Map Index: 48318      ---Dates Last Seen---      Lat/Long: 38°27'12" / 121°20'04"      Township: 07N  
Occ Rank: Unknown      Element: 1991-19-03      UTM: Zone-10 N4257241 E645317      Range: 06E  
Origin: Natural/Native occurrence      Site: 1991-19-03      Precision: NON-SPECIFIC      Section: 17 Qtr SE  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 1/10 mile      Elevation: 60 ft  
Main Source: BELK, D. & M. FUGATE 2002 (LIT)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: BELMONT ESTATES (OGDEN RANCH) NORTHWEST OF THE INTERSECTION OF BRADSHAW ROAD AND CALVINE ROAD.  
-----Comments-----  
Distribution:  
Ecological: VERNAL POOLS.  
Threat:  
General: DENTON BELK COLLECTION # 1014 COLLECTED 19 MAR 1991 BY BRENT HELM. UNKNOWN NUMBER OF INDIVIDUALS  
OBSERVED/COLLECTED AT SITE #003 (D. ROGERS) ON AN UNKNOWN DATE; ROGERS' LOCATION INFORMATION OBTAINED FROM  
VARIOUS SOURCES.  
Owner/Manager: UNKNOWN

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*Lindieriella occidentalis*  
California *lindieriella*  
Element Code: ICBRA06010

|                             |                    |               |
|-----------------------------|--------------------|---------------|
| —List Status—               | NDDB Element Ranks | —Other Lists— |
| Federal: Species of Concern | Global: G2G3       | CDFG Status:  |
| State: None                 | State: S2S3        |               |

Habitat Associations

General: SEASONAL POOLS IN UNPLOWED GRASSLANDS WITH OLD ALLUVIAL SOILS UNDERLAIN BY HARDPAN OR IN SANDSTONE DEPRESSIONS.  
Micro: WATER IN THE POOLS HAS VERY LOW ALKALINITY, CONDUCTIVITY, AND TDS.

Occurrence No. 131      Map Index:34800      —Dates Last Seen—      Lat/Long: 38°29'46" / 121°21'48"      Township: 07N  
 Occ Rank: Unknown      Element: 1992-04-02      UTM: Zone-10 N4261928 E642726      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1992-04-02      Precision: SPECIFIC      Section: 06 Qtr NW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 48 ft  
 Main Source: KOFORD, E. 1992 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: 0.1 MILES WEST OF HEDGE AVENUE AND SOUTH OF FLORIN ROAD IN A 35 FOOT LONG PUDDLE.  
 —Comments—  
 Distribution:  
 Ecological: 35 FOOT LONG PUDDLE.  
 Threat:  
 General: KOFORD OBSERVED LINDERIELLA IN PUDDLE DURING SURVEY IN SPRING OF 1992.  
 Owner/Manager: UNKNOWN

Occurrence No. 132      Map Index:34801      —Dates Last Seen—      Lat/Long: 38°29'47" / 121°20'02"      Township: 07N  
 Occ Rank: Unknown      Element: 1992-04-02      UTM: Zone-10 N4262000 E645301      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1992-04-02      Precision: NON-SPECIFIC      Section: 05 Qtr NE  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 4/5 mile      Elevation: 64 ft  
 Main Source: KOFORD, E. 1992 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)\*, CARMICHAEL (3812153/512D)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: ROADSIDE DITCHES NEAR FLORIN ROAD AND BRADSHAW ROAD, BESIDE FLORIN ROAD.  
 —Comments—  
 Distribution: TWO SITES, 0.6 MILES APART.  
 Ecological: ROADSIDE DITCHES.  
 Threat:  
 General: KOFORD OBSERVED LINDERIELLA IN DITCHES DURING SURVEY IN SPRING OF 1992.  
 Owner/Manager: UNKNOWN

Occurrence No. 182      Map Index:42726      —Dates Last Seen—      Lat/Long: 38°28'37" / 121°20'22"      Township: 07N  
 Occ Rank: Unknown      Element: 1993-03-31      UTM: Zone-10 N4259852 E644833      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1993-03-31      Precision: NON-SPECIFIC      Section: 08 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 156.9 ac      Elevation: 60 ft  
 Main Source: KIRKPATRICK, G. 1993 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: ALONG CENTRAL CALIFORNIA TRACTION RAILROAD, NORTH OF CALVINE RD, SOUTH OF FLORIN RD, & WEST OF VINEYARD RD.  
 —Comments—  
 Distribution: LONG NARROW RAIN FILLED DEPRESSIONS IN RAILROAD RIGHT-OF-WAY. LAND USE IS GRAZING AND RAILROAD RIGHT-OF-WAY.  
 Ecological: SOME ADJACENT PASTURES HAD REALLY NICE LOOKING VERNAL POOLS.  
 Threat: UNDULATING TOPOGRAPHY, RED CLAY SOILS. POOLS 5 X 10 TO 15 METERS  
 General: RAILROAD MAINTENANCE, CONVERSION TO RESIDENTIAL, INTENSIVE AGRICULTURE, GRAZING, DUMPING.  
 NUMEROUS TO FEW ADULTS OBSERVED, HIGHER NUMBERS IN THE MIDDLE SECTION OF MAPPED AREA. ALSO OBSERVED LEPIDURUS SP, CLAM SHRIMP, RED COPEPODS.  
 Owner/Manager: PVT

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*Linderiella occidentalis* (cont.)  
California *Linderiella*  
Element Code: ICBRA06010

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Species of Concern      Global: G2G3      CDFG Status:  
State: None      State: S2S3

Occurrence No. 183      Map Index:42727      ---Dates Last Seen---      Lat/Long: 38°29'54" / 121°21'32"      Township: 08N  
Occ Rank: Unknown      Element: 1993-04-01      UTM: Zone-10 N4262184 E643088      Range: 06E  
Origin: Natural/Native occurrence      Site: 1993-04-01      Precision: NON-SPECIFIC      Section: 31 Qtr SE  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 27.2 ac      Elevation: 40 ft  
Main Source: KIRKPATRICK, G. 1993 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)\*, CARMICHAEL (3812153/512D)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: ALONG CENTRAL CALIFORNIA TRACTION RAILROAD, BETWEEN HEDGE AVE AND FLORIN ROAD, SACRAMENTO.  
-----Comments-----  
Distribution: NARROW RAIN-FILLED DEPRESSION IN RIGHT-OF-WAY ~ 5 METERS IN WIDTH AND 15 METERS IN LENGTH. UNDULATING TOPOGRAPHY ON RED CLAY SOILS.  
Ecological: CLEAR, CLAY BOTTOMED POOL WITH SOME EMERGENT VEGETATION, POOL IS ADJACENT TO SAND LOADER USED FOR RAIL BED MAINTENANCE.  
Threat: RAILROAD MAINTENENCE AND GRADING OF RAILROAD.  
General: MODERATE DENSITY OF REPRODUCTIVE ADULTS OBSERVED; ALSO OBSERVED WESTERN TOAD TADPOLES, 1993.  
Owner/Manager: PVT

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*Lepidurus packardi*

vernal pool tadpole shrimp  
Element Code: ICBRA10010

|                       |                              |                       |
|-----------------------|------------------------------|-----------------------|
| -----List Status----- | -----NDDB Element Ranks----- | -----Other Lists----- |
| Federal: Endangered   | Global: G2G3                 | CDFG Status:          |
| State: None           | State: S2S3                  |                       |

-----Habitat Associations-----

General: INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.  
Micro: POOLS COMMONLY FOUND IN GRASS BOTTOMED SWALES OF UNPLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED & HIGHLY TURBID.

Occurrence No. 71      Map Index:34802      ---Dates Last Seen---      Lat/Long: 38°29'53" / 121°17'38"      Township: 08N  
Occ Rank: Unknown      Element: 1992-04-02      UTM: Zone-10 N4262263 E648784      Range: 06E  
Origin: Natural/Native occurrence      Site: 1992-04-02      Precision: NON-SPECIFIC      Section: 35 Qtr SW  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 1/5 mile      Elevation: 110 ft  
Main Source: KOPORD, E. 1992 (PERS)  
Quad Summary: ELK GROVE (3812143/496A)\*, CARMICHAEL (3812153/512D)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: NEAR NORTHEAST CORNER OF EXCELSIOR ROAD AND FLORIN ROAD.  
-----Comments-----  
Distribution:  
Ecological: VERNAL POOL.  
Threat:  
General: KOPORD OBSERVED TADPOLE SHRIMP DURING SURVEY IN SPRING OF 1992.  
Owner/Manager: UNKNOWN

Occurrence No. 85      Map Index:36381      ---Dates Last Seen---      Lat/Long: 38°27'54" / 121°19'24"      Township: 07N  
Occ Rank: Fair      Element: 1997-02-12      UTM: Zone-10 N4258522 E646281      Range: 06E  
Origin: Natural/Native occurrence      Site: 1997-02-12      Precision: SPECIFIC      Section: 16 Qtr NE  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 65 ft  
Main Source: WOLFF, D. 1997 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: SOUTH OF LAGUNA CREEK, 0.5 MILE WEST OF VINEYARD BLVD, 4 MILES NE OF ELK GROVE.  
-----Comments-----  
Distribution: SITE IS LOCATED NORTH OF A LARGE SUBDIVISION BETWEEN VINEYARD LANE AND CENTRAL CALIFORNIA TRACTION.  
Ecological: HABITAT CONSISTS OF A GRAZED SEASONAL WETLAND FORMED BY EARTH EXCAVATION, SCRAPING 6 YEARS AGO. SOME VERNAL POOL PLANTS PRESENT, BUT MANY WEEDY, NON-NATIVES AS WELL; DOMINANTS: PLAGIOBOTHRYUS STIPITATUS, ELEOCHARIS MACROSTACHYA.  
Threat:  
General: 7 ADULTS OBSERVED (6 DEAD, 1 ALIVE) ON 12 FEB 1997.  
Owner/Manager: SAC COUNTY-PARKS & REC

Occurrence No. 86      Map Index:30622      ---Dates Last Seen---      Lat/Long: 38°23'23" / 121°20'41"      Township: 06N  
Occ Rank: Unknown      Element: 1993-03-12      UTM: Zone-10 N4250133 E644569      Range: 06E  
Origin: Natural/Native occurrence      Site: 1993-03-12      Precision: NON-SPECIFIC      Section: 08 Qtr XX  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 3/5 mile      Elevation: 50 ft  
Main Source: SUGNET & ASSOC. 1993 (PERS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: VICINITY OF GRANT LINE ROAD. ABOUT 1.5 MILES SE OF ELK GROVE.  
-----Comments-----  
Distribution: ROADSIDE DITCH LOCATED SOMEWHERE IN SECTION 8.  
Ecological: MANMADE ROADSIDE DITCH.  
Threat:  
General: LEPIDURUS PACKARDI OBSERVED IN THE 1 FEATURE INSPECTED. SUGNET RECORD #129.  
Owner/Manager: UNKNOWN

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|  |                       |                              |                       |
|--|-----------------------|------------------------------|-----------------------|
| <i>Lepidurus packardii</i> (cont.)<br>vernal pool tadpole shrimp<br>Element Code: ICBRA10010 | -----List Status----- | -----NDDB Element Ranks----- | -----Other Lists----- |
|  | Federal: Endangered   | Global: G2G3                 | CDFG Status:          |
|  | State: None           | State: S2S3                  |                       |

Occurrence No. 90      Map Index:33686      ---Dates Last Seen---      Lat/Long: 38°29'21" / 121°20'35"      Township: 07N  
 Occ Rank: Unknown      Element: 1993-02-16      UTM: Zone-10 N4261171 E644513      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1993-02-16      Precision: NON-SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 1,920.3 ac      Elevation: 60 ft  
 Main Source: SUGNET & ASSOC. 1993 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: NORTH OF GERBER ROAD, SOUTH OF FLORIN ROAD, EAST OF ELK GROVE-FLORIN ROAD. ABOUT 5 MILES NORTH OF ELK GROVE.  
 Comments:  
 Distribution: SEASONAL WETLANDS, VERNAL POOLS AND ROADSIDE DITCHES SOMEWHERE IN SECTIONS 4, 5 & 6.  
 Ecological: NATURAL SEASONAL WETLANDS, NATURAL VERNAL POOLS AND MANMADE ROADSIDE DITCHES.  
 Threat:  
 General: LEPIDURUS PACKARDI OBSERVED IN 1 OF 3 SEASONAL WETLANDS & 4 OF 48 VERNAL POOLS INSPECTED IN SEC 4. ALSO IN 3 OF 21 SEASONAL WETLANDS INSPECTED IN SEC 5 & 1 OF 3 ROADSIDE DITCHES INSPECTED IN SEC 6. SUGNET RECORD #'S 136, 137, 138 & 139.  
 Owner/Manager: UNKNOWN

Occurrence No. 91      Map Index:33687      ---Dates Last Seen---      Lat/Long: 38°27'11" / 121°20'01"      Township: 07N  
 Occ Rank: Unknown      Element: 1997-02-12      UTM: Zone-10 N4257183 E645412      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1997-02-12      Precision: NON-SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 2,537.5 ac      Elevation: 65 ft  
 Main Source: SUGNET & ASSOC. 1993 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: EAST OF ELK GROVE-FLORIN RD, WEST OF EXCELSIOR RD, NORTH OF SHELDON RD. NNE OF ELK GROVE.  
 Comments:  
 Distribution: VERNAL POOLS LOCATED SOMEWHERE IN SECTIONS 15, 16, 17 & 19. 1997 SURVEY BY D. WOLFF WAS NEAR CENTER OF SECTION 16 BORDERED BY RR TRACKS.  
 Ecological: NATURAL VERNAL POOLS. 1997 IN NORTHERN HARDPAN VERNAL POOLS COMMUNITY.  
 Threat: DEVELOPEMENT, CATTLE GRAZING  
 General: LEPIDURUS PACKARDI OBSERVED IN 29 OF 49 FEATURES INSPECTED IN SEC 15 ON 3/2/93, AND IN 1 FEATURE INSPECTED IN SECTION 16 ON 1/25/93. SUGNET RECORD #'S 140 & 141. 7 OBSERVED IN 1997.  
 Owner/Manager: UNKNOWN

Occurrence No. 94      Map Index:33693      ---Dates Last Seen---      Lat/Long: 38°29'58" / 121°17'00"      Township: 08N  
 Occ Rank: Excellent      Element: 1998-01-28      UTM: Zone-10 N4262430 E649680      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1998-01-28      Precision: SPECIFIC      Section: 35 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 161.9 ac      Elevation: 115 ft  
 Main Source: WHITNEY, K. 1998 (PERS)  
 Quad Summary: ELK GROVE (3812143/496A)\*, CARMICHAEL (3812153/512D)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: ARROYO SECO SITE, 0.8 MILE ENE JCT OF EXCELSIOR RD & FLORIN RD, 1.5 MILES WSW OF JCT EAGLES NEST RD & JACKSON RD.  
 Comments:  
 Distribution: ARROYO SECO MITIGATION BANK SITE (PREVIOUSLY DESCRIBED AS: VERNAL POOLS SOMEWHERE IN SECTION 35).  
 Ecological: NATURAL VERNAL POOLS IN A VERNAL POOL COMMUNITY  
 Threat:  
 General: 2 APR 1992: UNKNOWN NUMBER OF LEPIDURUS PACKARDI OBSERVED IN A VERNAL POOL, SUGNET RECORD #150. 100'S OBSERVED IN MITIGATION BANK, SURVEYED 28 JAN 1998.  
 Owner/Manager: PVT



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*Lepidurus packardii* (cont.)  
vernal pool tadpole shrimp  
Element Code: ICBRA10010

|                       |                              |                       |
|-----------------------|------------------------------|-----------------------|
| -----List Status----- | -----NDDB Element Ranks----- | -----Other Lists----- |
| Federal: Endangered   | Global: G2G3                 | CDFG Status:          |
| State: None           | State: S2S3                  |                       |

Occurrence No. 113      Map Index:36874      ---Dates Last Seen---      Lat/Long: 38°30'14" / 121°15'10"      Township: 08N  
 Occ Rank: Good      Element: 2000-03-15      UTM: Zone-10 N4262974 E652346      Range: 07E  
 Origin: Natural/Native occurrence      Site: 2000-03-15      Precision: NON-SPECIFIC      Section: 31 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 587.8 ac      Elevation: 125 ft  
 Main Source: MUTH, D. 1996 (OBS)  
 Quad Summary: CARMICHAEL (3812153/512D)\*, SLOUGHHOUSE (3812142/495B), ELK GROVE (3812143/496A), BUFFALO CREEK (3812152/511C)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: VICINITY OF THE INTERSECTION OF EAGLES NEST ROAD AND HWY 16 (JACKSON ROAD), SOUTH OF MATHER AIR FORCE BASE.  
 Comments:  
 Distribution:  
 Ecological: HABITAT CONSISTS OF NORTHERN HARDPAN VERNAL POOLS, AS WELL AS SCRAPES, SWALES, DEPRESSIONS, AND STOCK PONDS; SURROUNDED BY NON-NATIVE GRASSLAND.  
 Threat: THREATENED BY GRAVEL MINING.  
 General: NUMEROUS FAIRY SHRIMP AND TADPOLE SHRIMP FOUND AT THIS SITE DURING SPRING 1996 SURVEYS. 10 PLUS ADULTS OBSERVED MARCH 2000 IN WESTERN PORTION OF POLYGON.  
 Owner/Manager: PVT

Occurrence No. 165      Map Index:46127      ---Dates Last Seen---      Lat/Long: 38°27'48" / 121°20'10"      Township: 07N  
 Occ Rank: Excellent      Element: 2002-01-21      UTM: Zone-10 N4258335 E645154      Range: 06E  
 Origin: Natural/Native occurrence      Site: 2002-01-21      Precision: NON-SPECIFIC      Section: 17 Qtr NE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 93.8 ac      Elevation: 65 ft  
 Main Source: CAPELL, S. ET AL 2001 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: CHURCHILL DOWNS WETLAND PRESERVE; 4 MILES NNE OF ELK GROVE.  
 Comments:  
 Distribution: 1 MILE SOUTH GERBER RD, 0.5 MILE NORTH CALVINE RD & EXTENDING FROM 0.4 MILE WEST BRADSHAW RD. 2001 SURVEY: SE 1/4 OF NE 1/4, SECTION 17. 2002 SURVEY: INDIVIDUALS OBSERVED IN POOL NUMBER CVP1 (NW 1/4 OF THE NE 1/4, SECTION 17).  
 Ecological: SITE IS VERNAL POOL PRESERVE - GRASSLAND. OTHER SPECIES: LINDERIELLA OCCIDENTALIS AND BRANCHINECTA LYNCHI ALSO IN VICINITY. SURROUNDING LAND CONSISTS OF HOMES.  
 Threat:  
 General: 16 MAR 2001: 100'S OF ADULTS OBSERVED. 5 APR 2001: 10'S OF EXOSKELETONS OBSERVED IN POOL - NO LIVE SHRIMP FOUND. 100'S OBS IN 1 POOL ON 21 JAN 2002.  
 Owner/Manager: ELLIOT HOMES

Occurrence No. 173      Map Index:48534      ---Dates Last Seen---      Lat/Long: 38°28'23" / 121°21'32"      Township: 07N  
 Occ Rank: Excellent      Element: 2002-01-21      UTM: Zone-10 N4259383 E643155      Range: 06E  
 Origin: Natural/Native occurrence      Site: 2002-01-21      Precision: NON-SPECIFIC      Section: 07 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 55.4 ac      Elevation: 50 ft  
 Main Source: ECORP CONSULTING, INC. 2002 (LIT)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: CHURCHILL DOWNS WETLAND PRESERVE; 4.5 MILES NORTH OF ELK GROVE.  
 Comments:  
 Distribution: 0.5 MILE SOUTH OF GERBER RD, 1.2 MILES NORTH OF CALVINE AND 0.5 MILE EAST OF FLORIN RD. INDIVIDUALS OBSERVED IN POOL NUMBERS 8 AND 34 (NE 1/4 OF THE SE 1/4, SECTION 7).  
 Ecological: HABITAT CONSISTS OF A VERNAL POOL WITHIN A GRASSLAND. LINDERIELLA OCCIDENTALIS AND BRANCHINECT LYNCHI ALSO IN VICINITY.  
 Threat:  
 General: 1000'S OBSERVED IN POOL 8 AND 10'S OBSERVED IN POOL 34 ON 21 JAN 2002  
 Owner/Manager: PVT

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*Desmocerus californicus dimorphus*  
valley elderberry longhorn beetle  
Element Code: IICOL48011

|                       |                              |                       |
|-----------------------|------------------------------|-----------------------|
| -----List Status----- | -----NDDB Element Ranks----- | -----Other Lists----- |
| Federal: Threatened   | Global: G3T2                 | CDFG Status:          |
| State: None           | State: S2                    |                       |

-----Habitat Associations-----

General: OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA, IN ASSOCIATION WITH BLUE ELDERBERRY (SAMBUCUS MEXICANA).  
Micro: PREFERS TO LAY EGGS IN ELDERBERRIES 2-8 INCHES IN DIAMETER; SOME PREFERENCE SHOWN FOR "STRESSED" ELDERBERRIES.

|                                   |                 |                           |                                  |                    |
|-----------------------------------|-----------------|---------------------------|----------------------------------|--------------------|
| Occurrence No. 163                | Map Index:39509 | -----Dates Last Seen----- | Lat/Long: 38°25'01" / 121°16'17" | Township: 99X      |
| Occ Rank: Unknown                 |                 | Element: 1984-XX-XX       | UTM: Zone-10 N4253289 E650912    | Range: 99X         |
| Origin: Natural/Native occurrence |                 | Site: 1984-XX-XX          | Precision: NON-SPECIFIC          | Section: XX Qtr XX |
| Presence: Presumed Extant         |                 |                           | Symbol Type: POLYGON             | Meridian: X        |
| Trend: Unknown                    |                 |                           | Area: 403.6 ac                   | Elevation: 60 ft   |

Main Source: ARNOLD, R. 1984 (LIT)  
Quad Summary: ELK GROVE (3812143/496A)\*, SLOUGHHOUSE (3812142/495B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: ALONG COSUMNES RIVER, NEAR WILTON.

