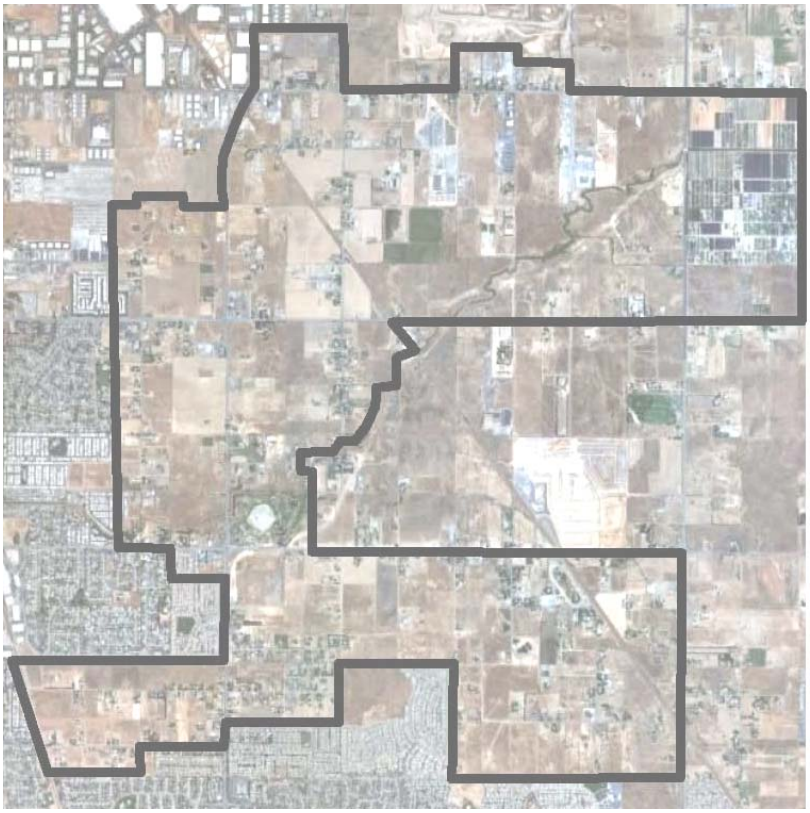
FINAL ENVIRONMENTAL IMPACT REPORT
VOLUME 4 (OF 5)

FLORIN-VINEYARD GAP COMMUNITY PLAN PROJECT



Control Number: 04-GPB-CPB-0096
State Clearinghouse Number: 2005082045
Date: October 2010

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

Board Of Supervisors

1st District: Roger Dickinson,
2nd District: Jimmie Yee
3rd District: Susan Peters
4th District: Roberta MacGlashan
5th District: Don Nottoli

County Executive

Steve Szalay

Prepared By

Department of Environmental Review and Assessment

With Assistance By

Raney Planning & Management, Inc.

FINAL ENVIRONMENTAL IMPACT REPORT
VOLUME 4 (OF 4)

FLORIN-VINEYARD GAP COMMUNITY PLAN

Control Number: 04-GPB-CPB-0096
State Clearinghouse Number: 2005082045

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 ASSESSMENT
www.DERA.saccounty.net
827 7TH STREET, ROOM 220
SACRAMENTO, CALIFORNIA 95814

Municipal Services Agency

Department of Environmental Review and Assessment
Joyce Horizumi, Director

Steven C. Szalay, Interim County Executive
Nav Gil, Chief Operations Manager

October 15, 2010

TO: ALL INTERESTED PARTIES

SUBJECT: DRAFT ENVIRONMENTAL IMPACT REPORT FOR FLORIN-VINEYARD GAP COMMUNITY PLAN PROJECT (Control Number: 04-GPB-CPB-0096; State Clearinghouse Number: 2005082045)

The subject Final Environmental Impact Report (FEIR) is attached for your review. The FEIR and the subject project are scheduled to be heard before the Sacramento County Board of Supervisors on October 27, 2010 at (time) in the County Board Chambers located at 700 H Street, Sacramento, California.

The DEIR consists of five volumes:

- **Volume I** of the FEIR contains all of the program-level California Environmental Quality Act (CEQA) mandated information and analyses for the entire Florin Vineyard Gap Community Plan Project area. This volume also includes the Response to Comments on the Draft EIR.
- **Volume II** of the FEIR contains all of the project-level CEQA mandated information and analyses for the individual development projects currently proposed within the Florin Vineyard Gap Community Plan Project area.
- **Volume III** of the FEIR contains supporting technical appendices for the DEIR analysis for the overall Florin Vineyard Gap Community Plan Project Area.
- **Volume IV** of the FEIR contains supporting technical appendices for the individual development projects.
- **Volume V** of the FEIR contains Mitigation Monitoring and Reporting Programs for the individual development projects.

Volumes I, II and V are available in hard copy, with Volumes III and IV attached in CD format. All volumes will be available electronically, beginning October 15, 2010, at:
http://www.dera.saccounty.net/tabid/71/Default.aspx?ProjectID=32642

Sincerely,

Joyce Horizumi
Environmental Coordinator

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COUNTY OF SACRAMENTO
INTER-OFFICE CORRESPONDENCE

August 31, 2010
Board Date: TBD

TO: BOARD OF SUPERVISORS

FROM: CELIA CORONADO, Secretary CGC
County Planning Commission

SUBJECT: **04-RZB–PMR-ABE-0139** - (VINEYARD / BOSCHEE)
REZONE, TENTATIVE PARCEL MAP AND ABANDONMENT
(Approval by the Planning Commission is a recommendation only. Final Adoption is by the Board of Supervisors.)
TAYLOR/VILLAGE-SACRAMENTO INVESTMENTS - Engineer: TSD Engineering, Incorporated - Engineer: Edward Gillum - located at northeast corner of Elk Grove-Florin Road and Gerber Road (8915 Gerber Road), in the Vineyard community.

The County Planning Commission, meeting in regular session on August 23, 2010, voted unanimously to make the following recommendations on the above referenced matter:

REZONE

Recommend approval of a Rezone of approximately 18.4 acres from AR-10 (Agricultural-Residential) and AR-10(F) (Agricultural-Residential Flood Combining) to SC (Shopping Center)., subject to the findings and conditions as outlined in Addendum No. 1.

TENTATIVE PARCEL MAP

Recommend approval of a Tentative Parcel Map to divide an approximately 18.4 gross acre parcel into five (5) parcels: Parcel 1 at approximately 12.52 gross acres, Parcel 2 at approximately 1.78 gross acres, Parcel 3 at approximately 1.20 gross acres, Parcel 4 at approximately .82 gross acres, and Parcel 5 at approximately .13 gross acres, subject to the findings and conditions as outlined in Addendum No. 1.

ABANDONMENT

Recommend approval of an Abandonment of excess right-of-way along Elk Grove Florin Road and Gerber Road, subject to the findings recommended by staff.

The Commission determined the Draft Environmental Impact Report to be adequate and complete and recommends adoption of the Mitigation Monitoring and Reporting Program.

CGC:am

cc: In-house

COUNTY OF SACRAMENTO
INTER-OFFICE CORRESPONDENCE

August 31, 2010
Board Date: TBD

TO: BOARD OF SUPERVISORS

FROM: CELIA CORONADO, Secretary CGC
County Planning Commission

SUBJECT: **2004-RZB-0143** - (SOUTH SACRAMENTO / BOSCHEE)
REZONE
(Approval by the Planning Commission is a recommendation only. Final Adoption is by the Board of Supervisors.)
MARVIN L. OATES, ET AL - Applicant/Developer: Buzz Oates Construction - located on the southwest corner of Florin Road and Elk Grove-Florin Road, in the South Sacramento community.

The County Planning Commission, meeting in regular session on August 23, 2010, voted unanimously to make the following recommendations on the above referenced matter:

REZONE

Recommend approval of a Rezone of approximately 6.63 acres from A-10 (Agricultural Holding Zone) to SC (Shopping Center Zone), subject to the findings and conditions recommended by staff, as amended in the Planning Department memo dated August 9, 2010.

The Commission determined the Draft Environmental Impact Report to be adequate and complete and recommends adoption of the Mitigation Monitoring and Reporting Program.

CGC:am

cc: In-house

COUNTY OF SACRAMENTO
INTER-OFFICE CORRESPONDENCE

August 30, 2010
Board Date: TBD

TO: BOARD OF SUPERVISORS

FROM: CELIA CORONADO, Secretary
County Planning Commission

SUBJECT: **04-RZB-SDP-SPP-AHS-0187** - (SOUTH SACRAMENTO / SINGH)
REZONE, TENTATIVE SUBDIVISION MAP, SPECIAL DEVELOPMENT PERMIT, AND AN AFFORDABLE HOUSING PLAN
(Approval by the Planning Commission is a recommendation only. Final Adoption is by the Board of Supervisors.)
JACK LIEBAU - Engineer: MacKay & Somps - located on the west side of Elk Grove-Florin Road approximately 500 feet north of Gerber Road, in the South Sacramento community.