-----Comments-----  
Distribution: STREAM MAPPED, FOR ~4 RIVER MILES AROUND WILTON.  
Ecological:  
Threat:  
General: EXIT HOLES OBSERVED DURING MAY AND JUNE SURVEYS, 1984, NO ADULTS OBSERVED.  
Owner/Manager: UNKNOWN

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*Downingia pusilla*  
dwarf downingia  
Element Code: PDCAM060C0

|                       |                              |                       |
|-----------------------|------------------------------|-----------------------|
| -----List Status----- | -----NDBB Element Ranks----- | -----Other Lists----- |
| Federal: None         | Global: G3                   | CNPS List: 2          |
| State: None           | State: S3.1                  | R-E-D Code: 1-2-1     |

-----Habitat Associations-----

General: VALLEY AND FOOTHILL GRASSLAND (MESIC SITES), VERNAL POOLS.  
Micro: VERNAL LAKE AND POOL MARGINS WITH A VARIETY OF ASSOCIATES. IN SEVERAL TYPES OF VERNAL POOLS. 1-485M.

Occurrence No. 54      Map Index:26056      ---Dates Last Seen---      Lat/Long: 38°25'59" / 121°21'01"      Township: 07N  
 Occ Rank: Fair      Element: 1991-04-26      UTM: Zone-10 N4254958 E643984      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1991-04-26      Precision: SPECIFIC      Section: 29 Qtr NW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 55 ft  
 Main Source: WITHAM, C. 1991 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: SOUTHEAST CORNER OF SHELDON AND WATERMAN ROADS, ELK GROVE.  
 -----Comments-----  
 Distribution: MAPPED BETWEEN LAGUNA CREEK AND WATERMAN ROAD IN THE SW CORNER OF DAIRY PASTURE. WITHIN THE SW 1/4 OF THE NW 1/4 OF SECTION 29.  
 Ecological: VERNAL POOL DOMINATED BY ALLOCARYA STIPITATA MICRANTHA, RANUNCULUS BONARIENSIS TRISEPALUS, AND ERYNGIUM VASEYI VALLICOLA. LEGENERE LIMOSA GROWING IN NEARBY POOL AND SEASONAL WETLAND.  
 Threat: MOST POOLS HEAVILY DAMAGED BY EXHAUSTIVE DAIRY CATTLE GRAZING.  
 General: ABOUT 200 PLANTS OBSERVED IN 1991.  
 Owner/Manager: PVT

Occurrence No. 55      Map Index:26057      ---Dates Last Seen---      Lat/Long: 38°25'38" / 121°21'11"      Township: 07N  
 Occ Rank: Good      Element: 1991-04-XX      UTM: Zone-10 N4254295 E643764      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1991-04-XX      Precision: SPECIFIC      Section: 30 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 12.9 ac      Elevation: 60 ft  
 Main Source: DAINS, V. 1991 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: NORTHWEST CORNER OF BOND ROAD AND WATERMAN ROAD, ELK GROVE.  
 -----Comments-----  
 Distribution: TWO CONCENTRATIONS OF PLANTS MAPPED; ONE ALONG EAST SIDE OF WATERMAN ABOUT 0.2 MILE NORTH OF BOND. THE OTHER IS ABOUT 0.35 MILE WEST OF WATERMAN AND 0.1 MILE NORTH OF BOND.  
 Ecological: 6 POPULATIONS IN NATURAL POOLS; 2 POPULATIONS IN SCRAPED DEPRESSIONS. NATURAL POOLS HAVE A WELL DEVELOPED NATIVE FLORA. LEGENERE LIMOSA CO-OCCURS IN ONE POOL.  
 Threat: CURRENT USE IS GRAZING; DEVELOPMENT PLAN IS BEING PREPARED.  
 General: 300 PLANTS OBSERVED IN 1991. QUALITY OF NATURAL POOLS IS EXCELLENT, QUALITY OF SCRAPED DEPRESSIONS IS FAIR.  
 Owner/Manager: PVT

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|   |   |   |   |
|---|---|---|---|
| <i>Legenere limosa</i><br>legenere<br>Element Code: PDCAM0C10 | -----List Status-----<br>Federal: Species of Concern<br>State: None | -----NDBB Element Ranks-----<br>Global: G2<br>State: S2.2 | -----Other Lists-----<br>CNPS List: 1B<br>R-E-D Code: 2-3-3 |
|---|---|---|---|

-----Habitat Associations-----  
General: VERNAL POOLS. MANY HISTORICAL OCCURRENCES ARE EXTIRPATED.  
Micro: IN BEDS OF VERNAL POOLS. 1-880M.

Occurrence No. 27      Map Index:30207      ---Dates Last Seen---      Lat/Long: 38°25'42" / 121°21'37"      Township: 07N  
Occ Rank: Excellent      Element: 1991-04-XX      UTM: Zone-10 N4254407 E643127      Range: 06E  
Origin: Natural/Native occurrence      Site: 1991-04-XX      Precision: SPECIFIC      Section: 30 Qtr E  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 90.7 ac      Elevation: 50 ft  
Main Source: DAINS, V. 1991 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: NORTHWEST CORNER OF BOND ROAD AND WATERMAN ROAD, ELK GROVE.  
-----Comments-----  
Distribution: FIVE SUB-POPULATIONS FOUND IN NATURAL VERNAL POOLS AND FIVE IN DISTURBED/CREATED SEASONAL DEPRESSIONS.  
Ecological: NATURAL AND CREATED VERNAL POOLS/SEASONAL DEPRESSIONS. ASSOCIATES IN NATURAL POOLS INCLUDE ELEOCHARIS  
MACROSTACHYA, LASTHENIA GLABERRIMA, GRATIOLA HETEROSEPALA, AND DOWNINGIA PUSILLA.  
Threat: CATTLE GRAZING, DEVELOPMENT PLANNED FOR THIS SITE.  
General: 1000'S OF PLANTS OBSERVED AT THIS SITE IN 1991. NATURAL POOLS ARE OF EXCELLENT QUALITY; CREATED DEPRESSIONS  
ARE OF FAIR QUALITY. MOST OF THE LEGENERE POPULATIONS WILL BE PRESERVED ALTHOUGH SOME LESSER QUALITY POOLS  
WILL BE DESTROYED.  
Owner/Manager: PVT

Occurrence No. 28      Map Index:30205      ---Dates Last Seen---      Lat/Long: 38°28'58" / 121°16'59"      Township: 07N  
Occ Rank: Excellent      Element: 1988-03-26      UTM: Zone-10 N4260573 E649753      Range: 06E  
Origin: Natural/Native occurrence      Site: 1988-03-26      Precision: SPECIFIC      Section: 02 Qtr SE  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 18.6 ac      Elevation: 90 ft  
Main Source: DAINS, V. 1988 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: SOUTH FLORIN COUNTY PARK, ABOUT 1 MILE SOUTH OF FLORIN ROAD AND 0.7 MILE EAST OF EXCELSIOR ROAD, NORTHEAST OF  
ELK GROVE.  
-----Comments-----  
Distribution: LOCATED NEAR THE SOUTHERN BORDER OF THE PARK (PRE-DEVELOPMENT). FOUR COLONIES MAPPED WITHIN THE S 1/2 OF THE  
SE 1/4 OF SECTION 2.  
Ecological: VERNAL POOLS. ASSOCIATED WITH ELEOCHARIS MACROSTACHYS AND LASTHENIA GLABERRIMA.  
Threat: PARK SLATED FOR DEVELOPMENT (1988).  
General: ABOUT 100 PLANTS OBSERVED WITHIN THE PARK (INCLUDING OCCURRENCE #29). POPULATION MAY BE LOW DUE TO DRY YEAR.  
SITE IS RELATIVELY UNDISTURBED/UNGRAZED. HIGH QUALITY SEASONAL WETLAND.  
Owner/Manager: SAC COUNTY-PARKS & REC

Occurrence No. 29      Map Index:30204      ---Dates Last Seen---      Lat/Long: 38°29'33" / 121°17'02"      Township: 07N  
Occ Rank: Excellent      Element: 1988-03-26      UTM: Zone-10 N4261641 E649674      Range: 06E  
Origin: Natural/Native occurrence      Site: 1988-03-26      Precision: SPECIFIC      Section: 02 Qtr NE  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 9.7 ac      Elevation: 110 ft  
Main Source: DAINS, V. 1988 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: SOUTH FLORIN COUNTY PARK, ABOUT 0.2 MILE SOUTH OF FLORIN ROAD AND 0.7 MILE EAST OF EXCELSIOR RD, NORTHEAST OF  
ELK GROVE.  
-----Comments-----  
Distribution: LOCATED NEAR THE NORTH-CENTRAL PORTION OF THE PARK (PRE-DEVELOPMENT). TWO COLONIES MAPPED ALONG AN EPHEMERAL  
DRAINAGE IN THE W 1/2 OF THE NE 1/4 OF SECTION 2.  
Ecological: VERNAL POOLS. ASSOCIATED WITH ELEOCHARIS MACROSTACHYA AND LASTHENIA GLABERRIMA.  
Threat: PARK SLATED FOR DEVELOPMENT (1988).  
General: ABOUT 100 PLANTS OBSERVED WITHIN THE PARK (INCLUDING OCCURRENCE #28). POPULATION MAY BE LOW DUE TO DRY YEAR.  
ONLY A FEW PLANTS SEEN AT EACH LOCATION. SITE IS RELATIVELY UNDISTURBED/UNGRAZED. THESE ARE HIGH QUALITY  
SEASONAL WETLANDS.  
Owner/Manager: SAC COUNTY-PARKS & REC

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|   |   |   |   |
|---|---|---|---|
| Legenere limosa (cont.)<br>legenere<br>Element Code: PDCAMOC010 | -----List Status-----<br>Federal: Species of Concern<br>State: None | -----NDDB Element Ranks-----<br>Global: G2<br>State: S2.2 | -----Other Lists-----<br>CNPS List: 1B<br>R-E-D Code: 2-3-3 |
|---|---|---|---|

Occurrence No. 30      Map Index:30206      ---Dates Last Seen---      Lat/Long: 38°25'57" / 121°20'54"      Township: 07N  
 Occ Rank: Fair      Element: 1991-04-26      UTM: Zone-10 N4254884 E644155      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1991-04-26      Precision: SPECIFIC      Section: 29 Qtr NW  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 18.3 ac      Elevation: 50 ft  
 Main Source: WITHAM, C. 1991 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: SOUTHEAST CORNER OF SHELDON ROAD AND WATERMAN ROAD, ELK GROVE.  
 -----Comments-----  
 Distribution: THREE COLONIES MAPPED AS A SINGLE POLYGON WITHIN THE SW 1/4 OF THE NW 1/4 OF SECTION 29.  
 Ecological: LARGE SEASONAL WETLAND AND VERNAL POOL WITHIN A DAIRY PASTURE. DOMINANTS INCLUDE LASTHENIA GLABERRIMA, ALLOCARYA BRACTEATUS, ELEOCHARIS MACROSTACHYA, AND RANUNCULUS BONARIENSIS TRISEPALUS. DOWNINGIA PUSILLA OCCURS IN A NEARBY VERNAL POOL.  
 Threat: HEAVILY DAMAGED BY CATTLE GRAZING; ADJACENT PROPERTY BEING DEVELOPED FOR HOMES.  
 General: MORE THAN 300 PLANTS OBSERVED IN 1991; COLONIES RANGE IN SIZE FROM 5 TO 300 PLANTS.  
 Owner/Manager: PVT

Occurrence No. 60      Map Index:50727      ---Dates Last Seen---      Lat/Long: 38°28'25" / 121°21'23"      Township: 07N  
 Occ Rank: Excellent      Element: 2002-05-23      UTM: Zone-10 N4259445 E643356      Range: 06E  
 Origin: Natural/Native occurrence      Site: 2002-05-23      Precision: SPECIFIC      Section: 07 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 100 ft  
 Main Source: STARR, S. 2002 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: CHURCHILL DOWNS PRESERVE, 0.9 AIRMI SOUTHWEST OF GERBER ROAD AT THE CENTRAL CALIFORNIA RAILROAD TRACKS, EAST OF FLORIN.  
 -----Comments-----  
 Distribution: MAPPED WITHIN THE NE 1/4 OF THE SE 1/4 OF SECTION 7.  
 Ecological: PLANTS FOUND IN VERNAL POOLS IN ASSOCIATION WITH ELEOCHARIS MACROSTACHYA, LASTHENIA GLABERRIMA, L. FREMONTII, PLAGIOBOTHRYX SPITATUS, AND DESCHAMPSIA DANTHIOIDES.  
 Threat: NONE NOTED IN 2002.  
 General: THOUSANDS OF PLANTS OBSERVED IN 2002 BY STARR. PLANTS FOUND WITHIN A PRESERVE. SURROUNDED BY RESIDENTIAL DEVELOPMENT AND OPEN PASTURE.  
 Owner/Manager: PVT-ELLIOT CONSERVANCY

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*Gratiola heterosepala*  
Boggs Lake hedge-hyssop  
Element Code: PDSCR0R060

|                             |                              |                       |
|-----------------------------|------------------------------|-----------------------|
| -----List Status-----       | -----NDBB Element Ranks----- | -----Other Lists----- |
| Federal: Species of Concern | Global: G3                   | CNPS List: 1B         |
| State: Endangered           | State: S3.1                  | R-E-D Code: 1-2-2     |

-----Habitat Associations-----

General: MARSHES AND SWAMPS (FRESHWATER), VERNAL POOLS.  
Micro: CLAY SOILS; USUALLY IN VERNAL POOLS, SOMETIMES ON LAKE MARGINS. 5-2400M.

Occurrence No. 33      Map Index:23929      ---Dates Last Seen---      Lat/Long: 38°25'55" / 121°21'41"      Township: 07N  
 Occ Rank: Fair      Element: 1991-05-13      UTM: Zone-10 N4254805 E643029      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1991-05-13      Precision: SPECIFIC      Section: 30 Qtr N  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 45 ft  
 Main Source: DAINS, V. 1991 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: 0.75 MI NW OF INTERSECTION OF BOND AND WATERMAN RDS.  
 -----Comments-----  
 Distribution:  
 Ecological: ASSOCIATED WITH ERYNGIUM VASEYI, ELEOCHARIS MACROSTACHYA, DOWNINGIA ORNATISSIMA. MOST PLANTS IN NEARLY BARREN PORTIONS OF POOL. ANOTHER RARE PLANT ALSO HERE: LEGENERE LIMOSA.  
 Threat:  
 General: 20 PLANTS IN 1991. SITE OWNED BY CAMRAY DEVELOPMENT.  
 Owner/Manager: PVT

Occurrence No. 34      Map Index:23930      ---Dates Last Seen---      Lat/Long: 38°27'29" / 121°21'08"      Township: 07N  
 Occ Rank: Good      Element: 1991-05-09      UTM: Zone-10 N4257718 E643767      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1991-05-09      Precision: SPECIFIC      Section: 17 Qtr SW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Decreasing      Radius: 80 meters      Elevation: 75 ft  
 Main Source: WITHAM, C. 1991 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: 0.35 MI N OF INTERSECTION OF CALVINE AND WATERMAN ROADS.  
 -----Comments-----  
 Distribution:  
 Ecological: LARGE VERNAL POOL COMPLEX; GROWING IN SPARSELY VEGETATED DEEPER AREAS OF POOLS. ASSOCIATED WITH ELEOCHARIS MACROSTACHYA, ERYNGIUM VASEYI, G. EBRACTEA, ISOETES NUTTALLII, PLAGIOBOTHRYS BRACTEATUS, LASTHENIA GLABBERIMA, & ELATINE CA.  
 Threat: ADJACENT AREAS SLATED FOR DEVELOPMENT, COULD IMPACT POOLS. TWO-THIRDS OF THE POOL COMPLEX HAS BEEN DISKED.  
 General: APPROX 200 PLANTS IN 1991.  
 Owner/Manager: PVT

Occurrence No. 35      Map Index:23931      ---Dates Last Seen---      Lat/Long: 38°28'05" / 121°21'24"      Township: 07N  
 Occ Rank: Excellent      Element: 1989-04-28      UTM: Zone-10 N4258831 E643356      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1989-04-28      Precision: NON-SPECIFIC      Section: 17 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 513.0 ac      Elevation: 75 ft  
 Main Source: WYMER, N. 1989 (OBS)  
 Quad Summary: ELK GROVE (3812143/496A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: BETWEEN BRADSHAW RD AND ELK GROVE-FLORIN RD, N OF CALVINE RD, S OF GERBER RD.  
 -----Comments-----  
 Distribution:  
 Ecological: 3 POOLS WITHIN A ROLLING GRASSLAND WITH DOWNINGIA BICORNUTA, PLAGIOBOTHRYS STIPIITATUS MICRANTHA, G. EBRACTEATA, ETC.  
 Threat: HORSE TRACKS THROUGH 1 POOL, ORV TRACKS ALSO EVIDENT. FUTURE DEVELOPMENT SITE FOR ELLIOT HOMES.  
 General: NEED BETTER MAP OF POPULATION; MAP AT CNDBB IS OF PROJECT SITE. SITE OWNED BY ELLIOT HOMES.  
 Owner/Manager: PVT

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*Gratiola heterosepala* (cont.)