The County Planning Commission, meeting in regular session on August 23, 2010, voted unanimously to make the following recommendations to your Board:

REZONE

Recommend approval of the Rezone of approximately 30.3 gross acres from A-10 (Agricultural), and A-10 (F), to RD-4 (Residential, approximately 15.3 acres) and RD-7 (Residential, approximately 15.0 acres), subject to the findings and conditions recommended by staff, as amended in the Planning Department memo dated August 23, 2010.

TENTATIVE SUBDIVISION MAP

Recommend approval of a Tentative Subdivision Map to divide the 30.3 acres into 184 residential lots (24 half-plex lots and 160 single-family lots) and two landscape lots, subject to the findings and conditions recommended by staff, as amended in the Planning Department memo dated August 23, 2010.

SPECIAL DEVELOPMENT PERMIT

Recommend approval of a Special Development Permit to allow deviations from the lot size, width and setback standards.

Recommend approval of a Special Development Permit to allow an affordable housing density bonus of 24 lots as permitted by the Affordable Housing Ordinance to off-set those units lost to affordable housing.

AFFORDABLE HOUSING PLAN

Recommend approval of the Affordable Housing Plan consisting of on-site construction of affordable units dispersed throughout the project.

The Commission determined the Draft Environmental Impact Report to be adequate and complete and recommends adoption of the Mitigation Monitoring and Reporting Program.

CGC:am

cc: In-house

COUNTY OF SACRAMENTO
INTER-OFFICE CORRESPONDENCE

June 2, 2010
Board Date: TBD

TO: BOARD OF SUPERVISORS

FROM: CELIA CORONADO, Secretary
County Planning Commission

SUBJECT: **2004-RZB-PMR-0204** - (VINEYARD / MICHELINI)
REZONE AND TENTATIVE PARCEL MAP
(Approval by the Planning Commission is a recommendation only. Final Adoption is by the Board of Supervisors)
TAYLOR/VILLAGE-SACRAMENTO INVESTMENTS - Applicant: Edward R. Gillum - Engineer: Mackay And Somps - Developer: Taylor Properties - located on the northeast corner of Bradshaw Road and Florin Road in the Vineyard community.

The County Planning Commission, meeting in regular session on May 24, 2010, considered the contents of the Draft Environmental Impact Report and voted 4 to 1 (Commissioner Debbs voted no) to make the following recommendations to your Board:

REZONE

Recommend approval of a Rezone to change the zoning of 47.4 gross acres (44.1 net acres) from the AG-80 (Agricultural) zone to the SC (Shopping Center) zone, subject to the findings and conditions as outlined in Addendum No. 1

TENTATIVE PARCEL MAP

Recommend approval of a Tentative Parcel Map to subdivide 47.4 gross acres (44.1 net acres) into four (4) lots, subject to the findings and conditions as outlined in Addendum No. 1.

The Commission recommends adoption of the Mitigation Monitoring and Reporting Program.

CC:am

cc: In-house

COUNTY OF SACRAMENTO
INTER-OFFICE CORRESPONDENCE

June 2, 2010
Board Date: TBD

TO: BOARD OF SUPERVISORS

FROM: CELIA CORONADO, Secretary
County Planning Commission

SUBJECT: **2004-RZB-SDP-AHS-0205** - (VINEYARD / MICHELINI)
REZONE, TENTATIVE SUBDIVISION MAP AND AFFORDABLE HOUSING PLAN
(Approval by the Planning Commission is a recommendation only. Final Adoption is by the Board of Supervisors)
THURMAN R. FLATT TRUST - Applicant: Anthony Scotch - Engineer: Baker- William Engineering Group - located on the west side of Bradshaw Road, approximately 900 feet of north of the Central California Traction Railroad crossing in the Vineyard community.

The County Planning Commission, meeting in regular session on May 24, 2010, considered the contents of the Draft Environmental Impact Report and voted unanimously to make the following recommendations to your Board:

REZONE

Recommend approval of a Rezone of approximately 9.48 acres from the AR-10 (Agricultural-Residential) zone to the RD-5 (Residential) zone, subject to the findings and conditions as outlined in Addendum No. 3, amended as follows:

Condition No. 45 amended as follows:

The District will accept the 25-foot-wide landscape corridor lots along Bradshaw Road. The landscape corridors shall be dedicated to the District as a gift and shall be fully developed by the developer with plans and specifications to be approved by the District and pursuant to current County Standards. The District requires 6-foot high masonry soundwalls for all lots that back-up or side-on to the landscape corridor. All masonry soundwalls shall be treated with graffiti-resistant coating and the design approved by the District. Landscape corridors shall have a detached 6-foot wide concrete sidewalk with vertical curb and ADA compliant street

crossings on all corners. A Type 3 curb is required at the back of sidewalks for landscaped areas (except turf). The irrigation system shall be installed according to specifications provided by the District. The District does not require subdivision entrance lighting but requests the installation of conduit to an electric box within the landscape corridor for future installation of lighting, should it become necessary. The District shall accept the completed landscape corridor lot after it has passed inspections and received a clear title report. The District shall maintain the landscape corridor through assessment district proceeds *(Southgate Recreation & Park District)*.

TENTATIVE SUBDIVISION MAP

Recommend approval of a Tentative Subdivision Map to divide 9.48-acre parcel into forty-seven (47) single-family lots, subject to the findings and conditions as outlined in Addendum No. 2, amended as follows:

Condition No. 57 amended as follows:

The District will accept the 25-foot-wide landscape corridor lots along Bradshaw Road. The landscape corridors shall be dedicated to the District as a gift and shall be fully developed by the developer with plans and specifications to be approved by the District and pursuant to current County Standards. The District requires 6-foot high masonry soundwalls for all lots that back-up or side-on to the landscape corridor. All masonry soundwalls shall be treated with graffiti-resistant coating and the design approved by the District. Landscape corridors shall have a detached 6-foot wide concrete sidewalk with vertical curb and ADA compliant street crossings on all corners. A Type 3 curb is required at the back of sidewalks for landscaped areas (except turf). The irrigation system shall be installed according to specifications provided by the District. The District does not require subdivision entrance lighting but requests the installation of conduit to an electric box within the landscape corridor for future installation of lighting, should it become necessary. The District shall accept the completed landscape corridor lot after it has passed inspections and received a clear title report. The District shall maintain the landscape corridor through assessment district proceeds *(Southgate Recreation & Park District)*.

AFFORDABLE HOUSING PLAN

Recommend approval of an Affordable Housing Plan consisting of the payment of fees.

The Commission recommends adoption of the Mitigation Monitoring and Reporting Program.

CC:am

cc: In-house

COUNTY OF SACRAMENTO
INTER-OFFICE CORRESPONDENCE

August 31, 2010
Board Date: TBD

TO: BOARD OF SUPERVISORS

FROM: CELIA CORONADO, Secretary CGC
County Planning Commission

SUBJECT: **2004-RZB-SDP-AHS-0206** - (SOUTH SACRAMENTO / BOSCHEE)
REZONE, TENTATIVE SUBDIVISION MAP AND AFFORDABLE HOUSING PLAN
(Approval by the Planning Commission is a recommendation only. Final Adoption is by the Board of Supervisors.)
JOSEPH AND TENNYE PETTINATO - Applicant/Developer: Stumbos And Company - Engineer: Mackay And Somps - located on the west side of Elk Grove-Florin Road, approximately 1,800 feet north of Gerber Road, in the South Sacramento community.

The County Planning Commission, meeting in regular session on August 23, 2010, voted unanimously to make the following recommendations on the above referenced matter:

REZONE

Recommend approval of a Rezone of approximately 9.8 acres from AR-10 (Agricultural-Residential) to RD-7 (Residential), subject to the findings and conditions as outlined in Addendum No. 1, as amended in the Planning Department memo dated August 9, 2010.

TENTATIVE SUBDIVISION MAP

Recommend approval of a Tentative Subdivision Map to divide approximately 9.8 gross acres into sixty-two (62) dwelling units, subject to the findings and conditions as outlined in Addendum No. 1, as amended in the Planning Department memo dated August 9, 2010.

AFFORDABLE HOUSING PLAN

Recommend approval of an Affordable Housing Plan consisting of the payment of in-lieu and affordability fees.

The Commission determined the Draft Environmental Impact Report to be adequate and complete and recommends adoption of the Mitigation Monitoring and Reporting Program.

CGC:am

cc: In-house

COUNTY OF SACRAMENTO
INTER-OFFICE CORRESPONDENCE

June 2, 2010
Board Date: TBD

TO: BOARD OF SUPERVISORS

FROM: CELIA CORONADO, Secretary
County Planning Commission

SUBJECT: **2004-RZB–SDP–SPP–ABE–AHS-0207** - (VINEYARD AND SOUTH SACRAMENTO / SINGH)
REZONE, TENTATIVE SUBDIVISION MAP, SPECIAL DEVELOPMENT PERMIT, ABANDONMENT, AND AFFORDABLE HOUSING PLAN
(Approval by the Planning Commission is a recommendation only. Final Adoption is by the Board of Supervisors.)
VILLAGE CAPITOL GROUP, LLC - Engineer: Mackay And Somps - located at the northeast corner of Florin Road and Gardner Avenue, and also on both sides of South Watt Avenue, approximately 1,300 feet north of Florin Road, in the Vineyard and South Sacramento Community Planning Area.