Boggs Lake hedge-hyssop  
Element Code: PDSCR0R060

| List Status                 | NDDB Element Ranks | Other Lists       |
|-----------------------------|--------------------|-------------------|
| Federal: Species of Concern | Global: G3         | CNPS List: 1B     |
| State: Endangered           | State: S3.1        | R-E-D Code: 1-2-2 |

Occurrence No. 81      Map Index: 39745      —Dates Last Seen—      Lat/Long: 38°27'53" / 121°17'37"      Township: 07N  
Occ Rank: None      Element: 1998-06-05      UTM: Zone-10 N4258577 E648859      Range: 06E  
Origin: Natural/Native occurrence      Site: 2002-08-30      Precision: NON-SPECIFIC      Section: 14 Qtr NW  
Presence: Extirpated      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 62.3 ac      Elevation: 100 ft  
Main Source: ROBISON, R. 1998 (OBS)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: ON EAST SIDE OF EXSELSIOR ROAD, WEST OF DIERKS ROAD. ABOUT 0.7-1.0 MI NORTH OF CALVINE ROAD. DIERKS RANCH.  
Comments:  
Distribution: NW1/4 OF NW1/4 OF SECTION 14.  
Ecological: IN A VERNAL POOL WITH GRATIOLA EBRACTEATA.  
Threat: PREVIOUSLY DISKED AND PARTIALLY LEVELLED. DEVELOPMENT PLANNED FOR THIS SITE.  
General: ONLY 4 PLANTS IN 1998, 1 IN FLOWER, 3 IN FRUIT. SITE DEVELOPED PERMIT 2081, SOIL TRANSPLANTED TO LAGUNA CREEK MITIGATION BANK.  
Owner/Manager: PVT

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*Sagittaria sanfordii*  
Sanford's arrowhead  
Element Code: PMALI040Q0

| List Status                 | NDDB Element Ranks | Other Lists       |
|-----------------------------|--------------------|-------------------|
| Federal: Species of Concern | Global: G3         | CNPS List: 1B     |
| State: None                 | State: S3.2        | R-E-D Code: 2-2-3 |

Habitat Associations

General: MARSHES AND SWAMPS.

Micro: IN STANDING OR SLOW-MOVING FRESHWATER PONDS, MARSHES, AND DITCHES. . 0-610M.

Occurrence No. 18      Map Index: 24539      —Dates Last Seen—      Lat/Long: 38°27'06" / 121°23'31"      Township: 07N  
Occ Rank: None      Element: 1993-XX-XX      UTM: Zone-10 N4256949 E640312      Range: 05E  
Origin: Natural/Native occurrence      Site: 1993-XX-XX      Precision: NON-SPECIFIC      Section: 13 Qtr SE  
Presence: Possibly Extirpated      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 121.9 ac      Elevation: 40 ft  
Main Source: MILLER, S. & R. LOPEZ 1991 (PERS)  
Quad Summary: FLORIN (3812144/496B)\*, ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: STRAWBERRY CREEK. NORTHWEST AND SOUTH OF CALVINE RD/ELK GROVE-FLORIN RD INTERSECTION, ELK GROVE.  
Comments:  
Distribution: FIVE COLONIES, 1) EXACT LOCATION UNKNOWN "CHANNEL OFF OF STRAWBERRY CREEK" MAPPED NW OF CALVINE/ELK GROVE-FLORIN RD INTERSECTION 2-4) ALONG CREEK WEST OF ELK GROVE-FLORIN RD 5) ALONG ASSESSORS PARCEL #115013014.  
Ecological: NORTHWEST COLONY IS CEMENT LINED CHANNEL. CENTER COLONIES ALONG DRIED CREEK CHANNEL.  
Threat: NW POP IN CANAL WAS TO BE CLEARED OF VEGETATION IN 1991 OR 1992, DEVELOPMENT PROPOSED FOR CENTER POP.  
General: SACRAMENTO CO PUBLIC WORKS DEPT. TO TRANSPLANT COLONY 1 INTO A GIANT GARTER SNAKE SITE TO MITIGATE FOR CANAL CLEARING ACTIVITIES. WESTERN POP REPLANTED AT SITE AFTER STRAWBERRY CR REALIGNMENT. FIELDWORK NEEDED.  
FORMER EO #19 & #20 HERE.  
Owner/Manager: SAC COUNTY PUBLIC WORKS, PVT



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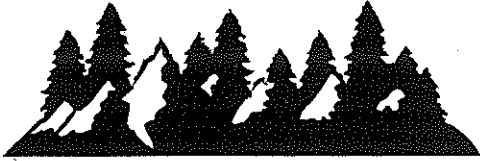
|   |                       |                              |                       |
|---|-----------------------|------------------------------|-----------------------|
| Orcuttia tenuis<br>slender orcutt grass<br>Element Code: PMPOA4G050 | -----List Status----- | -----NDDB Element Ranks----- | -----Other Lists----- |
|   | Federal: Threatened   | Global: G3                   | CNPS List: 1B         |
|   | State: Endangered     | State: S3.1                  | R-E-D Code: 2-3-3     |

-----Habitat Associations-----  
General: VERNAL POOLS.  
Micro: 30-1735M.

Occurrence No. 16      Map Index: 11658      ---Dates Last Seen---      Lat/Long: 38°28'36" / 121°17'29"      Township: 07N  
Occ Rank: Fair      Element: 1987-05-19      UTM: Zone-10 N4259884 E649036      Range: 06E  
Origin: Natural/Native occurrence      Site: 1987-05-19      Precision: SPECIFIC      Section: 11 Qtr NW  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 110 ft  
Main Source: BIOSYSTEMS ANALYSIS 1988 (LIT)  
Quad Summary: ELK GROVE (3812143/496A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: WEST SIDE OF LAGUNA CREEK, 0.2 MI E OF EXCELSIOR ROAD. 1.6 MI N OF CALVINE ROAD.  
-----Comments-----  
Distribution:  
Ecological: ELONGATE, NARROW VERNAL POOL SURROUNDED BY ANNUAL GRASSLAND. WITH ELEOCHARIS MACROSTACHYA, ALLOCARYA STIPITATA, DOWNINGIA BICORNUTA, NAVARRETIA LEUCOCEPHALA, PSILOCARPHUS BREVISSIMUS, ERYNGIUM VASEYI, ETC.  
Threat: GRAZING DOES NOT SEEM TO BE ADVERSELY IMPACTING PLANTS. INDUSTRIAL PARK HAS BEEN PROPOSED FOR THIS PARCEL.  
General: HOLLAND REPORTED 10,000+ PLANTS IN 1983. ABUNDANT IN 1986 AND 1987.  
Owner/Manager: PVT

# **Appendix S-1**

## **Arborist Report – North Vineyard Greens Unit 1**



# SIERRA NEVADA ARBORISTS

RECEIVED

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**J.A. COLLINS PROPERTIES, INC.**

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North Vineyard Greens -- Unit 1  
[APN 065-080-29, 066-070-020, 043, 044, 045 & Others]  
Sacramento County, California

**UPDATED PRELIMINARY ARBORIST REPORT**

Submitted by:

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SIERRA NEVADA ARBORISTS

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SIERRA NEVADA ARBORISTS

November 20, 2003

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### COPYRIGHT STATEMENT

This *updated* consultant's report, dated November 20, 2003, is for the exclusive and confidential use of J.A. Collins Properties, Inc. concerning the North Vineyard Greens -- Unit 1 project [APN 065-080-029, 066-070-020, 043, 044, 045 & others] located in Sacramento County, California exclusively, and may not be reproduced in whole or in part on other occasions without written permission of the Consultants, Sierra Nevada Arborists.



# SIERRA NEVADA ARBORISTS

November 20, 2003

Mr. Peter P. Daru  
J.A. Collins Properties, Inc.  
720 Howe Avenue, Suite 103  
Sacramento, California 95825-4603

Re: **Updated Arborist Report for North Vineyard Green -- Unit 1**  
**[APN 065-080-029, 066-0070-020, 043 044, 045 & Others]**  
**Sacramento County, California**

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Dear Mr. Daru:

On June 6 and again on November 20, 2003, Sierra Nevada Arborists visited the North Vineyard Greens -- Unit 1 project site [APN 065-080-029, 066-0070-020, 043, 044, 045 & Others] in the County of Sacramento, California. The purpose of this site visit was to conduct a field inspection to identify, inventory and evaluate any trees falling within the requirements of the Sacramento County Department of Environmental Review and Assessment ("DERA") which requires an inventory and field identification of any native oaks, California Sycamore, Northern California Black Walnut, Oregon Ash, Goodding's Black Willow, California Box Elder and White Alder 4" DBH and larger, as well as any significant trees 19" DBH and larger. The trees have been identified in the field with a metal numbering tag beginning with Tree No. 39. For your reference, the numbers utilized in this report correspond to the tree tag affixed to the tree, and those tree numbers have been rough-plotted on the Vesting Tentative Map provided by MacKay & Soms Civil Engineers, Inc. dated May 1, 2003, as well as the supplemental site plans provided on November 12, 2003.

As you will see from the Inventory Summary on page 13 of the Report, the project area contains 29 protected trees totaling 675 aggregate inches, and assesses the current status of the protected trees within the project area, including the overall structural condition and vigor of each tree. In addition, specific maintenance recommendations have been proscribed for each tree within the report. Lastly, general preservation recommendations have been provided for the trees to be preserved within the development area. Please note that this is a detailed, but cursory, look at the trees within the project area. Final impact assessments cannot be definitely determined until development plans have been finalized. At that time, additional impacts and/or removals may be more precisely defined and quantified an Inventory Impact Summary.

Thank you for allowing Sierra Nevada Arborists to assist you with this project. Please feel free to give me a call if you have any questions or require additional information.

Sincerely,

Edwin E. Stirtz  
ISA Certified Arborist WE-0510A



|   |                      |  |
|---|----------------------|--|
| TREE#39                                     | DIAMETER             | : 4 inches, 5 inches, 5 inches,<br>6 inches, 7 inches  |
| Fruitless Mulberry<br>( <i>Morus alba</i> ) | DRIPLINE RADIUS      | : 18 feet  |
|   | ROOT CROWN           | : Fair   |
|   | TRUNK                | : Fair   |
|   | LIMBS                | : Fair -- slightly above average<br>amount of deadwood |
|   | FOLIAGE              | : Fair   |
|   | CONDITION            | : Fair structure and fair vigor                        |
|   | DRIPLINE ENVIRONMENT | : Grasses  |
|   | RECOMMENDATIONS      | : Clean out crown                                      |

|   |                      |  |
|---|----------------------|--|
| TREE#40                                     | DIAMETER             | : 19 inches  |
| Silver Maple<br>( <i>Acer saccharinum</i> ) | DRIPLINE RADIUS      | : 27 feet  |
|   | ROOT CROWN           | : Fair   |
|   | TRUNK                | : Fair   |
|   | LIMBS                | : Fair -- slightly above average<br>amount of deadwood |
|   | FOLIAGE              | : Fair   |
|   | CONDITION            | : Fair structure and fair vigor                        |
|   | DRIPLINE ENVIRONMENT | : Turf   |
|   | RECOMMENDATIONS      | : Clean out crown                                      |

|  |                      |  |
|--|----------------------|--|
| TREE#41  | DIAMETER             | : 21 inches  |
| Coast Redwood<br>( <i>Sequoia sempervirens</i> ) | DRIPLINE RADIUS      | : 14 feet  |
|  | ROOT CROWN           | : Fair   |
|  | TRUNK                | : Fair   |
|  | LIMBS                | : Fair -- slightly above average<br>amount of deadwood |
|  | FOLIAGE              | : Fair   |
|  | CONDITION            | : Fair structure and fair vigor                        |
|  | DRIPLINE ENVIRONMENT | : Turf/garden  |
|  | RECOMMENDATIONS      | : Clean out crown                                      |



TREE#42  
 Fruitless Mulberry  
 (*Morus alba*)

DIAMETER : 6 inches, 7 inches, 8 inches,  
 9 inches  
 DRIPLINE RADIUS : 22 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair – slightly above average  
 amount of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Grasses  
 RECOMMENDATIONS : Clean out crown

TREE#43  
 Coast Redwood  
 (*Sequoia sempervirens*)

DIAMETER : 19 inches  
 DRIPLINE RADIUS : 12 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair – slightly above average  
 amount of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Turf/porch  
 RECOMMENDATIONS : Clean out crown

TREE#44  
 California Box Elder  
 (*Acer negundo*)

DIAMETER : 2 inches, 3 inches, 3 inches,  
 3 inches  
 DRIPLINE RADIUS : 12 feet  
 ROOT CROWN : Fair  
 TRUNK : Poor to fair – leans east  
 LIMBS : Fair – above average amount  
 of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and poor to fair  
 vigor  
 DRIPLINE ENVIRONMENT : Grasses  
 RECOMMENDATIONS : Clean out crown; deep root  
 fertilize

TREE#45  
 Pacific Willow  
 (*Salix lasiandra*)

DIAMETER : 7 inches, 8 inches, 10 inches,  
 12 inches

DRIPLINE RADIUS : 14 feet

ROOT CROWN : Fair

TRUNK : Fair

LIMBS : Poor to fair – above average  
 amount of deadwood

FOLIAGE : Fair

CONDITION : Fair structure and poor to fair  
 vigor

DRIPLINE ENVIRONMENT : Grasses

RECOMMENDATIONS : Clean out crown; deep root  
 fertilize

TREE#46  
 Pacific Willow  
 (*Salix lasiandra*)

DIAMETER : 4 inches, 5 inches, 7 inches,  
 8 inches, 9 inches

DRIPLINE RADIUS : 12 feet

ROOT CROWN : Fair

TRUNK : Fair

LIMBS : Poor to fair – above average  
 amount of deadwood

FOLIAGE : Fair

CONDITION : Fair structure and poor to fair  
 vigor

DRIPLINE ENVIRONMENT : Concrete blocks/drainage/  
 grasses

RECOMMENDATIONS : Clean out crown; deep root  
 fertilize

TREE#47  
 White Poplar  
 (*Populus alba*)

DIAMETER : 5 inches, 18 inches @ 3'  
 above grade

DRIPLINE RADIUS : 18 feet

ROOT CROWN : Fair

TRUNK : Fair – leans east

LIMBS : Poor to fair – above average  
 amount of large deadwood

FOLIAGE : Poor to fair – somewhat  
 sparse

CONDITION : Fair structure and poor to fair  
 vigor

DRIPLINE ENVIRONMENT : Drainage/grasses

RECOMMENDATIONS : Clean out crown; deep root  
 fertilize

TREE#48  
 Blue Gum  
*(Eucalyptus globulus)*

DIAMETER : 10 inches, 12 inches,  
 12 inches  
 DRIPLINE RADIUS : 14 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair -- above average amount  
 of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Grasses  
 RECOMMENDATIONS : Clean out crown

TREE#49  
 Blue Gum  
*(Eucalyptus globulus)*

DIAMETER : 7 inches, 10 inches, 14 inches,  
 16 inches  
 DRIPLINE RADIUS : 18 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair -- above average amount  
 of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Grasses  
 RECOMMENDATIONS : Clean out crown

TREE#50  
 Blue Gum  
*(Eucalyptus globulus)*

DIAMETER : 8 inches, 20 inches  
 DRIPLINE RADIUS : 16 feet  
 ROOT CROWN : Fair  
 TRUNK : Poor to fair -- old wounds  
 resulting from fire damage,  
 various locations  
 LIMBS : Poor to fair -- above average  
 amount of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and poor to fair  
 vigor  
 DRIPLINE ENVIRONMENT : Grasses  
 RECOMMENDATIONS : Clean out crown; deep root  
 fertilize

TREE#51  
 Fremont Cottonwood  
*(Populus fremontii)*

DIAMETER : 27 inches  
 DRIPLINE RADIUS : 28 feet  
 ROOT CROWN : Poor to fair – minor to moderate defects/decay, various locations  
 TRUNK : Poor to fair – old callousing wound, south side at 2' to 5' above grade  
 LIMBS : Poor to fair – above average amount of large deadwood  
 FOLIAGE : Poor to fair – sparse  
 CONDITION : Poor to fair structure and poor to fair vigor  
 DRIPLINE ENVIRONMENT : Grasses/pond  
 RECOMMENDATIONS : If preserved, clean out crown and deep root fertilize

TREE#52  
 Coast Live Oak  
*(Quercus agrifolia)*

DIAMETER : 2 inches, 2 inches, 3 inches, 9 inches  
 DRIPLINE RADIUS : 13 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair – above average amount of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Grasses/pond  
 RECOMMENDATIONS : Clean out crown

TREE#53  
 Coast Live Oak  
*(Quercus agrifolia)*

DIAMETER : 2 inches, 2 inches, 3 inches, 3 inches  
 DRIPLINE RADIUS : 6 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair – slightly above average amount of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Grasses  
 RECOMMENDATIONS : Clean out crown

TREE#54  
 Fremont Cottonwood  
*(Populus fremontii)*

DIAMETER : 30 inches @ 3' above grade  
 DRIPLINE RADIUS : 30 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair – above average amount  
 of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Grasses/dirt road  
 RECOMMENDATIONS : Clean out crown

TREE#55  
 Blue Gum  
*(Eucalyptus globulus)*

DIAMETER : 19 inches  
 DRIPLINE RADIUS : 16 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair – above average amount  
 of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Grasses  
 RECOMMENDATIONS : Clean out crown

TREE#56  
 Blue Gum  
*(Eucalyptus globulus)*

DIAMETER : 12 inches, 14 inches  
 DRIPLINE RADIUS : 17 feet  
 ROOT CROWN : Fair  
 TRUNK : Poor to fair – old callousing  
 fire scars, various locations  
 LIMBS : Fair – above average amount  
 of deadwood  
 FOLIAGE : Fair  
 CONDITION : Poor to fair structure and fair  
 vigor  
 DRIPLINE ENVIRONMENT : Grasses  
 RECOMMENDATIONS : If preserved, clean out crown  
 and deep root fertilize

|  |  |  |
|--|--|--|
| TREE#57<br>Blue Gum<br>( <i>Eucalyptus globulus</i> )            | DIAMETER   | : 5 inches, 6 inches, 8 inches,<br>12 inches                         |
|  | DRIPLINE RADIUS                                    | : 17 feet  |
|  | ROOT CROWN   | : Poor to fair – partially<br>exposed, south side, along<br>drainage |
|  | TRUNK  | : Poor to fair – old callousing<br>fire scars                        |
|  | LIMBS  | : Fair – above average amount<br>of deadwood                         |
|  | FOLIAGE  | : Fair   |
|  | CONDITION  | : Poor to fair structure and fair<br>vigor                           |
|  | DRIPLINE ENVIRONMENT                               | : Grasses/drainage   |
|  | RECOMMENDATIONS                                    | : Clean out crown  |
|  | TREE#58<br>Valley Oak<br>( <i>Quercus lobata</i> ) | DIAMETER   |
| DRIPLINE RADIUS  |  | : 6 feet   |
| ROOT CROWN   |  | : Fair   |
| TRUNK  |  | : Fair   |
| LIMBS  |  | : Fair   |
| FOLIAGE  |  | : Fair   |
| CONDITION  |  | : Fair structure and fair vigor                                      |
| DRIPLINE ENVIRONMENT   |  | : Grasses/roadside ditch   |
| RECOMMENDATIONS  |  | : Clean out crown  |
| TREE#59<br>California Black Walnut<br>( <i>Juglans hindsii</i> ) | DIAMETER   | : 13 inches, 14 inches   |
|  | DRIPLINE RADIUS                                    | : 17 feet  |
|  | ROOT CROWN   | : Fair   |
|  | TRUNK  | : Fair   |
|  | LIMBS  | : Fair – slightly above average<br>amount of deadwood                |
|  | FOLIAGE  | : Fair   |
|  | CONDITION  | : Fair structure and fair vigor                                      |
|  | DRIPLINE ENVIRONMENT                               | : Grasses  |
|  | RECOMMENDATIONS                                    | : Clean out crown  |