The County Planning Commission, meeting in regular session on May 24, 2010, considered the contents of the Draft Environmental Impact Report and voted unanimously to make the following recommendations to your Board:

REZONE

Recommend approval of a Rezone of approximately 101.6 gross acres from A-10 (Agricultural) and IR (Industrial Reserve) to RD-2 (Residential), 26.7 acres; RD-4 (Residential), 16.8 acres; RD-5 (Residential), 28.2 acres; RD-7 ((Residential), 12.9 acres; RD-20 (Residential), 9.5 acres; and O (Recreation), 7.5 acres, for a park site, subject to the findings and conditions as outlined in Addendum No. 1, amended as follows:

Condition No. 104 added to read:

An 8-foot masonry wall shall be constructed along the western edge of the project site (i.e. along proposed lots #347 to #363).

Condition No. 105 added to read:

A 25 foot rear building setback shall be maintained for all lots proposed along the western property line (i.e., for proposed lots #347 to #363)

TENTATIVE SUBDIVISION MAP

Recommend approval of a Tentative Subdivision Map to divide approximately 101.6 gross acres into 372 single-family residential lots, one (1) multiple-family affordable residential lot, one (1) church lot, one (1) park site lot, and two (2) landscape corridor lots. Included on the Map are requests for abandonment of easement(s) , subject to the findings and conditions as outlined in Addendum No. 1, amended as follows:

Condition No. 75 added to read:

An 8-foot masonry wall shall be constructed along the western edge of the project site (i.e. along proposed lots #347 to #363).

Condition No. 76 added to read:

A 25 foot rear building setback shall be maintained for all lots proposed along the western property line (i.e., for proposed lots #347 to #363)

SPECIAL DEVELOPMENT PERMIT

Recommend approval of a Special Development Permit to allow deviations from the lot size and width standards applicable to lots created in the RD-4 (Residential) , RD-5 (Residential) and RD-7 (Residential) zones.

Recommend approval of a Special Development Permit to allow an affordable housing density bonus of 84 single-family lots as permitted by the Affordable Housing Ordinance to off-set those units lost to affordable housing.

EXCEPTION

Recommend approval of an Exception to Title 22 to allow lots less than 95 feet deep and to allow the depth of the lots to exceed three times its width.

AFFORDABLE HOUSING PLAN

Recommend approval of an Affordable Housing Plan with options for construction of onsite rental multi-family units or land dedication.

The Commission recommends adoption of the Mitigation Monitoring and Reporting Program.

CC:am

cc: In-house

COUNTY OF SACRAMENTO
INTER-OFFICE CORRESPONDENCE

August 31, 2010
Board Date: TBD

TO: BOARD OF SUPERVISORS

FROM: CELIA CORONADO, Secretary
County Planning Commission

SUBJECT: **04-RZB-SDP-SPP-EXP-AHS-0208** - (VINEYARD/SINGH)
REZONE, TENTATIVE SUBDIVISION MAP, LARGE LOT TENTATIVE SUBDIVISION MAP, SPECIAL DEVELOPMENT PERMITS, EXCEPTION AND AFFORDABLE HOUSING PLAN
(Approval by the Planning Commission is a recommendation only. Final Adoption is by the Board of Supervisors.)

EGF HOLDINGS LLC / LK DEV ONE, LLC - Engineer: MacKay & Somps - located on the west side of Hedge Avenue approximately 1,400 feet south of Florin Road, in the Vineyard community planning area.

The County Planning Commission, meeting in regular session on August 23, 2010, determined the contents of the Draft Environmental Impact Report and voted unanimously to make the following recommendations to your Board:

REZONE

Recommend approval of the Rezone of approximately 86.3 gross acres from AR-10 (Agricultural-Residential), AR-10F (Agricultural-Residential - Flood Combining) and AR-2 (Agricultural-Residential) to RD-5 (Residential), RD-7 (Residential), RD-10 (Residential), RD-20 (Residential) and O (Open Space), subject to the findings and conditions recommended by staff and amended as follows:

Condition No. 4 (d) amended to read:

Maintenance, paint, repair, and eventual replacement of all other residential dwelling improvements including exterior surfaces by the

Association in accordance with the maintenance manual provided by the developers to initial purchasers.

Condition No. 79 amended to read:

The property owners shall comply with the applicable provisions of Ordinance No. SCC _____ An Ordinance Specifying Thresholds of Development Within The Florin Vineyard Community Plan For The Concurrent Construction Of Phased Traffic Mitigation Improvements And Logical Roadway Segments.

a. As noted in Exhibit 1 of said Ordinance, non-residential development projects within the Florin Vineyard Community Plan (FVCP) area are not subject to the roadway phasing requirements, but are required to contribute appropriately to meeting FVCP traffic mitigation obligations through construction of onsite roadway improvements as specified in project conditions of approval and by payment of Florin Vineyard Fee Program roadway fees.

b. The following applies if residential development occurs on the site. The conditions listed in Exhibit 1 of said Ordinance implement the mitigation measures identified in the Final EIR for the Florin Vineyard Community Plan that are necessary to relieve the identified traffic and circulation impacts. Some of the traffic mitigation roadway improvements must be constructed prior to the development of the specified cumulative total number of residential units created within the Florin Vineyard Community Plan. The Board of Supervisors may approve final subdivision maps or improvement plans for residential sites within the Florin Vineyard Community Plan above the cumulative total thresholds, if it determines that said roadway improvements are expected to be completed prior to traffic being generated by said determined number of residential units and that development of more than the designated number of residential units will not result in unacceptable traffic congestion or safety problems. Any traffic studies required by the County in support of a determination shall be paid for by the residential Developer.

Condition No. 79 (c) deleted

LARGE LOT TENTATIVE SUBDIVISION MAP

Recommend approval of the Large Lot Tentative Subdivision Map to divide 86.3 gross acres into 11 (eleven) lots, subject to the findings and conditions recommended by staff.

TENTATIVE SUBDIVISION MAP

Recommend approval of the Tentative Subdivision Map to divide 86.3 gross acres into 494 single-family lots, 1 (one) RD-10 lot, 1 (one) RD-20 lot, 1 (one) park lot, 2 (two) common area lots, 3 (three) Landscape lots and 1 (one) water quality treatment lot, subject to the findings and conditions recommended by staff and amended as follows:

Condition No. 4 (d) amended to read:

Maintenance, paint, repair, and eventual replacement of all other residential dwelling improvements including exterior surfaces by the Association in accordance with the maintenance manual provided by the developers to initial purchasers;

Condition No. 122 amended to read:

The property owners shall comply with the applicable provisions of Ordinance No. SCC _____ An Ordinance Specifying Thresholds of Development Within The Florin Vineyard Community Plan For The Concurrent Construction Of Phased Traffic Mitigation Improvements And Logical Roadway Segments.

a. As noted in Exhibit 1 of said Ordinance, non-residential development projects within the Florin Vineyard Community Plan (FVCP) area are not subject to the roadway phasing requirements, but are required to contribute appropriately to meeting FVCP traffic mitigation obligations through construction of onsite roadway improvements as specified in project conditions of approval and by payment of Florin Vineyard Fee Program roadway fees.

b. The following applies if residential development occurs on the site. The conditions listed in Exhibit 1 of said Ordinance implement the mitigation measures identified in the Final EIR for the Florin Vineyard Community Plan that are necessary to relieve the identified traffic and circulation impacts. Some of the traffic mitigation roadway improvements must be constructed prior to the development of the specified cumulative total number of residential units created within the Florin Vineyard Community Plan. The Board of Supervisors may

approve final subdivision maps or improvement plans for residential sites within the Florin Vineyard Community Plan above the cumulative total thresholds, if it determines that said roadway improvements are expected to be completed prior to traffic being generated by said determined number of residential units and that development of more than the designated number of residential units will not result in unacceptable traffic congestion or safety problems. Any traffic studies required by the County in support of a determination shall be paid for by the residential Developer.

Condition No. 122 (c) deleted

SPECIAL DEVELOPMENT PERMITS

Recommend approval of the Special Development Permit to reduce the RD-5 (Residential) and RD-7 (Residential) zone lot area, lot width and public street frontage requirements.

Recommend approval of the Special Development Permit to reduce the required single-family residential front, side, and rear setback requirements.

Recommend approval of the Special Development Permit to allow an affordable housing density bonus of 87 single-family lots as permitted by the Affordable Housing Ordinance to off-set those units lost to affordable housing.

EXCEPTION

Recommend approval of the Exception from Title 22 of the Sacramento County Land Development Ordinance to allow lots less than 95 feet in depth.

AFFORDABLE HOUSING PLAN

Recommends adoption of the Affordable Housing Plan consisting of OFF-SITE construction OR dedication of land.

The Commission recommends adoption of the Mitigation Monitoring and Reporting Program.