TREE#60  
 American Elm  
 (*Ulmus americana*)

DIAMETER : 19 inches  
 DRIPLINE RADIUS : 26 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair – above average amount  
 of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Grasses/bushes  
 RECOMMENDATIONS : Clean out crown

TREE#61  
 Arizona Cypress  
 (*Cupressus arizonica*)

DIAMETER : 24 inches  
 DRIPLINE RADIUS : 18 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair – pruned for utility line  
 clearance; slightly above  
 average amount of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Turf/rose bushes/asphalt drive  
 RECOMMENDATIONS : Clean out crown

TREE#62  
 California Black Walnut  
 (*Juglans hindsii*)

DIAMETER : 31 inches @ 3' above grade  
 DRIPLINE RADIUS : 28 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair – slightly above average  
 amount of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Grasses/structure  
 RECOMMENDATIONS : Clean out crown

TREE#63  
 Valley Oak  
 (*Quercus lobata*)

DIAMETER : 8 inches  
 DRIPLINE RADIUS : 12 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair – above average amount  
 of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Berries/yard equipment  
 RECOMMENDATIONS : Clean out crown

TREE#64  
 Valley Oak  
 (*Quercus lobata*)

DIAMETER : 8 inches, 15 inches  
 DRIPLINE RADIUS : 17 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair – slightly above average  
 amount of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Emu pen/bushes/grasses  
 RECOMMENDATIONS : Clean out crown

TREE#65  
 Southern Catalpa  
 (*Catalpa bignoniacea*)

DIAMETER : 19 inches  
 DRIPLINE RADIUS : 25 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Poor to fair – above average  
 amount of large deadwood  
 FOLIAGE : Poor to fair – somewhat sparse  
 CONDITION : Fair structure and poor to fair  
 vigor  
 DRIPLINE ENVIRONMENT : Grasses/structure  
 RECOMMENDATIONS : Clean out crown; deep root  
 fertilize



TREE#66  
California Black Walnut  
(*Juglans hindsii*)

DIAMETER : 7 inches  
DRIPLINE RADIUS : 13 feet  
ROOT CROWN : Fair  
TRUNK : Fair  
LIMBS : Fair  
FOLIAGE : Fair  
CONDITION : Fair structure and fair vigor  
DRIPLINE ENVIRONMENT : Grasses  
RECOMMENDATIONS : Clean out crown

TREE#67  
Modesto Ash  
(*Fraxinus velutina*)

DIAMETER : 25 inches  
DRIPLINE RADIUS : 28 feet  
ROOT CROWN : Fair  
TRUNK : Fair  
LIMBS : Poor to fair – above average  
deadwood  
FOLIAGE : Fair  
CONDITION : Fair structure and fair vigor  
DRIPLINE ENVIRONMENT : Turf/structure  
RECOMMENDATIONS : Clean out crown



J.A. COLLINS PROPERTIES, INC.  
 North Vineyard Greens - Unit 1 [APN 065-080-29, 066-070-020, 043, 044, 045 and Others]  
**TREE INVENTORY SUMMARY**

| TREE #   | COMMON NAME             | SPECIES                         | MULTI-STEMS<br>(inches) | DBH<br>(inches) | DLR<br>(feet) | Condition/Structure |     | Condition/Vigor |     | RECOMMENDATION |   |
|--|-------------------------|---------------------------------|-------------------------|-----------------|---------------|---------------------|-----|-----------------|-----|----------------|---|
|  |                         |                                 |                         |                 |               | P                   | P-F | P               | P-F |                | F   |
| 39   | Fruitless Mulberry      | ( <i>Morus alba</i> )           | 4,5,5,6,7               | 27              | 18            |                     |     | X               |     | X              | Clean out crown                                       |
| 40   | Silver Maple            | ( <i>Acer saccharinum</i> )     |                         | 19              | 27            |                     |     | X               |     | X              | Clean out crown                                       |
| 41   | Coast Redwood           | ( <i>Sequoia sempervirens</i> ) |                         | 21              | 14            |                     |     | X               |     | X              | Clean out crown                                       |
| 42   | Fruitless Mulberry      | ( <i>Morus alba</i> )           | 6,7,8,9                 | 30              | 22            |                     |     | X               |     | X              | Clean out crown                                       |
| 43   | Coast Redwood           | ( <i>Sequoia sempervirens</i> ) |                         | 19              | 12            |                     |     | X               |     | X              | Clean out crown                                       |
| 44   | California Box Elder    | ( <i>Acer negundo</i> )         | 2,3,3,3                 | 11              | 12            |                     |     | X               |     | X              | Clean out crown; deep root fertilize                  |
| 45   | Pacific Willow          | ( <i>Salix lasiandra</i> )      | 7,8,10,12               | 37              | 14            |                     |     | X               |     | X              | Clean out crown; deep root fertilize                  |
| 46   | Pacific Willow          | ( <i>Salix lasiandra</i> )      | 4,5,7,8,9               | 33              | 12            |                     |     | X               |     | X              | Clean out crown; deep root fertilize                  |
| 47   | White Poplar            | ( <i>Populus alba</i> )         | 5,18                    | 23              | 18            |                     |     | X               |     | X              | Clean out crown; deep root fertilize                  |
| 48   | Blue Gum Eucalyptus     | ( <i>Eucalyptus globulus</i> )  | 10,12,12                | 34              | 14            |                     |     | X               |     | X              | Clean out crown                                       |
| 49   | Blue Gum Eucalyptus     | ( <i>Eucalyptus globulus</i> )  | 7,10,14,16              | 47              | 18            |                     |     | X               |     | X              | Clean out crown                                       |
| 50   | Blue Gum Eucalyptus     | ( <i>Eucalyptus globulus</i> )  | 8,20                    | 28              | 16            |                     |     | X               |     | X              | Clean out crown; deep root fertilize                  |
| 51   | Fremont Cottonwood      | ( <i>Populus fremontii</i> )    |                         | 27              | 28            |                     | X   |                 |     | X              | If preserved, clean out crown and deep root fertilize |
| 52   | Coast Live Oak          | ( <i>Quercus agrifolia</i> )    | 2,2,3,9                 | 16              | 13            |                     |     | X               |     | X              | Clean out crown                                       |
| 53   | Coast Live Oak          | ( <i>Quercus agrifolia</i> )    | 2,2,3,3                 | 10              | 6             |                     |     | X               |     | X              | Clean out crown                                       |
| 54   | Fremont Cottonwood      | ( <i>Populus fremontii</i> )    |                         | 30              | 30            |                     |     | X               |     | X              | Clean out crown                                       |
| 55   | Blue Gum Eucalyptus     | ( <i>Eucalyptus globulus</i> )  |                         | 19              | 16            |                     |     | X               |     | X              | Clean out crown                                       |
| 56   | Blue Gum Eucalyptus     | ( <i>Eucalyptus globulus</i> )  | 12,14                   | 26              | 17            |                     | X   |                 |     | X              | If preserved, clean out crown and deep root fertilize |
| 57   | Blue Gum Eucalyptus     | ( <i>Eucalyptus globulus</i> )  | 5,6,8,12                | 31              | 17            |                     | X   |                 |     | X              | Clean out crown                                       |
| 58   | Valley Oak              | ( <i>Quercus lobata</i> )       |                         | 4               | 6             |                     |     | X               |     | X              | Clean out crown                                       |
| 59   | California Black Walnut | ( <i>Juglans hindsii</i> )      | 13,14                   | 27              | 17            |                     |     | X               |     | X              | Clean out crown                                       |
| 60   | American Elm            | ( <i>Ulmus americana</i> )      |                         | 19              | 26            |                     |     | X               |     | X              | Clean out crown                                       |
| 61   | Arizona Cypress         | ( <i>Cupressus arizonica</i> )  |                         | 24              | 18            |                     |     | X               |     | X              | Clean out crown                                       |
| 62   | California Black Walnut | ( <i>Juglans hindsii</i> )      |                         | 31              | 28            |                     |     | X               |     | X              | Clean out crown                                       |
| 63   | Valley Oak              | ( <i>Quercus lobata</i> )       |                         | 8               | 12            |                     |     | X               |     | X              | Clean out crown                                       |
| 64   | Valley Oak              | ( <i>Quercus lobata</i> )       | 8,15                    | 23              | 17            |                     |     | X               |     | X              | Clean out crown                                       |
| 65   | Southern Catalpa        | ( <i>Catalpa bignoniacea</i> )  |                         | 19              | 25            |                     |     | X               |     | X              | Clean out crown; deep root fertilize                  |
| 66   | California Black Walnut | ( <i>Juglans hindsii</i> )      |                         | 7               | 13            |                     |     | X               |     | X              | Clean out crown                                       |
| 67   | Modesto Ash             | ( <i>Fraxinus velutina</i> )    |                         | 25              | 28            |                     |     | X               |     | X              | Clean out crown                                       |
| <b>TOTAL INVENTORIED TREES = 29 Trees (675 inches)</b> |                         |                                 |                         |                 |               |                     |     |                 |     |                |   |



### **GENERAL PRESERVATION RECOMMENDATIONS**

The following information is provided in an effort to protect those trees which may be impacted by construction within the project site. It should be noted that these recommendations are generic in nature. As plans are developed and refined, a more detailed evaluation of tree impacts and/or removals should be made by a Certified Arborist. At that time specific preservation recommendations may be made for individual trees within the project site.

### **MITIGATIVE OVERVIEW**

In order to afford the greatest potential for tree preservation during construction, there are general guidelines to provide this protection. The critical root zone area for a tree should include the dripline radius measurement taken from the tree trunk to the tip of the farthest reaching branch. In some circumstances, such as with a one-sided tree, this measurement could be somewhat skewed. In these situations, the Project Arborist should determine the critical root zone area. Generally, encroachments should be held to no more than 20% of the critical root zone area where potential root damage could be moderate or significant. In limited situations, encroachment exceeding 20% of the critical root zone area may be possible provided that potential root damage is not severe. The critical root zone area should be fenced prior to any activities on the site.

Canopy impacts can also pose a detriment to preserved trees. Frequently overlooked are conflicts between low-hanging tree branches and necessary clearance beneath a tree for construction equipment or home building purposes. Canopy impacts should also be maintained at 20% or less.

### **PAD GRADING MITIGATIVE MEASURES**

#### **Grade Cuts.**

Cuts within a dripline of a tree should be maintained at less than 20% of the critical root zone area. Grade cuts should be supervised by the Project Arborist and any damaged roots encountered should be root pruned and properly treated as soon as possible after excavation. Cut faces which will be exposed for more than 2-3 days should be covered with dense burlap fabric and watered to maintain soil moisture at least on a daily basis (or possibly more frequently during summer months).

#### **Grade Fills.**

Fill materials less than 1 foot in depth and encroaching less than 20% into the critical root zone area should not require special mitigative measures. Should fills exceed 1 foot in depth up to 20% of the critical root zone area, aeration systems may serve to mitigate the presence of the fill materials.

Should it be necessary to build fill materials on two or three sides of a tree, it is critical to provide for drainage away from the critical root zone area of the tree -- particularly when considering heavy winter rainfalls. Overland releases and subterranean drains dug outside the critical root zone area and tied directly to the main storm drain system are two possible options.

**Structure Encroachment.**

In some cases it may be necessary for a proposed home to encroach into the critical root zone area. Again, this encroachment should be maintained at less than 20%. In this situation, a slab foundation with an aeration system installed beneath the slab and footings excavated by hand may provide adequate root protection. Where tree roots tend to be shallow, even a hand-excavated footing can be detrimental. In this situation, a "post-tension" type slab may minimize root damage. If it is necessary for encroachment to exceed 20%, raised floor construction with a grade-beam type foundation footing may be a viable option.

When evaluating encroachment from a proposed structure the structure height and tree branch conflicts are critical to evaluate in order to ensure that no more than 20% of the tree's canopy requires removal.



## Specific Inventory Data/Maintenance Recommendations

Within this specific inventory data you will find the following information:

|                            |   |
|----------------------------|---|
| Tree Number:               | Corresponds to aluminum tag attached to the tree.   |
| Species<br>Identification: | Scientific and common species name.   |
| Diameter:                  | This is the trunk diameter as measured at breast height (industry standard 4.5 feet above ground level).  |
| Dripline radius:           | Measurement of the tree's dripline from the trunk to the farthest most branch tip.  |
| Root Crown:                | Assessment of the root crown area located at the base of the trunk of the tree at soil level.   |
| Trunk:                     | Assessment of the tree's main trunk from ground level generally to the point of the primary crotch structure.   |
| Limbs:                     | Assessment of both smaller and larger branching, generally from primary crotch structure to branch tips.  |
| Foliage:                   | Tree's leaves.  |
| Overall Condition:         | Describes overall condition of the tree in terms of structure and vigor.  |
| Dripline Environment:      | Describes area directly beneath the tree (growing environment).   |
| Recommendation:            | Specific maintenance requirements.  |
| (?):                       | Occasionally some portion of the tree may be obscured from visual inspection due to the presence of dense climbing vines such as ivy, etc. which, during the course of inspection for the preliminary arborist report, prevented an evaluation with certainty. In these cases, should a tree with an (?) be significant and in a location where it may be preserved on site, it would be prudent to remove any obstructions and perform further evaluation. |



### DEFINITIONS OF TERMS USED IN THIS REPORT

**GOOD** - A tree in this category has no trunk or root crown cavities or injuries; there is no indication of hollowness; no foreign objects are embedded in its structure; the root crown is above grade; there is no decay present except for small stubs; the structure is strong; the trunk is tapered; the bark thickness is normal; there is no fluxing; no fungus is evident; there is a below average amount of dead limbs and twigs present which is normal for the size and age of the species; there is no co-dominant branching present; there are no large callused areas and any small callusing present is vigorous and intact; there are no abnormally heavy insect infestations; the growth rate is and has been average or above; limb weight is not excessive; buds are normal size and viable; the leaf size, color, and density is normal or better; and barring any unforeseen negative effects, the life expectancy should exceed thirty years.

**FAIR** - There is no decay or indications of large hollow areas in the large limbs, root crown, or trunk; a few small callused-over foreign objects, e.g., nails, may be present, the structure is strong; no fungus is evident other than small saprophytes on exposed wood; some small, callusing injuries may be present, some small limbs may be dead and decaying but callus is forming at their base; some excessive limb weight may exist; there may be some minor fluxing; the amount of dead limbs and twigs present is within the normal range; some large callused areas may be present; some small cavities and areas of decay may be present; the growth rate is average or slightly below average; and some leaf size, color, and density may vary.

**POOR** - Significant cavities, dead areas, and decay may be present; the tree is actually defective; fungus fruiting bodies may be present; the amount of dead limbs and twigs is far above normal; major co-dominant branching with embedded bark may be present; buds are small and some may not be viable; leaves may be below average size and may be abnormal in color; significant pest damage may be present; and the predicted structural life and/or viability is less than ten years.

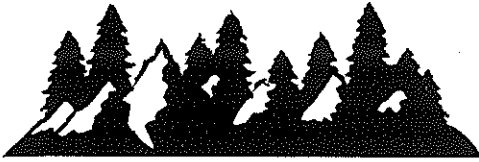
The ratings "good to fair" and "fair to poor" are used to describe trees that fall between the described major categories and have elements of both.

**CROWN CLEAN OUT:** This shall consist of the removal of all dead, dying, diseased, interfering, objectionable, obstructing, and weak branches, as well as selective thinning to lessen wind resistance.

**DEEP ROOT FERTILIZATION (D.R.F.):** A method employed to induce vigor and stimulate new root growth. This is used as a means of feeding a large tree, as well as deep watering at the same time. Water soluble fertilizers are mixed in water and hydraulically pumped with a probe into the ground, delivering water and nutrients directly to the root zone, allowing for uptake from the tree. In this way, vigor can be improved and new root growth stimulated.

## **Appendix S-2**

### **Arborist Report – North Vineyard Greens Unit 3**



# SIERRA NEVADA ARBORISTS

## J.A. COLLINS PROPERTIES, INC.

North Vineyard Greens -- Unit 3  
[APN 065-0080-027, 080 & 090]  
Sacramento County, California

### UPDATED PRELIMINARY ARBORIST REPORT

03 0141

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APR 16 2004

PLANNING DEPT.  
County of Sacramento

Submitted by:

Edwin E. Stirtz, Principal Consulting Arborist  
ISA Certified Arborist WE-0510A  
SIERRA NEVADA ARBORISTS

Wayne R. McKee, Consulting Arborist  
ISA Certified Arborist WE-0959A  
SIERRA NEVADA ARBORISTS

November 20, 2003

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### **COPYRIGHT STATEMENT**

This *updated* consultant's report, dated November 20, 2003, is for the exclusive and confidential use of J.A. Collins Properties, Inc. concerning the North Vineyard Greens -- Unit 3 project [APN 065-0080-027, 080 & 090] located in Sacramento County, California exclusively, and may not be reproduced in whole or in part on other occasions without written permission of the Consultants, Sierra Nevada Arborists.



# SIERRA NEVADA ARBORISTS

November 20, 2003

Mr. Peter P. Daru  
J.A. Collins Properties, Inc.  
720 Howe Avenue, Suite 103  
Sacramento, California 95825-4603

Re: **Updated Arborist Report for North Vineyard Green -- Unit 3**  
**[APN 065-0080-027, 080 & 090] Sacramento, California**

Dear Mr. Daru:

On June 6, 2003 and again on November 20, 2003, Sierra Nevada Arborists visited the North Vineyard Greens -- Unit 3 project site [APN 065-0080-027, 080 & 090] in the County of Sacramento, California. The purpose of this site visit was to conduct a field inspection to identify, inventory and evaluate any trees falling within the requirements of the Sacramento County Department of Environmental Review and Assessment ("DERA") which requires an inventory and field identification of any native oaks, California Sycamore, Northern California Black Walnut, Oregon Ash, Goodding's Black Willow, California Box Elder and White Alder 4" DBH and larger, as well as any significant trees 19" DBH and larger. The trees have been identified in the field with a metal numbering tag beginning with Tree No. 9. For your reference, the numbers utilized in this report correspond to the tree tag affixed to the tree, and those tree numbers have been rough-plotted on the Vesting Tentative Map provided by MacKay & Somsps Civil Engineers, Inc. dated May 15, 2003, as well as the supplemental site plans provided on November 12, 2003.

As you will see from the Inventory Summary on page 15 of the Report, the project area contains 35 protected trees totaling 676 aggregate inches, and assesses the current status of the protected trees within the project area, including the overall structural condition and vigor of each tree. In addition, specific maintenance recommendations have been proscribed for each tree within the report. Lastly, general preservation recommendations have been provided for the trees to be preserved within the development area. Please note that this is a detailed, but cursory, look at the trees within the project area. Final impact assessments cannot be definitely determined until development plans have been finalized. At that time, additional impacts and/or removals may be more precisely defined and quantified in an Inventory Impact Summary.

Thank you for allowing Sierra Nevada Arborists to assist you with this project. Please feel free to give me a call if you have any questions or require additional information.