CC:kr

Cc: In-house
Owner/Applicant
Engineer

COUNTY OF SACRAMENTO
INTER-OFFICE CORRESPONDENCE

August 31, 2010
Board Date: TBD

TO: BOARD OF SUPERVISORS

FROM: CELIA CORONADO, Secretary
County Planning Commission

SUBJECT: **04-RZB-PMR-0209** - (VINEYARD/BOSCHEE)
REZONE AND TENTATIVE PARCEL MAP
(Approval by the Planning Commission is a recommendation only. Final Adoption is by the Board of Supervisors.)

CHESAPEAKE INVESTMENT COMPANY LLC - Developer/Applicant: Petrovich Development Company - located on the southeast corner of Gerber Road and Elk Grove-Florin Road, in the Vineyard community.

The County Planning Commission, meeting in regular session on August 23, 2010, determined the Draft Environmental Impact Report as adequate and complete and voted 4-0 (Commissioner Peterson recused himself) to recommend approval of the following requests:

REZONE

Recommend approval of the Rezone of approximately 37 acres from AR-10 (Agricultural-Residential) to SC (Shopping Center) (37 acres), subject to the findings and conditions recommended by staff and amended as follows:

Condition No. 13 amended to read:

Dedicate additional right-of-way for intersection widening at Gerber Road and the proposed signalized driveway and install improvements (which may include signal poles, conduit, detector loops, new audible pedestrian signal heads and ADA compliant pedestrian push buttons throughout the intersection, etc.) for a signalized intersection pursuant to the Sacramento County Improvement Standards and to the satisfaction of the Department of Transportation. Note: sufficient pavement width shall be provided at this intersection for west bound U-turn capabilities.

Condition No. 15 amended to read:

Connection to the Sacramento Area Sewer District's (SASD) sewer system shall be required to the satisfaction of SASD. SASD Design Standards apply to any on and off-site sewer construction.

Condition No. 16 amended to read:

Each lot and each building with a sewage source shall have a separate connection to the SASD sewer system. If there is more than one building in any single parcel and the parcel is not proposed for split, then each building on that parcel shall have a separate connection to a private on-site sewer line or SASD public sewer line.

Condition No. 75 added to read:

Projects within the FVCP that front on the roadways listed in Table A-1 shall be subject to the requirements of the County policy concerning discontinuous roadway frontage improvements ("sawtooth"). Projects subject to these requirements shall install roadway frontage improvements along logical segments of at least one-quarter mile in length, including the project's frontage. If the length of the project's conditioned on-site frontage improvements on a single roadway is equal to or greater that on-quarter mile, then the project will be deemed to have satisfied the logical segment condition for that roadway. If the project's on-site frontage improvements are less than one-quarter mile in length, the project shall install additional off-site frontage improvements in order to satisfy the logical segment condition. The location and limits of such off-site frontage improvements will be determined at the time of improvement plan approval and to the satisfaction of the Department of Transportation. Off-site frontage improvements shall include the construction of the outside travel lane, bike lane, and a six foot paved pedestrian walkway separated from the roadway by a roadside ditch. For thoroughfare roadways (ultimate six lanes) that are to the developed to an interim four-lane configuration, off-site frontage improvements shall consist of the second travel lane, bike lane and six-foot paved pedestrian walkway separated from the roadway by a roadside ditch. Projects that front on more than one of the roadways listed in Table A-1 (including corner lots) shall be responsible for meeting the logical segment condition on each fronting roadway.

Table A-1: Florin Vineyard Community Plan Roadways Subject to Logical Segments:

- Bradshaw Road
- Elder Creek Road
- Elk Grove-Florin Road
- Gerber Road
- Florin Road
- South Watt Avenue
- Waterman Road

TENTATIVE PARCEL MAP

A Tentative Parcel Map to divide approximately 37 acres into seven (7) parcels, subject to the findings and conditions recommended by staff and amended as follows:

Condition No. 29 amended to read:

Dedicate additional right-of-way for intersection widening at Gerber Road and the proposed signalized driveway and install improvements (which may include signal poles, conduit, detector loops, new audible pedestrian signal heads and ADA compliant pedestrian push buttons throughout the intersection, etc.) for a signalized intersection pursuant to the Sacramento County Improvement Standards and to the satisfaction of the Department of Transportation. Note: sufficient pavement width shall be provided at this intersection for west bound U-turn capabilities.

Condition No. 31 amended to read:

Connection to the Sacramento Area Sewer District's (SASD) sewer system shall be required to the satisfaction of SASD. SASD Design Standards apply to any on and off-site sewer construction.

Condition No. 32 amended to read:

Each lot and each building with a sewage source shall have a separate connection to the SASD sewer system. If there is more than one building in any single parcel and the parcel is not proposed for split, then each building on that parcel shall have a separate connection to a private on-site sewer line or SASD public sewer line.