Sincerely,

Edwin E. Stirtz  
ISA Certified Arborist WE-0510A

cc: Mr. Ben French, MacKay & Somsps (w/rough-plotted map)



|  |                      |   |
|--|----------------------|---|
| TREE#9   | DIAMETER             | : 9 inches, 10 inches, 11 inches, 13 inches   |
| Coast Live Oak<br>( <i>Quercus agrifolia</i> ) | DRIPLINE RADIUS      | : 24 feet   |
|  | ROOT CROWN           | : Fair  |
|  | TRUNK                | : Fair  |
|  | LIMBS                | : Fair – slightly above average amount of deadwood; pruned for utility line clearance |
|  | FOLIAGE              | : Fair  |
|  | CONDITION            | : Fair structure and fair vigor   |
|  | DRIPLINE ENVIRONMENT | : Grasses/roadside ditch  |
|  | RECOMMENDATIONS      | : Clean out crown   |

|  |                      |  |
|--|----------------------|--|
| TREE#10                                    | DIAMETER             | : 5 inches, 7 inches, 9 inches                     |
| American Elm<br>( <i>Ulmus americana</i> ) | DRIPLINE RADIUS      | : 20 feet  |
|  | ROOT CROWN           | : Fair   |
|  | TRUNK                | : Fair   |
|  | LIMBS                | : Fair – slightly above average amount of deadwood |
|  | FOLIAGE              | : Fair   |
|  | CONDITION            | : Fair structure and fair vigor                    |
|  | DRIPLINE ENVIRONMENT | : Grasses/smaller Elm sprouts                      |
|  | RECOMMENDATIONS      | : Clean out crown                                  |

|                                  |                      |   |
|----------------------------------|----------------------|---|
| TREE#11                          | DIAMETER             | : 4 inches, 7 inches, 7 inches, 24 inches |
| Poplar<br>( <i>Populus sp.</i> ) | DRIPLINE RADIUS      | : 24 feet                                 |
|                                  | ROOT CROWN           | : Fair                                    |
|                                  | TRUNK                | : Fair                                    |
|                                  | LIMBS                | : Fair – above average amount of deadwood |
|                                  | FOLIAGE              | : Fair                                    |
|                                  | CONDITION            | : Fair structure and fair vigor           |
|                                  | DRIPLINE ENVIRONMENT | : Grasses/Elm sprouts                     |
|                                  | RECOMMENDATIONS      | : Clean out crown                         |



|                              |                      |   |
|------------------------------|----------------------|---|
| TREE#12                      | DIAMETER             | : 60 inches @ 3' above grade  |
| Blue Gum                     | DRIPLINE RADIUS      | : 25 feet   |
| <i>(Eucalyptus globulus)</i> | ROOT CROWN           | : Fair  |
|                              | TRUNK                | : Poor to fair – minor to moderate defects/decay, various locations   |
|                              | LIMBS                | : Poor to fair – pruned for utility line clearance                    |
|                              | FOLIAGE              | : Fair  |
|                              | CONDITION            | : Poor to fair structure and fair vigor                               |
|                              | DRIPLINE ENVIRONMENT | : Asphalt road/grasses  |
|                              | RECOMMENDATIONS      | : Clean out crown   |
|                              |                      |   |
| TREE#13                      | DIAMETER             | : 7 inches, 7 inches  |
| Oregon Ash                   | DRIPLINE RADIUS      | : 15 feet   |
| <i>(Fraxinus latifolia)</i>  | ROOT CROWN           | : Fair  |
|                              | TRUNK                | : Fair  |
|                              | LIMBS                | : Poor to fair – above average amount of deadwood                     |
|                              | FOLIAGE              | : Fair  |
|                              | CONDITION            | : Fair structure and fair vigor                                       |
|                              | DRIPLINE ENVIRONMENT | : Grasses/drainage  |
|                              | RECOMMENDATIONS      | : Clean out crown   |
|                              |                      |   |
| TREE#14                      | DIAMETER             | : 6 inches  |
| Oregon Ash                   | DRIPLINE RADIUS      | : 16 feet   |
| <i>(Fraxinus latifolia)</i>  | ROOT CROWN           | : Fair  |
|                              | TRUNK                | : Poor to fair – defects/decay 6' above grade at point of old failure |
|                              | LIMBS                | : Fair – above average amount of deadwood                             |
|                              | FOLIAGE              | : Fair  |
|                              | CONDITION            | : Poor to fair structure and fair vigor                               |
|                              | DRIPLINE ENVIRONMENT | : Grasses/drainage  |
|                              | RECOMMENDATIONS      | : Clean out crown   |

TREE#15  
Oregon Ash  
(*Fraxinus latifolia*)

DIAMETER : 6 inches  
DRIPLINE RADIUS : 11 feet  
ROOT CROWN : Fair  
TRUNK : Fair  
LIMBS : Fair – above average amount  
of deadwood  
FOLIAGE : Fair  
CONDITION : Fair structure and fair vigor  
DRIPLINE ENVIRONMENT : Grasses  
RECOMMENDATIONS : Clean out crown

TREE#16  
Oregon Ash  
(*Fraxinus latifolia*)

DIAMETER : 5 inches  
DRIPLINE RADIUS : 11 feet  
ROOT CROWN : Fair  
TRUNK : Fair  
LIMBS : Poor to fair – above average  
amount of deadwood  
FOLIAGE : Fair  
CONDITION : Fair structure and fair vigor  
DRIPLINE ENVIRONMENT : Grasses  
RECOMMENDATIONS : Clean out crown

TREE#17  
Oregon Ash  
(*Fraxinus latifolia*)

DIAMETER : 6 inches, 6 inches  
DRIPLINE RADIUS : 18 feet  
ROOT CROWN : Fair  
TRUNK : Fair  
LIMBS : Poor to fair – above average  
amount of deadwood  
FOLIAGE : Fair  
CONDITION : Fair structure and fair vigor  
DRIPLINE ENVIRONMENT : Grasses/drainage  
RECOMMENDATIONS : Clean out crown

TREE#18  
 Oregon Ash  
*(Fraxinus latifolia)*

DIAMETER : 6 inches  
 DRIPLINE RADIUS : 18 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Poor to fair -- above average amount of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Grasses  
 RECOMMENDATIONS : Clean out crown

TREE#19  
 Oregon Ash  
*(Fraxinus latifolia)*

DIAMETER : 7 inches, 9 inches  
 DRIPLINE RADIUS : 14 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Poor to fair -- above average amount of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Grasses  
 RECOMMENDATIONS : Clean out crown

TREE#20  
 Oregon Ash  
*(Fraxinus latifolia)*

DIAMETER : 10 inches  
 DRIPLINE RADIUS : 12 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Poor -- excessive amount of large deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and poor to fair vigor  
 DRIPLINE ENVIRONMENT : Grasses/asphalt road  
 RECOMMENDATIONS : Clean out crown; deep root fertilize

TREE#21  
 Oregon Ash  
 (*Fraxinus latifolia*)

DIAMETER : 8 inches  
 DRIPLINE RADIUS : 12 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Poor to fair -- excessive amount of large deadwood  
 FOLIAGE : Poor to fair -- sparse; primarily epicormic sprouts  
 CONDITION : Poor to fair structure and poor to fair vigor  
 DRIPLINE ENVIRONMENT : Grasses/drainage canal  
 RECOMMENDATIONS : Clean out crown; deep root fertilize

TREE#22  
 Oregon Ash  
 (*Fraxinus latifolia*)

DIAMETER : 8 inches  
 DRIPLINE RADIUS : 12 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Poor to fair -- excessive amount of large deadwood  
 FOLIAGE : Poor to fair -- somewhat sparse; primarily epicormic sprouts  
 CONDITION : Fair structure and poor to fair vigor  
 DRIPLINE ENVIRONMENT : Asphalt road/grasses/drainage  
 RECOMMENDATIONS : Clean out crown; deep root fertilize

TREE#23  
 Oregon Ash  
 (*Fraxinus latifolia*)

DIAMETER : 5 inches, 9 inches  
 DRIPLINE RADIUS : 13 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Poor to fair -- excessive amount of large deadwood  
 FOLIAGE : Poor to fair -- somewhat sparse; primarily epicormic sprouts  
 CONDITION : Fair structure and poor to fair vigor  
 DRIPLINE ENVIRONMENT : Grasses/drainage  
 RECOMMENDATIONS : Clean out crown; deep root fertilize

TREE#24  
 Oregon Ash  
 (*Fraxinus latifolia*)

DIAMETER : 3 inches, 5 inches  
 DRIPLINE RADIUS : 16 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair – above average amount  
 of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Grasses/drainage  
 RECOMMENDATIONS : Clean out crown

TREE#25  
 Oregon Ash  
 (*Fraxinus latifolia*)

DIAMETER : 6 inches  
 DRIPLINE RADIUS : 10 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Poor to fair – above average  
 amount of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and poor to fair  
 vigor  
 DRIPLINE ENVIRONMENT : Grasses/drainage  
 RECOMMENDATIONS : Clean out crown; deep root  
 fertilize

TREE#26  
 Oregon Ash  
 (*Fraxinus latifolia*)

DIAMETER : 5 inches  
 DRIPLINE RADIUS : 8 feet  
 ROOT CROWN : Fair  
 TRUNK : Poor to fair – defects/decay,  
 various locations  
 LIMBS : Poor to fair – above average  
 amount of deadwood  
 FOLIAGE : Poor to fair – somewhat  
 sparse  
 CONDITION : Poor to fair structure and poor  
 to fair vigor  
 DRIPLINE ENVIRONMENT : Grasses/drainage  
 RECOMMENDATIONS : Clean out crown; deep root  
 fertilize

TREE#27  
 Fremont Cottonwood  
 (*Populus fremontii*)

DIAMETER : 6 inches, 6 inches, 6 inches,  
 10 inches  
 DRIPLINE RADIUS : 20 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair – slightly above average  
 amount of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Grasses/drainage  
 RECOMMENDATIONS : Clean out crown

TREE#28  
 Fremont Cottonwood  
 (*Populus fremontii*)

DIAMETER : 8 inches, 12 inches  
 DRIPLINE RADIUS : 18 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair – slightly above average  
 amount of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Grasses/drainage  
 RECOMMENDATIONS : Clean out crown

TREE#29  
 Oregon Ash  
 (*Fraxinus latifolia*)

DIAMETER : 5 inches, 8 inches, 8 inches,  
 8 inches, 9 inches, 12 inches  
 DRIPLINE RADIUS : 24 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair – above average amount  
 of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Grasses/drainage  
 RECOMMENDATIONS : Clean out crown

TREE#30  
 Oregon Ash  
*(Fraxinus latifolia)*

DIAMETER : 10 inches, 14 inches  
 DRIPLINE RADIUS : 25 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair – above average amount  
 of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Grasses/drainage  
 RECOMMENDATIONS : Clean out crown

TREE#31  
 Oregon Ash  
*(Fraxinus latifolia)*

DIAMETER : 5 inches, 7 inches  
 DRIPLINE RADIUS : 15 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair – above average amount  
 of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Grasses/drainage  
 RECOMMENDATIONS : Clean out crown

TREE#32  
 Oregon Ash  
*(Fraxinus latifolia)*

DIAMETER : 2 inches, 2 inches, 2 inches,  
 3 inches, 3 inches  
 DRIPLINE RADIUS : 8 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair – above average amount  
 of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Grasses  
 RECOMMENDATIONS : Clean out crown

TREE#33  
 California Black Walnut  
 (*Juglans hindsii*)

DIAMETER : 13 inches  
 DRIPLINE RADIUS : 14 feet  
 ROOT CROWN : Fair  
 TRUNK : Poor to fair – defects/decay,  
 south and north sides;  
 suspected hollowing  
 LIMBS : Fair – slightly above average  
 amount of deadwood  
 FOLIAGE : Fair  
 CONDITION : Poor to fair structure and fair  
 vigor  
 DRIPLINE ENVIRONMENT : Grasses  
 RECOMMENDATIONS : Clean out crown; inspect  
 annually for structural  
 stability

TREE#34  
 California Black Walnut  
 (*Juglans hindsii*)

DIAMETER : 3 inches, 3 inches, 5 inches  
 DRIPLINE RADIUS : 10 feet  
 ROOT CROWN : Fair  
 TRUNK : Poor to fair – defects/decay in  
 old stump from which sprouts  
 have arisen  
 LIMBS : Fair – slightly above average  
 amount of deadwood  
 FOLIAGE : Fair  
 CONDITION : Poor to fair structure and fair  
 vigor  
 DRIPLINE ENVIRONMENT : Grasses  
 RECOMMENDATIONS : Clean out crown

TREE#35  
 California Black Walnut  
 (*Juglans hindsii*)

DIAMETER : 4 inches, 5 inches  
 DRIPLINE RADIUS : 8 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair – slightly above average  
 amount of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Grasses  
 RECOMMENDATIONS : Clean out crown



TREE#36  
 Modesto Ash  
 (*Fraxinus velutina*)

DIAMETER : 27 inches  
 DRIPLINE RADIUS : 31 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair – slightly above average amount of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Turf  
 RECOMMENDATIONS : Clean out crown

TREE#37  
 Valley Oak  
 (*Quercus lobata*)

DIAMETER : 12 inches  
 DRIPLINE RADIUS : 14 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair – slightly above average amount of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Turf  
 RECOMMENDATIONS : Clean out crown

TREE#38  
 Valley Oak  
 (*Quercus lobata*)

DIAMETER : 3 inches, 4 inches  
 DRIPLINE RADIUS : 7 feet  
 ROOT CROWN : Poor to fair – growing through piece of farm equipment; portions embedded in trunk  
 TRUNK : Fair  
 LIMBS : Fair  
 FOLIAGE : Fair  
 CONDITION : Poor to fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Grasses  
 RECOMMENDATIONS : Cut piece of farm equipment away from trunk; clean out crown

TREE NOS. 39-67  
 CONTAINED IN SEPARATE REPORT FOR NORTH VINEYARD GREENS – UNIT 1 PROJECT

|                               |                      |  |
|-------------------------------|----------------------|--|
| TREE#68                       | DIAMETER             | : 19 inches  |
| Coast Redwood                 | DRIPLINE RADIUS      | : 11 feet  |
| <i>(Sequoia sempervirens)</i> | ROOT CROWN           | : Fair   |
|                               | TRUNK                | : Fair   |
|                               | LIMBS                | : Fair   |
|                               | FOLIAGE              | : Fair   |
|                               | CONDITION            | : Fair structure and fair vigor  |
|                               | DRIPLINE ENVIRONMENT | : Turf   |
|                               | RECOMMENDATIONS      | : Clean out crown  |
|                               |                      |  |
| TREE#69                       | DIAMETER             | : 24 inches, 36 inches   |
| Blue Gum Eucalyptus           | DRIPLINE RADIUS      | : 18 feet  |
| <i>(Eucalyptus globulus)</i>  | ROOT CROWN           | : Fair   |
|                               | TRUNK                | : Poor – large cavity, main stem<br>with significant decay to 10'<br>above grade |
|                               | LIMBS                | : Poor – severely topped for<br>utility line clearance                           |
|                               | FOLIAGE              | : Fair   |
|                               | CONDITION            | : Poor structure and fair vigor  |
|                               | DRIPLINE ENVIRONMENT | : Grasses  |
|                               | RECOMMENDATIONS      | : None at this time  |
|                               |                      |  |
| TREE#70                       | DIAMETER             | : 28 inches  |
| Aleppo Pine                   | DRIPLINE RADIUS      | : 23 feet  |
| <i>(Pinus halepensis)</i>     | ROOT CROWN           | : Fair   |
|                               | TRUNK                | : Fair   |
|                               | LIMBS                | : Fair – above average<br>deadwood   |
|                               | FOLIAGE              | : Fair   |
|                               | CONDITION            | : Fair structure and fair vigor  |
|                               | DRIPLINE ENVIRONMENT | : Turf   |
|                               | RECOMMENDATIONS      | : Clean out crown  |

|                             |                      |   |
|-----------------------------|----------------------|---|
| TREE#71                     | DIAMETER             | : 9 inches, 9 inches, 15 inches                     |
| Aleppo Pine                 | DRIPLINE RADIUS      | : 16 feet   |
| ( <i>Pinus halepensis</i> ) | ROOT CROWN           | : Fair  |
|                             | TRUNK                | : Fair  |
|                             | LIMBS                | : Fair -- slightly above average amount of deadwood |
|                             | FOLIAGE              | : Fair  |
|                             | CONDITION            | : Fair structure and fair vigor                     |
|                             | DRIPLINE ENVIRONMENT | : Turf/bushes                                       |
|                             | RECOMMENDATIONS      | : Clean out crown                                   |

|                                  |                      |                                 |
|----------------------------------|----------------------|---------------------------------|
| TREE#72                          | DIAMETER             | : 20 inches                     |
| California Fan Palm              | DRIPLINE RADIUS      | : 12 feet                       |
| ( <i>Washingtonia filifera</i> ) | ROOT CROWN           | : Fair                          |
|                                  | TRUNK                | : Fair                          |
|                                  | LIMBS                | : Fair                          |
|                                  | FOLIAGE              | : Fair                          |
|                                  | CONDITION            | : Fair structure and fair vigor |
|                                  | DRIPLINE ENVIRONMENT | : Grasses                       |
|                                  | RECOMMENDATIONS      | : Clean out crown               |



J.A. COLLINS PROPERTIES, INC.  
 North Vineyard Greens [APN 065-0080-027, 080 and 090]  
 (County of Sacramento)

FREE INVENTORY SUMMARY

| TREE # | COMMON NAME             | SPECIES                      | MULTI-STEMS<br>(inches) | DBH<br>(inches) | DPR<br>(feet) | Condition/Structure |     |   | Condition/Vigor |     |   | RECOMMENDATION                       |
|--------|-------------------------|------------------------------|-------------------------|-----------------|---------------|---------------------|-----|---|-----------------|-----|---|--------------------------------------|
|        |                         |                              |                         |                 |               | P                   | P-F | F | P               | P-F | F |                                      |
| 9      | Coast Live Oak          | <i>(Quercus agrifolia)</i>   | 9,10,11,13              | 43              | 24            |                     |     | X |                 |     | X | Clean out crown                      |
| 10     | American Elm            | <i>(Ulmus americana)</i>     | 5,7,9                   | 21              | 20            |                     |     | X |                 |     | X | Clean out crown                      |
| 11     | Poplar                  | <i>(Populus sp.)</i>         | 4,7,7,24                | 42              | 24            |                     |     | X |                 |     | X | Clean out crown                      |
| 12     | Blue Gum Eucalyptus     | <i>(Eucalyptus globulus)</i> |                         | 60              | 25            |                     |     | X |                 |     | X | Clean out crown                      |
| 13     | Oregon Ash              | <i>(Fraxinus latifolia)</i>  | 7,7                     | 14              | 15            |                     |     | X |                 |     | X | Clean out crown                      |
| 14     | Oregon Ash              | <i>(Fraxinus latifolia)</i>  |                         | 7               | 16            |                     | X   |   |                 |     | X | Clean out crown                      |
| 15     | Oregon Ash              | <i>(Fraxinus latifolia)</i>  |                         | 6               | 11            |                     |     | X |                 |     | X | Clean out crown                      |
| 16     | Oregon Ash              | <i>(Fraxinus latifolia)</i>  |                         | 5               | 11            |                     |     | X |                 |     | X | Clean out crown                      |
| 17     | Oregon Ash              | <i>(Fraxinus latifolia)</i>  | 6,6                     | 12              | 18            |                     |     | X |                 |     | X | Clean out crown                      |
| 18     | Oregon Ash              | <i>(Fraxinus latifolia)</i>  |                         | 6               | 18            |                     |     | X |                 |     | X | Clean out crown                      |
| 19     | Oregon Ash              | <i>(Fraxinus latifolia)</i>  | 7,9                     | 16              | 14            |                     |     | X |                 |     | X | Clean out crown                      |
| 20     | Oregon Ash              | <i>(Fraxinus latifolia)</i>  |                         | 10              | 12            |                     |     | X |                 |     | X | Clean out crown; deep root fertilize |
| 21     | Oregon Ash              | <i>(Fraxinus latifolia)</i>  |                         | 8               | 12            |                     | X   |   |                 | X   |   | Clean out crown; deep root fertilize |
| 22     | Oregon Ash              | <i>(Fraxinus latifolia)</i>  |                         | 8               | 12            |                     |     | X |                 | X   |   | Clean out crown; deep root fertilize |
| 23     | Oregon Ash              | <i>(Fraxinus latifolia)</i>  | 5,9                     | 14              | 13            |                     |     | X |                 | X   |   | Clean out crown; deep root fertilize |
| 24     | Oregon Ash              | <i>(Fraxinus latifolia)</i>  | 3,5                     | 8               | 16            |                     |     | X |                 |     | X | Clean out crown                      |
| 25     | Oregon Ash              | <i>(Fraxinus latifolia)</i>  |                         | 6               | 10            |                     |     | X |                 | X   |   | Clean out crown; deep root fertilize |
| 26     | Oregon Ash              | <i>(Fraxinus latifolia)</i>  |                         | 5               | 8             |                     | X   |   |                 | X   |   | Clean out crown; deep root fertilize |
| 27     | Fremont Cottonwood      | <i>(Populus fremontii)</i>   | 6,6,6,10                | 28              | 20            |                     |     | X |                 | X   |   | Clean out crown                      |
| 28     | Fremont Cottonwood      | <i>(Populus fremontii)</i>   | 8,12                    | 20              | 18            |                     |     | X |                 | X   |   | Clean out crown                      |
| 29     | Oregon Ash              | <i>(Fraxinus latifolia)</i>  | 5,8,8,9,12              | 50              | 24            |                     |     | X |                 | X   |   | Clean out crown                      |
| 30     | Oregon Ash              | <i>(Fraxinus latifolia)</i>  | 10,14                   | 24              | 25            |                     |     | X |                 | X   |   | Clean out crown                      |
| 31     | Oregon Ash              | <i>(Fraxinus latifolia)</i>  | 5,7                     | 12              | 15            |                     |     | X |                 | X   |   | Clean out crown                      |
| 32     | Oregon Ash              | <i>(Fraxinus latifolia)</i>  | 2,2,2,3,3               | 12              | 8             |                     |     | X |                 | X   |   | Clean out crown; inspect annually    |
| 33     | California Black Walnut | <i>(Juglans hindsii)</i>     |                         | 13              | 14            |                     |     | X |                 | X   |   | Clean out crown                      |
| 34     | California Black Walnut | <i>(Juglans hindsii)</i>     | 3,3,5                   | 11              | 10            |                     |     | X |                 | X   |   | Clean out crown                      |
| 35     | California Black Walnut | <i>(Juglans hindsii)</i>     | 4,5                     | 9               | 8             |                     |     | X |                 | X   |   | Clean out crown                      |
| 36     | Modesto Ash             | <i>(Fraxinus velutina)</i>   |                         | 27              | 31            |                     |     | X |                 | X   |   | Clean out crown                      |
| 37     | Valley Oak              | <i>(Quercus lobata)</i>      |                         | 12              | 14            |                     |     | X |                 | X   |   | Clean out crown                      |

J.A. COLLINS PROPERTIES, INC.  
 North Vineyard Greens [APN 065-0080-027, 080 and 090]  
 (County of Sacramento)

**TREE INVENTORY SUMMARY**

| TREE #   | COMMON NAME         | SPECIES                        | MULTI-STEMS<br>(inches) | DBH<br>(inches) | D/E/R<br>(feet) | Condition/Structure |     |   | Condition/Vigor |     |   | RECOMMENDATION |   |
|--|---------------------|--------------------------------|-------------------------|-----------------|-----------------|---------------------|-----|---|-----------------|-----|---|----------------|---|
|  |                     |                                |                         |                 |                 | P                   | P-F | F | P               | P-F | F |                |   |
| 38   | Valley Oak          | <i>(Quercus lobata)</i>        | 3,4                     | 7               | 7               |                     | X   |   |                 |     |   | X              | Clean out crown;<br>equipment away from trunk |
| Tree Nos. 39-67 found in separate report for North Vineyard Greens -- Unit 1 |                     |                                |                         |                 |                 |                     |     |   |                 |     |   |                |   |
| 68   | Coast Redwood       | <i>(Sequoia sempervirens)</i>  |                         | 19              | 11              |                     |     | X |                 |     |   | X              | Clean out crown                               |
| 69   | Blue Gum Eucalyptus | <i>(Eucalyptus globulus)</i>   | 24,36                   | 60              | 18              | X                   |     |   |                 | X   |   |                | None at this time                             |
| 70   | Aleppo Pine         | <i>(Pinus halepensis)</i>      |                         | 28              | 23              |                     |     | X |                 |     |   | X              | Clean out crown                               |
| 71   | Aleppo Pine         | <i>(Pinus halepensis)</i>      | 9,9,15                  | 33              | 16              |                     |     | X |                 |     |   | X              | Clean out crown                               |
| 72   | California Fan Palm | <i>(Washingtonia filifera)</i> |                         | 20              | 12              |                     |     | X |                 |     |   | X              | Clean out crown                               |

**TOTAL INVENTORIED TREES = 35 Trees (676 inches)**



## **GENERAL PRESERVATION RECOMMENDATIONS**

The following information is provided in an effort to protect those trees which may be impacted by construction within the project site. It should be noted that these recommendations are generic in nature. As plans are developed and refined, a more detailed evaluation of tree impacts and/or removals should be made by a Certified Arborist. At that time specific preservation recommendations may be made for individual trees within the project site.

### **MITIGATIVE OVERVIEW**

In order to afford the greatest potential for tree preservation during construction, there are general guidelines to provide this protection. The critical root zone area for a tree should include the dripline radius measurement taken from the tree trunk to the tip of the farthest reaching branch. In some circumstances, such as with a one-sided tree, this measurement could be somewhat skewed. In these situations, the Project Arborist should determine the critical root zone area. Generally, encroachments should be held to no more than 20% of the critical root zone area where potential root damage could be moderate or significant. In limited situations, encroachment exceeding 20% of the critical root zone area may be possible provided that potential root damage is not severe. The critical root zone area should be fenced prior to any activities on the site.

Canopy impacts can also pose a detriment to preserved trees. Frequently overlooked are conflicts between low-hanging tree branches and necessary clearance beneath a tree for construction equipment or home building purposes. Canopy impacts should also be maintained at 20% or less.

### **PAD GRADING MITIGATIVE MEASURES**

#### **Grade Cuts.**

Cuts within a dripline of a tree should be maintained at less than 20% of the critical root zone area. Grade cuts should be supervised by the Project Arborist and any damaged roots encountered should be root pruned and properly treated as soon as possible after excavation. Cut faces which will be exposed for more than 2-3 days should be covered with dense burlap fabric and watered to maintain soil moisture at least on a daily basis (or possibly more frequently during summer months).

#### **Grade Fills.**

Fill materials less than 1 foot in depth and encroaching less than 20% into the critical root zone area should not require special mitigative measures. Should fills exceed 1 foot in depth up to 20% of the critical root zone area, aeration systems may serve to mitigate the presence of the fill materials.



Should it be necessary to build fill materials on two or three sides of a tree, it is critical to provide for drainage away from the critical root zone area of the tree -- particularly when considering heavy winter rainfalls. Overland releases and subterranean drains dug outside the critical root zone area and tied directly to the main storm drain system are two possible options.

**Structure Encroachment.**

In some cases it may be necessary for a proposed home to encroach into the critical root zone area. Again, this encroachment should be maintained at less than 20%. In this situation, a slab foundation with an aeration system installed beneath the slab and footings excavated by hand may provide adequate root protection. Where tree roots tend to be shallow, even a hand-excavated footing can be detrimental. In this situation, a "post-tension" type slab may minimize root damage. If it is necessary for encroachment to exceed 20%, raised floor construction with a grade-beam type foundation footing may be a viable option.

When evaluating encroachment from a proposed structure the structure height and tree branch conflicts are critical to evaluate in order to ensure that no more than 20% of the tree's canopy requires removal.



## Specific Inventory Data/Maintenance Recommendations

Within this specific inventory data you will find the following information:

|                            |   |
|----------------------------|---|
| Tree Number:               | Corresponds to aluminum tag attached to the tree.   |
| Species<br>Identification: | Scientific and common species name.   |
| Diameter:                  | This is the trunk diameter as measured at breast height (industry standard 4.5 feet above ground level).  |
| Dripline radius:           | Measurement of the tree's dripline from the trunk to the farthest most branch tip.  |
| Root Crown:                | Assessment of the root crown area located at the base of the trunk of the tree at soil level.   |
| Trunk:                     | Assessment of the tree's main trunk from ground level generally to the point of the primary crotch structure.   |
| Limbs:                     | Assessment of both smaller and larger branching, generally from primary crotch structure to branch tips.  |
| Foliage:                   | Tree's leaves.  |
| Overall Condition:         | Describes overall condition of the tree in terms of structure and vigor.  |
| Dripline Environment:      | Describes area directly beneath the tree (growing environment).   |
| Recommendation:            | Specific maintenance requirements.  |
| (?):                       | Occasionally some portion of the tree may be obscured from visual inspection due to the presence of dense climbing vines such as ivy, etc. which, during the course of inspection for the preliminary arborist report, prevented an evaluation with certainty. In these cases, should a tree with an (?) be significant and in a location where it may be preserved on site, it would be prudent to remove any obstructions and perform further evaluation. |

### DEFINITIONS OF TERMS USED IN THIS REPORT

**GOOD** - A tree in this category has no trunk or root crown cavities or injuries; there is no indication of hollowness; no foreign objects are embedded in its structure; the root crown is above grade; there is no decay present except for small stubs; the structure is strong; the trunk is tapers; the bark thickness is normal; there is no fluxing; no fungus is evident; there is a below average amount of dead limbs and twigs present which is normal for the size and age of the species; there is no co-dominant branching present; there are no large callused areas and any small callusing present is vigorous and intact; there are no abnormally heavy insect infestations; the growth rate is and has been average or above; limb weight is not excessive; buds are normal size and viable; the leaf size, color, and density is normal or better; and barring any unforeseen negative effects, the life expectancy should exceed thirty years.

**FAIR** - There is no decay or indications of large hollow areas in the large limbs, root crown, or trunk; a few small callused-over foreign objects, e.g., nails, may be present, the structure is strong; no fungus is evident other than small saprophytes on exposed wood; some small, callusing injuries may be present, some small limbs may be dead and decaying but callus is forming at their base; some excessive limb weight may exist; there may be some minor fluxing; the amount of dead limbs and twigs present is within the normal range; some large callused areas may be present; some small cavities and areas of decay may be present; the growth rate is average or slightly below average; and some leaf size, color, and density may vary.

**POOR** - Significant cavities, dead areas, and decay may be present; the tree is actually defective; fungus fruiting bodies may be present; the amount of dead limbs and twigs is far above normal; major co-dominant branching with embedded bark may be present; buds are small and some may not be viable; leaves may be below average size and may be abnormal in color; significant pest damage may be present; and the predicted structural life and/or viability is less than ten years.

The ratings "good to fair" and "fair to poor" are used to describe trees that fall between the described major categories and have elements of both.

**CROWN CLEAN OUT:** This shall consist of the removal of all dead, dying, diseased, interfering, objectionable, obstructing, and weak branches, as well as selective thinning to lessen wind resistance.

**DEEP ROOT FERTILIZATION (D.R.F.):** A method employed to induce vigor and stimulate new root growth. This is used as a means of feeding a large tree, as well as deep watering at the same time. Water soluble fertilizers are mixed in water and hydraulically pumped with a probe into the ground, delivering water and nutrients directly to the root zone, allowing for uptake from the tree. In this way, vigor can be improved and new root growth stimulated.

## **Appendix S-3**

### **Arborist Report – Gosal Estates**



# SIERRA NEVADA ARBORISTS

RECEIVED ON

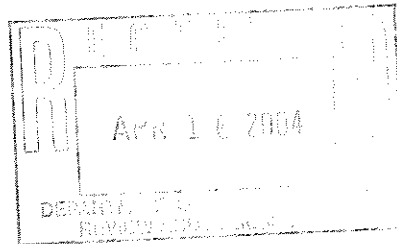
JUN 1 2003

MACKAY & SOMPS

**J.A. COLLINS PROPERTIES, INC.**

Gasol Estates  
[APN 065-0080-057]  
Sacramento County, California

## PRELIMINARY ARBORIST REPORT



Submitted by:

Edwin E. Stirtz, Principal Consulting Arborist  
ISA Certified Arborist WE-0510A  
SIERRA NEVADA ARBORISTS

Wayne R. McKee, Consulting Arborist  
ISA Certified Arborist WE-0959A  
SIERRA NEVADA ARBORISTS

June 6, 2003

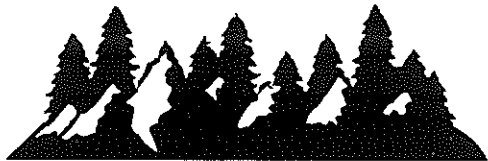
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| <br><b>DEFINITIONS</b>                                   |             |
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**COPYRIGHT STATEMENT**

This consultant's report, dated June 6, 2003, is for the exclusive and confidential use of J.A. Collins Properties, Inc. concerning the Gasol Estates project [APN 065-0080-057] located in Sacramento County, California exclusively, and may not be reproduced in whole or in part on other occasions without written permission of the Consultants, Sierra Nevada Arborists.





# SIERRA NEVADA ARBORISTS

June 6, 2003

Mr. Peter P. Daru  
J.A. Collins Properties, Inc.  
720 Howe Avenue, Suite 103  
Sacramento, California 95825-4603

Re: **Arborist Report for Gasol Estates [APN 065-0080-057]  
Sacramento County, California**

Dear Mr. Daru:

On June 6, 2003, Sierra Nevada Arborists visited the Gasol Estates project site [APN 065-0080-057] in the County of Sacramento, California. The purpose of this site visit was to conduct a field inspection to identify, inventory and evaluate any trees falling within the requirements of the Sacramento County Department of Environmental Review and Assessment ("DERA") which requires an inventory and field identification of any native oaks, California Sycamore, Northern California Black Walnut, Oregon Ash, Goodding's Black Willow, California Box Elder and White Alder 4" DBH and larger, as well as any significant trees 19" DBH and larger. The trees have been identified in the field with metal numbering tag which has been affixed to the tree's trunk. For your reference, the numbers utilized in this report correspond to the tree tag affixed to the tree, and those tree numbers have been rough-plotted on the Vesting Tentative Map provided by MacKay & Soms Civil Engineers, Inc.

As you will see from the Inventory Summary on page 6 of the Report, the project area contains eight (8) protected trees totaling 202 aggregate inches, and assesses the current status of the protected trees within the project area, including the overall structural condition and vigor of each tree. In addition, specific maintenance recommendations have been proscribed for each tree within the report. Lastly, general preservation recommendations have been provided for the trees to be preserved within the development area. Please note that this is a detailed, but cursory, look at the trees within the project area. Final impact assessments cannot be definitely determined until development plans have been finalized. At that time, additional impacts and/or removals may be more precisely defined and quantified an Inventory Impact Summary.

Thank you for allowing Sierra Nevada Arborists to assist you with this project. Please feel free to give me a call if you have any questions or require additional information.

Sincerely,

Edwin E. Stirtz  
ISA Certified Arborist WE-0510A

Enclosure – rough-plotted map

cc: Mr. Ben French, MacKay & Soms (w/rough-plotted map)

Appendix S-3

J.A. COLLINS PROPERTIES, INC.  
 RE: Gasol Estates (Sacramento County)  
 June 6, 2003  
 Page 3

TREE#1  
 California Black Walnut  
*(Juglans hindsii)*

DIAMETER : 14 inches  
 DRIPLINE RADIUS : 17 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair – above average amount  
 of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Grasses/small tree sprouts/  
 roadside ditch  
 RECOMMENDATIONS : Clean out crown

TREE#2  
 California Black Walnut  
*(Juglans hindsii)*

DIAMETER : 3 inches, 4 inches, 4 inches,  
 5 inches, 5 inches  
 DRIPLINE RADIUS : 12 feet  
 ROOT CROWN : Fair  
 TRUNK : Poor to fair – minor  
 defects/decay in central stem  
 LIMBS : Fair – above average amount  
 of deadwood  
 FOLIAGE : Fair  
 CONDITION : Poor to fair structure and fair  
 vigor  
 DRIPLINE ENVIRONMENT : Grasses/roadside ditch  
 RECOMMENDATIONS : Clean out crown

TREE#3  
 California Black Walnut  
*(Juglans hindsii)*

DIAMETER : 4 inches, 4 inches, 6 inches  
 DRIPLINE RADIUS : 13 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Fair – above average amount  
 of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Grasses/roadside ditch  
 RECOMMENDATIONS : Clean out crown

Appendix S-3

J.A. COLLINS PROPERTIES, INC.  
 RE: Gasol Estates (Sacramento County)  
 June 6, 2003  
 Page 4

TREE#4  
 California Black Walnut  
*(Juglans hindsii)*

DIAMETER : 7 inches, 8 inches, 9 inches,  
 11 inches  
 DRIPLINE RADIUS : 12 feet  
 ROOT CROWN : Fair  
 TRUNK : Poor to fair – minor to  
 moderate defects/decay,  
 various locations; central stem  
 is dead from 6' above grade  
 LIMBS : Poor to fair – above average  
 amount of large deadwood  
 FOLIAGE : Fair  
 CONDITION : Poor to fair structure and fair  
 vigor  
 DRIPLINE ENVIRONMENT : Grasses  
 RECOMMENDATIONS : Clean out crown; remove dead  
 portion of central stem

TREE#5  
 California Black Walnut  
*(Juglans hindsii)*

DIAMETER : 12 inches, 14 inches  
 DRIPLINE RADIUS : 17 feet  
 ROOT CROWN : Fair  
 TRUNK : Fair  
 LIMBS : Poor to fair – above average  
 amount of large deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Grasses  
 RECOMMENDATIONS : Clean out crown

TREE#6  
 California Black Walnut  
*(Juglans hindsii)*

DIAMETER : 6 inches, 7 inches, 8 inches  
 DRIPLINE RADIUS : 14 feet  
 ROOT CROWN : Fair  
 TRUNK : Poor to fair – central stem  
 dead with evidence of decay  
 at 2' above grade  
 LIMBS : Fair – above average amount  
 of deadwood  
 FOLIAGE : Fair  
 CONDITION : Fair structure and fair vigor  
 DRIPLINE ENVIRONMENT : Grasses/gravel road  
 RECOMMENDATIONS : Clean out crown; remove dead  
 portion of central stem

Appendix S-3

J.A. COLLINS PROPERTIES, INC.  
 RE: Gasol Estates (Sacramento County)  
 June 6, 2003  
 Page 5

|                             |                      |   |
|-----------------------------|----------------------|---|
| TREE#7                      | DIAMETER             | : 19 inches                               |
| London Plane                | DRIPLINE RADIUS      | : 28 feet                                 |
| <i>(Platanus acerfolia)</i> | ROOT CROWN           | : Fair                                    |
|                             | TRUNK                | : Fair                                    |
|                             | LIMBS                | : Fair – above average amount of deadwood |
|                             | FOLIAGE              | : Fair – slightly sparse                  |
|                             | CONDITION            | : Fair structure and fair vigor           |
|                             | DRIPLINE ENVIRONMENT | : Grasses/small structure                 |
|                             | RECOMMENDATIONS      | : Clean out crown                         |

|                              |                      |   |
|------------------------------|----------------------|---|
| TREE#8                       | DIAMETER             | : 52 inches @ 3' above grade  |
| Blue Gum                     | DRIPLINE RADIUS      | : 42 feet   |
| <i>(Eucalyptus globulus)</i> | ROOT CROWN           | : Fair  |
|                              | TRUNK                | : Poor to fair – callousing wounds, various locations at points of old failures |
|                              | LIMBS                | : Fair – above average amount of deadwood                                       |
|                              | FOLIAGE              | : Fair  |
|                              | CONDITION            | : Poor to fair structure and fair vigor   |
|                              | DRIPLINE ENVIRONMENT | : Grasses   |
|                              | RECOMMENDATIONS      | : Clean out crown; weight reduction pruning                                     |

J.A. COLLINS PROPERTIES, INC.  
 Gasol Estates [APN 065-0080-057]  
 (County of Sacramento)

| TREE # | COMMON NAME             | SPECIES                      | MULTI-STEMS<br>(inches) | DBH<br>(inches) | DLR<br>(feet) | Condition/Structure |     |   | Condition/Vigor |     |   | MAINTENANCE<br>RECOMMENDATION |   |
|--------|-------------------------|------------------------------|-------------------------|-----------------|---------------|---------------------|-----|---|-----------------|-----|---|-------------------------------|---|
|        |                         |                              |                         |                 |               | P                   | F-F | F | P               | P-F | F |                               |   |
| 1      | California Black Walnut | <i>(Juglans hindsii)</i>     |                         | 14              | 17            |                     |     | X |                 |     |   | X                             | Clean out crown   |
| 2      | California Black Walnut | <i>(Juglans hindsii)</i>     | 3,4,4,5,5               | 21              | 12            |                     | X   |   |                 |     |   | X                             | Clean out crown   |
| 3      | California Black Walnut | <i>(Juglans hindsii)</i>     | 4,4,6                   | 14              | 13            |                     |     | X |                 |     |   | X                             | Clean out crown   |
| 4      | California Black Walnut | <i>(Juglans hindsii)</i>     | 7,8,9,11                | 35              | 12            |                     | X   |   |                 |     |   | X                             | Clean out crown; remove<br>dead portion of central stem |
| 5      | California Black Walnut | <i>(Juglans hindsii)</i>     | 12,14                   | 26              | 17            |                     |     | X |                 |     |   | X                             | Clean out crown   |
| 6      | California Black Walnut | <i>(Juglans hindsii)</i>     | 6,7,8                   | 21              | 14            |                     |     |   | X               |     |   | X                             | Clean out crown; remove<br>dead portion of central stem |
| 7      | London Plane            | <i>(Platanus acerfolia)</i>  |                         | 19              | 28            |                     |     |   | X               |     |   | X                             | Clean out crown   |
| 8      | Blue Gum Eucalyptus     | <i>(Eucalyptus globulus)</i> |                         | 52              | 42            |                     | X   |   |                 |     |   | X                             | Clean out crown; prune to<br>reduce weight              |

**TOTAL INVENTORIED TREES = 8 Trees (202 inches)**

J.A. COLLINS PROPERTIES, INC.  
RE: Gasol Estates (Sacramento County)  
June 6, 2003  
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Cuts within a dripline of a tree should be maintained at less than 20% of the critical root zone area. Grade cuts should be supervised by the Project Arborist and any damaged roots encountered should be root pruned and properly treated as soon as possible after excavation. Cut faces which will be exposed for more than 2-3 days should be covered with dense burlap fabric and watered to maintain soil moisture at least on a daily basis (or possibly more frequently during summer months).

#### **Grade Fills.**

Fill materials less than 1 foot in depth and encroaching less than 20% into the critical root zone area should not require special mitigative measures. Should fills exceed 1 foot in depth up to 20% of the critical root zone area, aeration systems may serve to mitigate the presence of the fill materials.

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RE: Gasol Estates (Sacramento County)  
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Should it be necessary to build fill materials on two or three sides of a tree, it is critical to provide for drainage away from the critical root zone area of the tree -- particularly when considering heavy winter rainfalls. Overland releases and subterranean drains dug outside the critical root zone area and tied directly to the main storm drain system are two possible options.

**Structure Encroachment.**

In some cases it may be necessary for a proposed home to encroach into the critical root zone area. Again, this encroachment should be maintained at less than 20%. In this situation, a slab foundation with an aeration system installed beneath the slab and footings excavated by hand may provide adequate root protection. Where tree roots tend to be shallow, even a hand-excavated footing can be detrimental. In this situation, a "post-tension" type slab may minimize root damage. If it is necessary for encroachment to exceed 20%, raised floor construction with a grade-beam type foundation footing may be a viable option.

When evaluating encroachment from a proposed structure the structure height and tree branch conflicts are critical to evaluate in order to ensure that no more than 20% of the tree's canopy requires removal.

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DEFINITIONS OF TERMS USED IN THIS REPORT

**GOOD** - A tree in this category has no trunk or root crown cavities or injuries; there is no indication of hollowness; no foreign objects are embedded in its structure; the root crown is above grade; there is no decay present except for small stubs; the structure is strong; the trunk is tapers; the bark thickness is normal; there is no fluxing; no fungus is evident; there is a below average amount of dead limbs and twigs present which is normal for the size and age of the species; there is no co-dominant branching present; there are no large callused areas and any small callusing present is vigorous and intact; there are no abnormally heavy insect infestations; the growth rate is and has been average or above; limb weight is not excessive; buds are normal size and viable; the leaf size, color, and density is normal or better; and barring any unforeseen negative effects, the life expectancy should exceed thirty years.

**FAIR** - There is no decay or indications of large hollow areas in the large limbs, root crown, or trunk; a few small callused-over foreign objects, e.g., nails, may be present, the structure is strong; no fungus is evident other than small saprophytes on exposed wood; some small, callusing injuries may be present, some small limbs may be dead and decaying but callus is forming at their base; some excessive limb weight may exist; there may be some minor fluxing; the amount of dead limbs and twigs present is within the normal range; some large callused areas may be present; some small cavities and areas of decay may be present; the growth rate is average or slightly below average; and some leaf size, color, and density may vary.

**POOR** - Significant cavities, dead areas, and decay may be present; the tree is actually defective; fungus fruiting bodies may be present; the amount of dead limbs and twigs is far above normal; major co-dominant branching with embedded bark may be present; buds are small and some may not be viable; leaves may be below average size and may be abnormal in color; significant pest damage may be present; and the predicted structural life and/or viability is less than ten years.

The ratings "good to fair" and "fair to poor" are used to describe trees that fall between the described major categories and have elements of both.

**CROWN CLEAN OUT:** This shall consist of the removal of all dead, dying, diseased, interfering, objectionable, obstructing, and weak branches, as well as selective thinning to lessen wind resistance.

**DEEP ROOT FERTILIZATION (D.R.F.):** A method employed to induce vigor and stimulate new root growth. This is used as a means of feeding a large tree, as well as deep watering at the same time. Water soluble fertilizers are mixed in water and hydraulically pumped with a probe into the ground, delivering water and nutrients directly to the root zone, allowing for uptake from the tree. In this way, vigor can be improved and new root growth stimulated.



# **Appendix T**

## **Cultural Resources Assessment**

**CULTURAL RESOURCES ASSESSMENT  
OF THREE PROJECTS WITHIN THE  
NORTH VINEYARD STATION  
SPECIFIC PLAN AREA,  
SACRAMENTO COUNTY, CALIFORNIA**

**North Vineyard Greens Unit 1 and Davis Property: Control Numbers 03-0099 and 03-0214  
North Vineyard Greens Unit 3: Control Number 03-141  
Gosal Estates: Control Number 02-0660**

Prepared by

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Prepared for

**County of Sacramento**  
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July 4, 2005  
(Job #04-214)

## **INTRODUCTION**

The North Vineyard Station Specific Plan Area (Plan Area) incorporates approximately 1,580 acres. The Plan Area is bounded on the north by Florin Road, on the east by (the eventual expansion of) Vineyard Road, on the south by Gerber Road and on the west by the channel of Elder Creek. The Plan Area is located near the geographic center of Sacramento County

The County of Sacramento, Department of Environmental Review and Assessment (DERA) requested that an intensive cultural resource assessment be conducted for three project areas within the Plan Area: North Vineyard Greens Unit 1 and Davis Property (Assessor's Parcel Numbers 065-0080-029, 066-0070-020, 066-0070-043, 066-0070-044, 066-0070-045, 066-0070-046, 066-0080-001, 066-0080-002, 066-0080-003, and 066-0080-016), North Vineyard Unit 3 (Assessor's Parcel Numbers 065-0080-027, 065-0080-090, 065-0080-080, and 065-0080-064), and Gosal Estates (Assessor's Parcel Number 065-0080-057). North Vineyard Greens Unit 3 and Gosal Estates lie in the south half of section 6, Township 7 North Range 6 East, mapped on the Elk Grove 7.5' USGS topographic quadrangle. The third project area lies in the western one-quarter of section 5 and the southeast quarter of Section 6, Township 7 North Range 6 East (Map 1).

Melinda Peak served as principal investigator, with Ann Peak directing the field survey (resumes, Appendix 1).

## **CULTURAL HISTORY**

### **Archeological Background**

The Sacramento Delta was one of the first regions in California to attract intensive archeological fieldwork. Between 1893 and 1901, avocational archeologist J. A. Barr excavated many prehistoric mounds in the Stockton area. He collected nearly 2000 artifacts during the course of his investigations. H. C. Meredith was another avocational archeologist of the period who pursued collecting in the same Stockton locality. Meredith (1899, 1900) did publish a compilation of his own and Barr's findings, and these appear to constitute the earliest accounts of Delta archeology. Holmes (1902), from the Smithsonian Institution, further elaborated on the Delta or "Stockton District" archeology, presenting illustrations of artifacts collected by Meredith and Barr.

It was Elmer J. Dawson who first recognized culture changes through time in Delta archeology. Though he was an amateur archeologist, Dawson understood the necessity of keeping accurate notes on grave associations and provenience of artifacts. He collaborated with W. E. Schenck to produce an overview of northern San Joaquin Valley archeology (Schenck and Dawson 1929). The overview contained information on more than 90 prehistoric sites as well as data on previous collectors.



By 1931, the focus of archeological work was directed toward the Cosumnes River locality, where survey and exploration were conducted by Sacramento Junior College (Lillard and Purves 1936). Excavations, especially at the stratified Windmill mound (CA-SAC-107), suggested three temporally distinct cultural traditions: Early, Transitional, and Late. Information grew as a result of excavations at other mounds in the Delta and lower Sacramento Valley by Sacramento Junior College and the University of California, Berkeley.

Previous investigations in the project region have focused upon very detailed archival research of Spanish sources (Bennyhoff 1977), and the archeological investigations at a number of small sites (Schulz et al. 1979; Schulz and Simons 1973; Soule 1976). A reexamination of earlier work has also been undertaken (Ragir 1972; Schulz 1981; Doran 1980). Several of the previously investigated sites probably represent satellite encampments or small villages associated with major villages.

The majority of the sites appear to be relatively late in time, and probably represent Plains Miwok. As mentioned above, the sites appear to be satellite encampments or small villages. The activities practiced are varied, but detailed studies on the faunal collection suggest seasonality of occupation and a focus on fish species other than the main channel varieties.

Writing the definitive summary of California archeology, Moratto (1984: 529-547) devoted an entire chapter to linguistic prehistory. For the Central Valley region, Moratto points out that some Early Horizon and Middle Horizon central California archeological sites appear at least in part, contemporaneous, based on existing radiocarbon dates. Cultural materials recovered from CA-SJO-68, an Early Horizon site, are thought to relate to date to  $4350 \pm 250$  B.P or 2350 B.C. On the other hand, a Middle Horizon component at CA-CCO-308 dates to  $4450 \pm 400$  B.P. or 2450 B.C. The antiquity of other Early and Middle Horizon sites demonstrate an overlap of the two horizons by a millennium or more.

One explanation proposes that the Middle Horizon represents an intrusion of ancestral Miwok speaking people into the lower Cosumnes, Mokelumne, and Sacramento River areas from the Bay Area. The Early Horizon may represent older Yokuts settlements or perhaps the speakers of an Utian language who were somehow replaced by a shift of population(s) from the bay.

## **Ethnological Background**

The Eastern Miwok represent one of the two main divisions of the Miwokan subgroup of the Utian language family (Levy 1978:398). The Plains Miwok, one of five separate cultural and linguistic groups of the Eastern Miwok, occupied the lower reaches of the Mokelumne, Cosumnes and Sacramento Rivers including the area of south Sacramento County surrounding the project area. Linguistic studies and the application of a lexicostatistic model for language divergence suggests that Plains Miwok was a distinct linguistic entity for the last 2000 years (Levy 1970). This result led researchers such as Richard Levy (1978:398) to conclude that the Plains Miwok inhabited the Sacramento Delta for a considerable period of time.

The political organization of the Plains Miwok centered on the tribelet. Tribelets were comprised of

300 to 500 individuals (Levy 1978:410). Each tribelet was thought to control a specific area of resources and usually consisted of several villages or hamlets. Each tribelet also was divided along lineages. These lineages were apparently localized to a specific geographic setting and most likely represented a village site and their associated satellite sites where the seasonal collection of resources occurred (Levy 1978:398-399). Each settlement apparently contained roughly 21 individuals according to data collected by Gifford (Cook 1955:35).

The diet of the Plains Miwok emphasized the collection of floral resources such as acorns, buckeye, digger pine nuts, seeds from the native grasses and various fresh greens. Faunal resources such as tule elk, pronghorn antelope, deer, jackrabbits, cottontails, beaver, gray squirrels, woodrats, quail and waterfowl were hunted. Fishing, particularly salmon and sturgeon, contributed significantly to the Plains Miwok diet (Levy 1978:402-403). The primary method of collecting fish was by nets, but the use of bone hooks, harpoons and obsidian-tipped spears is also known ethnographically (Levy 1978:404).

Both twined and coiled basketry were manufactured by the Eastern Miwok. The uses of baskets included the collection and storage of seeds, basketry cradles and gaming (Levy 1978:406). Tule mats were also known to have been used by the Plains Miwok primarily as a floor covering. Other uses of tule included the manufacture of the tule balsa, a watercraft in which native people navigated and exploited adjacent delta and major river systems.

Four main types of structures were known among the Eastern Miwok, depending on the environmental setting. In the mountains, the primary structure was a conical structure of bark slabs. At lower elevations the structures consisted of thatched structures, semi-subterranean earth-covered dwellings and two types of assembly houses used for ceremonial purposes (Levy 1978:408-409).

Bennyhoff (1977:11) characterized the Plains Miwok as intensive hunter-gatherers, with an emphasis upon gathering. The seasonal availability of floral resources defined the limits of the group's economic pursuits. Hunting and fishing subsistence pursuits apparently accommodated the given distribution of resources. The Plains Miwok territory covered six seasonally productive biotic communities and as such native people could apparently afford to pick and choose the resources they ranked highest from each of these zones. The subsequent storage of floral resources (such as acorns in granaries) allowed for a more stable use of the resource base (Bennyhoff 1977:10). The acorn was apparently the subsistence base needed to provide an unusually productive environment as earlier non-acorn using peoples who resided in the same geographic setting apparently suffered some seasonal deprivation (Schulz 1981). Such an emphasis upon the gathering of acorns is consistent with the population increase evident during the Upper Emergent Period in California (Doran 1980).

The study of piscine (fish) remains from both CA-SAC-65 (Schulz et al. 1979) and CA-SAC-145 (Schulz n.d.; Schulz and Simons 1973) indicates that small villages away from the major rivers appear to concentrate on the collection of piscine species (particularly the Sacramento perch) that inhabited slow-moving waters. This would probably have been the case with any village located within or near the Plan Area, if there was a village in the immediate area.

The Plan Area is not known to be controlled by any particular tribelet of the Plains Miwok, but appears to lie in an unoccupied boundary zone between the Plains Miwok and the antagonistic Nisenan to the north (Bennyhoff 1977:58).

## **Historical Background**

The Plan Area does not lie on a portion of the early Mexican land grants nor does it lie within the land that could be mined for gold. As a result, there is no indication that any important events or activities occurred in the early history of the region. It was not long after the initial gold rush of the late 1840s-early 1850s, however, when the agricultural potential of the excellent farmlands of the Sacramento Valley was recognized. The first lands taken up were the rich bottomlands along the major watercourses. By the mid-1860s, the prime farmland had been claimed and the later settlers began to discover the potential of lands such as the Plan Area with poorer soil and less available water. In the 1860s and 1870s, virtually all land in the region was taken up by the later settlers for agricultural purposes. The Plan Area lies within the boundaries of the San Joaquin Township (Thompson & West 1880:234-235).

The historic maps of the Plan Area have been collected. The earliest map is the General Land Office plat of the township dating to 1856, which indicates a field on both sides of the line between the south halves of Sections 5 and 6, in what is now the North Vineyard Unit 1 and Davis Property project area. A road is indicated crossing the Plan Area in a northwest/southeast direction, within the south half of Section 6, crossing what is now the North Vineyard Unit 3. No structures are shown, but it is likely at least one ranch would be associated with the developed field.

The 1885 County map shows the subdivision of the land and the names of the landowners. Thomas G. Casey, who purchased the southeast quarter of Section 6 containing portions of all three of the project areas in 1880 for \$3000, has a biography in both the 1880 and 1890 County histories. Casey had been living in Brighton Township not too far north of the Plan Area in 1880. Casey added a number of improvements including fencing and outbuildings to his holding in the Plan Area. He is described as carrying on "general farming", but also had 15 acres of vineyard and orchards (Davis 1890).

The service center for the farmers of the Plan Area was the town of Florin, about three miles from the northwest quarter of the Plan Area. The town, formed in 1875 along the line of the Central Pacific Railroad branch, had a post office, railroad station, store, blacksmith shop, hotel, school, box factory and carpenter shop in 1880. The soils of the region overlie a hardpan layer, making them suitable primarily for the raising small fruits such as strawberries, grapes, peaches and apples, with irrigation. Florin served as the shipping point for the farm products of the region (Thompson & West 1880).

The early years of the twentieth century were an era of rapid development of a large number of interurban electrified railways. The technological advances related to the production and long-distance transmission of hydroelectric power of the late nineteenth century made this a popular form of transportation for passenger service and freight service throughout the virtually flat terrain of the

Central Valley. One of the systems to be organized and built in this era was the Central California Traction Railroad (CCT). The corporation was organized in 1905 with three goals in mind: to compete with the Southern Pacific and Western Pacific for transporting agricultural products of farms on the east side of the San Joaquin and Sacramento valleys; to develop farmland along the railroad right-of-way; and to provide a major customer for the power company owned by several of the corporate directors.

The 53-mile CCT main line connected Sacramento with Stockton, with a branch from the main line to Lodi. The section from Sheldon to Sacramento through the Plan Area was completed in 1910. Almost from the beginning, the railroad built up a substantial freight business, and was a financial success. In the 1920s, Southern Pacific, Santa Fe and Western Pacific purchased the railway jointly. Eventually, the increasing use of personal automobiles and bus lines brought a reduction in the number of passengers, for the CCT, and passenger service was eliminated in 1933. In 1946, the use of electricity was discontinued in favor of diesel service (Hilton and Due 1960: 401).

The railroad station along the line that would have been convenient for produce shippers within the Plan Area was located about one-quarter mile north of Florin Road, shown on a 1927 map of the county as the "Florin Road Station".

## **RESEARCH**

Records of previous cultural resource surveys and maps of recorded sites within the project area were reviewed at the North Central Information Center of the California Historical Resources Information Center (Appendix 2). The records search for the no prehistoric period archeological sites recorded in or near the project areas. Several historic period resources have been recorded in the project vicinity, including a section of the Central California Traction Railroad (CA-SAC-506H).

Very little of the project area has been systematically surveyed. In 1974, J. Johnson of CSU Sacramento completed a survey of Gerber Creek including a section that transects two of the project areas, North Vineyard Greens Unit 1 and North Vineyard Greens Unit 3. In 1979, Peak & Associates, Inc. completed a survey of the corridor for one of the SMUD transmission lines (Project A) that crosses the North Vineyard Greens Unit 1. Jones & Stokes completed a survey of the Bradshaw 6A Interceptor that crosses the western portion of the North Vineyard Greens Unit 3 project area in 2001. A number of surveys have been conducted in the project vicinity, including the surveys conducted by Peak & Associates for the North Vineyard Station Specific Plan Area in 1995. The 1995 study provided information on the history of the buildings within the Specific Plan Area, as well as recording and evaluating a number of the extant buildings (Appendix 2).



## **NATIVE AMERICAN CONSULTATION**

A letter was sent to the Native American Heritage Commission requesting a check of the Sacred Lands files. In their reply of June 3, 2005, the NAHC reported that there are no reported properties of concern in or near the project areas.

Letters have been sent to several Native American individuals and groups identified by the NAHC as having knowledge regarding the project area: Leland Daniels; Mary Daniels-Tarango, Wilton Rancheria; Glen Villa Jr. and Pamela Baumgartner, Ione Band of Miwok Indians; and Dwight Dutschke, Sierra Native American Council. No replies have been received to date.

## **FIELD ASSESSMENT**

The field survey of the project areas was undertaken in May 2005 with a team of archeologists led by Ann S. Peak. The team covered the three project areas using complete coverage with transects no wider than 10 meters. Where necessary, small holes were hand-dug to check the sediments for evidence of prehistoric/historic occupation/use of the project areas.

Historic research revealed that all of the project areas had contained buildings at various times, many of which were razed or replaced, with the exception of newer residences detailed below. Special emphasis was placed on a thorough examination of locations where buildings were shown on historic maps to determine if any trace of the old buildings could be located.

### **North Vineyard Greens Unit 1 and Davis Property**

The project area contained three building sites, analyzed in Peak & Associates' 1995 overview for the North Vineyard Station Specific Plan Area as Buildings 3, 13 and 22. Building 3 was indicated in the northern portion of the project area within APN 066-0070-043 on the 1909 topographic map, and again on the 1942 15' topographic map. This building had apparently been razed by 1968, perhaps in preparation for the power line corridor added to the property between 1968 and 1980. At some point after 1980, a new building related to a nursery had been constructed on the site. There is no evidence of the earlier building.

Building 13 was shown on the 1909 topographic map on the south end of the property near Gerber Road. This building had also been razed by 1968, and there is no physical evidence of the site.

Building 22 was constructed within the project boundaries between 1909 and 1942 at a location just north of the Central California Traction line, at the east edge of the project area. By 1968, this building had also been removed. No physical evidence could be found of this building.

### **North Vineyard Greens Unit 3**

North Vineyard Greens Unit 3 also contained three building sites, identified in the 1995 study as Buildings 14, 15 and 16. Building 14 dates to before 1909, but had been razed by 1942. Building 15 also dated to before 1909, but had been razed between 1942 and 1968. These sites lacked physical evidence of the earlier residences.

Building 16 dated to before 1909. This building was razed at an unknown date and replaced by a new residence in 1971, according to the Assessor's Building Record for the parcel (APN 065-0080-064). This building is to be retained in Lot 143.

There are two other residences on the project area. Both appear to have been constructed after 1968, and before 1980, based on the USGS topographic quadrangle. One is located in the westernmost arm of the project area in APN 065-0080-027. This building will be retained in Lot 140. The other residence is located in the eastern portion of the project area, on the north side of Gerber Creek in APN 065-080-090. This building will be retained in Lot 141.

### **Gosal Estates**

The Gosal Estates project area had a residence and outbuildings constructed on the site after 1980, as none of the topographic maps before that time indicate the presence of any buildings within the project area. The outlines of the buildings that comprised the complex appear on the topographic map for the project drawn from aerial photographs. One of the outbuildings, a small garage, is still present within the project area. The site does contain other physical evidence of use, including a buried cistern and the remnants of an unlined earthen fishpond and small wooden bridge. A neighbor claimed that the features are about thirty years old, but map evidence indicates they are less than twenty-five years old.

No evidence was found of prehistoric use of the project areas. The historic use evident dates to less than 45 years in age, and was not formally recorded. North Vineyard Greens Unit 1 is crossed by the route of the Central California Traction Railroad, but the railroad easement is excluded.

## **CONCLUSIONS**

The project area lies on a flat open plain of the Sacramento Valley with no permanent water sources present. Prehistoric period campsites and villages are normally not discovered in areas with no permanent water sources. Gerber Creek, the creek that bisects North Vineyard Greens Unit 1 and North Vineyard Greens Unit 3 appears to have been only seasonal in nature, and is not even mapped on the 1909 Elk Grove 1:31,680 scale topographic map. It is entirely likely that the Native American people utilized this area for seasonal resource collection, but did not inhabit the project areas on a permanent basis. The gathering/hunting of plants and animals rarely leaves tangible evidence of this activity, other than the isolated, lost tool.

The land of the project areas has been in agricultural use from the 1850s up to the present day. Generally, farmers first took up the land with first-rate soil, with a later wave of settlers selecting the tracts with second-rate soil. The soil type, combined with a lack of natural water sources, made the latter useful for dry land cultivation of hay and grain, or for seasonal grazing. Later, with the development of better systems for pumping water and irrigation, the land could be used more intensively for vineyards and small fruit orchards.

The early buildings that were present on the property and have been completely razed, leaving no surface evidence.

### **RECOMMENDATIONS**

A surface inspection can never entirely eliminate the possibility of a buried resource. It is, therefore, recommended that if artifacts, bone, or shell are uncovered during construction, all work should be halted in the area of the find and an archeologist should be contacted for an assessment. Should bone be uncovered that appears to be human, by state law the Sacramento County Coroner must be contacted. If the Coroner determines the bone is from a Native American interment, the Native American Heritage Commission must be contacted.

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**APPENDIX 1**  
**RESUMES OF INVESTIGATORS**

**PEAK & ASSOCIATES, INC.**  
**RESUME**

**MELINDA A. PEAK**

**January 2005**

**Senior Historian/Archeologist**

3941 Park Drive, Suite 20 #329

El Dorado Hills, CA 95762

(916) 939-2405

**PROFESSIONAL EXPERIENCE**

Ms. Peak has served as the principal investigator on a wide range of prehistoric and historic excavations throughout California. She has directed laboratory analyses of archeological materials, including the historic period. She has also conducted a wide variety of cultural resource assessments in California, including documentary research, field survey and report preparation.

In addition, Ms. Peak has developed a second field of expertise in applied history, specializing in site-specific research. She is a registered professional historian and has completed a number of historical research projects. Through her education and experience, Ms. Peak meets the Secretary of Interior Standards for historian, architectural historian, prehistoric archeologist and historic archeologist.

**EDUCATION**

M.A. - History - California State University, Sacramento, 1989

Thesis: *The Bellevue Mine: A Historical Resources Management Site Study in Plumas and Sierra Counties, California*

B.A. - Anthropology - University of California, Berkeley, 1976

**RECENT PROJECTS**

In recent months, Ms. Peak has completed several determinations of eligibility and effect documents in coordination with the Corps of Engineers for projects requiring federal permits, assessing the eligibility of a number of sites for the National Register of Historic Places. She has also completed historical research projects on a wide variety of topics for a number of projects including the development of navigation and landings on the Napa River, a farmhouse dating to the 1860s, an early roadhouse, and a section of an electric railway line. She also completed an NRHP evaluation of Folsom Dam for the Corps of Engineers.

In recent years, Ms. Peak has prepared a number of cultural resource overviews and predictive models for blocks of land proposed for future development for general and specific plans. She has been able to direct a number of surveys of these areas, allowing the model to be tested. Ms. Peak has served as project manager for a number of major survey and excavation projects in recent years, including the many surveys and site definition excavations for the 172-mile-long Pacific Pipeline, including an archival study in the City of Los Angeles.



## **RESUME**

**ANN S. PEAK**  
**Consulting Archeologist**

**February 2005**

### **PROFESSIONAL EXPERIENCE**

Ms. Peak has had over thirty years of extensive experience in both the public and private sectors, in providing professional archeological services. She has completed archeological work in all cultural areas of California, western Great Basin, and southeastern Oregon. Her projects include contracts with federal, state and local agencies and private firms.

She has directed all types of cultural resource-related projects, including field surveys, test excavations, data recovery programs, intensive archival research and cultural resource management.

### **EDUCATION**

M.A. - Anthropology - California State University, Sacramento, 1975

B.A. - Anthropology - California State University, Sacramento, 1972

Studies in public health and microbiology, University of California, Berkeley, 1949-1950

### **RECENT PROJECTS**

Ms. Peak most recently served as principal investigator for the data excavations at CA-PLA-592, -613, -618, -619, and -620, prehistoric midden sites in the Sierran foothills. In 1993, she served as the principal investigator for the excavations at CA-PLU-88, a large seasonal campsite with prehistoric rock art in the Plumas National Forest. She also completed the recordation and analysis of the numerous petroglyphs present within a portion of the site

Ms. Peak served as the principal investigator for the various surveys and site testing for the 172-mile-long Pacific Pipeline project proposed for construction in Santa Barbara, Ventura and Los Angeles counties. She has completed a number of smaller surveys throughout northern California and Nevada.

Ms. Peak has extensive experience in Great Basin culture areas, directing a number of large block surveys for proposed new mines or re-operations of historic mine sites throughout Nevada.

She has served as principal or field director and co-author on other large projects completed in recent years, including excavations of two historic sites in Sacramento County and one in El Dorado County, several prehistoric sites within the proposed Haystack Reservoir in Merced County and a prehistoric site within the area of the proposed Susanville Correctional Center expansion.

**APPENDIX 2**  
**RECORDS SEARCH**

# **Appendix U**

## **Planning Commission Transmittal**

**COUNTY OF SACRAMENTO  
INTER-OFFICE CORRESPONDENCE**

February 14, 2006  
Board Date: 3/8/06 at 2:30 PM

TO: BOARD OF SUPERVISORS

FROM:  FAITH GRUNWALDT, Secretary  
*Project Planning Commission*

SUBJECT: **03-CZB-SVB SPP-AHS-0099** - (VINEYARD/FRASCHETTI)  
**SPECIFIC PLAN AMENDMENTS, REZONE, TENTATIVE VESTING  
SUBDIVISION MAPS, SPECIAL DEVELOPMENT PERMIT AND  
AFFORDABLE HOUSING PLAN  
1992 MUNOZ REVOCABLE TRUST AND FILOMENA H. TOGONON -**  
Applicant: North Vineyard Greens, GP - Engineer: MacKay and Soms - Assessor's  
Parcel Nos. 065-0080-029; 066-0070-020, 043, 044, 045 and 046; 066-0080-001, 002,  
003 and 016, located on the north side of Gerber Road and the south side of Florin Road,  
on each side of the Central California Traction Railroad, approximately 4,000 feet west  
of Bradshaw Road, in the Vineyard community.

The Project Planning Commission, meeting in special session on February 6, 2006, voted  
unanimously to forward the following requests to your Board:

**SPECIFIC PLAN AMENDMENT**

Recommend approval of an amendment to the North Vineyard Specific Plan for  
approximately five (5) acres from Public Services to Single-Family Residential three (3)  
to five (5) units per acre (SFR 3-5); and to amend approximately 0.8 acres from  
Stormwater Detention (SWD) to Single-Family Residential 3-5, subject to the findings  
recommended by staff.

**REZONE**

Recommend approval of a Rezone of approximately 146.7 acres from AR-10  
(Agricultural-Residential), AR-10 (F) (Agricultural-Residential-Flood Combining), AG-  
20 (Permanent Agricultural Intensive), and AG-20 (F) (Permanent Agricultural  
Intensive-Flood Combining) to RD-5, RD-7, and RD-20 (Residential), and O  
(Recreation), subject to the findings and conditions recommended by staff, amended as  
follows:

**NORTH VINEYARD GREENS UNIT #1**  
03-CZB-SVB-SPP-AHS-0099  
065-0080-029; 066-0070-020, 043, 044, 045 and 046;  
066-0080-001, 002, 003, and 016

**Condition No. M(2) added to read as follows:**

Provide a minimum 7-foot high solid masonry wall between the Central California Traction Railroad right-of-way and adjacent residential lots. The wall shall be reviewed by the Planning Department during the plan check process or improvement plan process to assure a uniform design and materials with other walls in the North Vineyard Station area. The minimum standard for the wall shall be split face masonry block construction.

**Condition No. E(1) amended to read as follows:**

Prior to the issuance of any building permits, construct a masonry or concrete noise barrier to a total height of 8-feet (consisting of a 6-foot masonry or concrete wall on top of a 2-foot berm) between the proposed single-family residential lots and the landscaped areas along Gerber Road; construct a masonry or concrete noise barrier to a total height of 7-feet (consisting of a 6-foot masonry or concrete wall on top of a 1-foot berm) between the proposed single-family residential lots and the landscaped areas along Florin Road; and construct a 6-foot masonry or concrete noise barrier between the proposed single-family residential lots and the landscaped areas along Waterman Road. Sound walls are not required adjacent to the multi-family residential sites along Gerber and Waterman Roads. The Gerber Road and Waterman Road noise barriers should wrap around the corners of streets and driveways accessing Gerber and Waterman Roads to provide sufficient noise attenuation at the outdoor activity areas and buildings on the adjacent lots. The Florin Road noise barrier should wrap around the corners of the northernmost lot adjacent to Florin Road. Wrapping is sufficient where the noise barrier blocks the line of sight between the noise source and the receiver. Tapering of the wall height at intersections will be required for visibility purposes.

**Condition No. 133 added to read as follows:**

Traffic signal control shall be installed at the Waterman Road/1 street (north access road to Vineyard Creek subdivision) intersection. The main access to the multi-family site shall be located across from 1 street to create the fourth leg of the intersection. (Note: This condition will be listed as No. 7 when finalized.)

**VESTING LARGE LOT TENTATIVE SUBDIVISION MAP**

Recommend approval of a Vesting Large Lot Tentative Subdivision Map, known as **NORTH VINEYARD GREENS UNIT #1**, to divide approximately 146.7 acres into 15 parcels, subject to the findings and conditions recommended by staff.

NORTH VINEYARD GREENS UNIT #1  
03-CZB-SVB-SPP-AHS-0099  
065-0080-029; 066-0070-020, 043, 044, 045 and 046;  
066-0080-001, 002, 003, and 016

## VESTING SMALL LOT TENTATIVE SUBDIVISION MAP

Recommend approval of a Vesting Small Lot Tentative Subdivision Map to divide the same approximately 146.7 acres into 376 single-family residential lots, one future residential lot, two future multiple-family residential lots, and several miscellaneous public/quasi-public parcels, subject to the findings and conditions recommended by staff, amended as follows:

### **Condition No. B(24) added to read as follows:**

Prior to recordation of the final map, provide an easement for future bus stop pads at the following locations:

- a. Waterman Road at E street
- b. Waterman Road at 6 street
- c. Florin Road at L way
- d. Gerber Road at 2 street

### **Condition No. B(25) added to read as follows:**

Prior to recordation of the final map, provide an easement for concrete pads for future bus shelters at the following locations:

- a. Gerber Road at 2 street
- b. Waterman Road at 6 street

### **Condition No. B(26) added to read as follows:**

Coordinate with Robert Hendrix at 649-2759, Sacramento Regional Transit Facilities to identify the size and location of the above cited easements.

### **Condition No. B(27) added to read as follows:**

Dedicate a total of 9.83 acres for two affordable housing projects. This dedication obligation is for 5.77 acres on the Gosal Estates site and 4.06 acres on the North Vineyard Greens Unit #3 site, as identified in the Developer's Affordable Housing Plan. The dedication shall be to the "Sacramento Housing and Redevelopment Agency" in the form of an Irrevocable Offer of Dedication (IOD) to be placed on each of the parcels comprising the Gosal Estates site and North Vineyard Greens Unit #3 site on their respective final maps.

**NORTH VINEYARD GREENS UNIT #1**  
03-CZB-SVB-SPP-AHS-0099  
065-0080-029; 066-0070-020, 043, 044, 045 and 046;  
066-0080-001, 002, 003, and 016

**Condition No. B(28) added to read as follows:**

Enter into the Dedication Mitigation Agreement with Sacramento Housing and Redevelopment Agency (SHRA) regarding compliance with the mitigation measures and on-site and off-site infrastructure improvements for the dedicated sites. The Dedication Mitigation Agreement shall be recorded against all of the parcels comprising the North Vineyard Greens Unit #1 and Unit #3 final maps.

**Condition No. B(29) added to read as follows:**

Annex the subject property to the County of Sacramento, Community Facilities District 2004-2 to support the maintenance of the landscaped areas/medians that will not be dedicated to the Southgate Recreation and Park District. The annexation process takes approximately 6 months to complete. Contact Steve Hong at 874-5368, Infrastructure Finance Section, Municipal Services Agency, to initiate the annexation process. Final map recordation will not be approved until the annexation process is complete.

**SPECIAL DEVELOPMENT PERMIT**

A Special Development Permit to reduce the minimum 20-foot front yard setback for single-family residences to approximately 15 feet (Note: Garages will remain at 20 feet.) and to allow porches to be as close as 12.5 feet from street.

**The Commission recommends approval of the request, amended as follows:**

A Special Development Permit to reduce the minimum front-yard setback from 20 to 12.5 feet (Note: Garages will remain at 20 feet from the street.), subject to the findings and conditions recommended by staff.

**AFFORDABLE HOUSING PLAN**

Recommend approval of the Affordable Housing Plan consisting of on-site dedication and payment of fees.

**ENVIRONMENTAL DOCUMENT**

The Commission closed the comment period on the Draft Environmental Impact Report, directed staff to respond to written and oral public comments, and to prepare the Final Environmental Impact Report for your Board.

**NORTH VINEYARD GREENS UNIT #1**  
03-CZB-SVB-SPP-AHS-0099  
065-0080-029; 066-0070-020, 043, 044, 045 and 046;  
066-0080-001, 002, 003, and 016

## **MITIGATION MONITORING AND REPORTING PROGRAM**

Recommend adoption of the Mitigation Monitoring and Reporting Program.

The complete file and copies of all documents are attached.

cc: In-house  
Owner  
Applicant/Architect



## ACKNOWLEDGEMENTS

### EIR PREPARERS

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Joyce Horizumi, *Environmental Coordinator*  
Robert Caikoski, *Assistant Environmental Coordinator*  
Catherine Hack, *Division Manager*  
Tim Blewett, *Project Leader*  
Robert DeMorales, *Initial Review*

### SUPPORT STAFF

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Linda Wittkop Johnston, *Office Manager*  
Justin Maulit, *Office Assistant/II*

### TECHNICAL STUDIES

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#### ***Arborist Reports***

Sierra Nevada Arborists  
503 Anthony Court  
Roseville, CA 95678

#### ***Cultural Resources***

Peak & Associates  
3941 Park Drive, Suite 20 #329  
El Dorado Hills, CA 95762

#### ***Special-Status Species Assessments and Wetland Delineations***

ECORP Consulting, Inc.  
2260 Douglas Blvd.  
Roseville, CA 95661

#### ***Traffic Study***

Fehr & Peers Transportation Consultants  
660 J Street, Suite 390  
Sacramento, CA 95814

### PROJECT PROPONENTS

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#### **Owners:**

##### **North Vineyard Greens #1**

1992 Munoz Revocable Trust  
Filomena H. Togonon

##### **North Vineyard Greens #3**

Charles and Linda Galvez  
Roger and Nadine Simmons  
Ezra Properties

##### **Gosal Estates**

Gurmukh Gosal and KGD Trust

##### **Davis Property**

Donald R. and Rose A. Davis Family  
Trust

#### **Applicants:**

##### **North Vineyard Greens #1 North Vineyard Greens #3 Davis Property**

North Vineyard Greens, GP  
Attn: Peter Daru  
720 Howe Avenue, #103  
Sacramento, CA 95825

##### **Gosal Estates**

Gurmukh Gosal and KGD Trust  
720 Howe Avenue, #103  
Sacramento, CA 95825

#### **Engineer:**

##### **All Projects**

MacKay and Soms  
1771 Tribute Road, #E  
Sacramento, CA 95815