Condition No. 81 added to read:

Projects within the FVCP that front on the roadways listed in Table A-1 shall be subject to the requirements of the County policy concerning

discontinuous roadway frontage improvements ("sawtooth"). Projects subject to these requirements shall install roadway frontage improvements along logical segments of at least one-quarter mile in length, including the project's frontage. If the length of the project's conditioned on-site frontage improvements on a single roadway is equal to or greater that on-quarter mile, then the project will be deemed to have satisfied the logical segment condition for that roadway. If the project's on-site frontage improvements are less than one-quarter mile in length, the project shall install additional off-site frontage improvements in order to satisfy the logical segment condition. The location and limits of such off-site frontage improvements will be determined at the time of improvement plan approval and to the satisfaction of the Department of Transportation. Off-site frontage improvements shall include the construction of the outside travel lane, bike lane, and a six foot paved pedestrian walkway separated from the roadway by a roadside ditch. For thoroughfare roadways (ultimate six lanes) that are to the developed to an interim four-lane configuration, off-site frontage improvements shall consist of the second travel lane, bike lane and six-foot paved pedestrian walkway separated from the roadway by a roadside ditch. Projects that front on more than one of the roadways listed in Table A-1 (including corner lots) shall be responsible for meeting the logical segment condition on each fronting roadway.

Table A-1: Florin Vineyard Community Plan Roadways Subject to Logical Segments:

- Bradshaw Road
- Elder Creek Road
- Elk Grove-Florin Road
- Gerber Road
- Florin Road
- South Watt Avenue
- Waterman Road

The Commission recommends adoption of the Mitigation Monitoring and Reporting Program.

CC:kr

Cc: In-house
Developer/Applicant
Owner

COUNTY OF SACRAMENTO
INTER-OFFICE CORRESPONDENCE

August 31, 2010
Board Date: TBD

TO: BOARD OF SUPERVISORS

FROM: CELIA CORONADO, Secretary
County Planning Commission

SUBJECT: **04-RZB-SDP-SPP-AHS-0218** - (SOUTH SACRAMENTO / SINGH)
REZONE, TENTATIVE SUBDIVISION MAP, SPECIAL DEVELOPMENT PERMIT, AND AN AFFORDABLE HOUSING PLAN
(Approval by the Planning Commission is a recommendation only. Final Adoption is by the Board of Supervisors.)
GERRY N. KAMILOS, LLC - Engineer: MacKay and Somps - located on the east side of Gardner Avenue and on the west side of Elk Grove-Florin Road, approximately 500 feet south of Florin Road, in the South Sacramento community.

The County Planning Commission, meeting in regular session on August 23, 2010, voted 5-0 to tentatively recommend approval of the following requests:

REZONE

Recommend approval of a Rezone of approximately 65.4 acres from AR-5 (Agricultural/Residential - approximately 13.7 acres) and A-10 (Agricultural - approximately 51.7 acres) to RD-5 (Residential - approximately 21.8 acres), RD-7 (Residential - approximately 21.5 acres), RD-10 (Residential - approximately15.2 acres), and O (Recreation - approximately 6.9 acres), subject to the findings and conditions recommended by staff, as amended in the Planning Department memo dated August 23, 2010.

TENTATIVE SUBDIVISION MAP

Recommend approval of a Tentative Subdivision Map to divide approximately 65.4 acres into 379 single-family lots, 1 park lot and 4 landscape lots, subject to the findings and conditions recommended by staff, as amended in the Planning Department memo dated August 23, 2010.

SPECIAL DEVELOPMENT PERMIT

Recommend approval of a Special Development Permit to vary lot area and public street frontage in the RD-10 (Residential) zones.

AFFORDABLE HOUSING PLAN

Recommend approval of an Affordable Housing Plan consisting of the purchase of unit credits.

The Commission determined the Draft Environmental Impact Report to be adequate and complete and recommends adoption of the Mitigation Monitoring and Reporting Program.

CGC:am

cc: In-house

COUNTY OF SACRAMENTO
INTER-OFFICE CORRESPONDENCE

June 2, 2010
Board Date: TBD

TO: BOARD OF SUPERVISORS

FROM: CELIA CORONADO, Secretary
County Planning Commission

SUBJECT: **2004-RZB-PMR-ABE-0226** - (VINEYARD / MICHELINI)
REZONE, TENTATIVE PARCEL MAP, AND ABANDONMENT/RELOCATION OF DRAINAGE EASEMENTS
(Approval by the Planning Commission is a recommendation only. Final Adoption is by the Board of Supervisors)
GERBER BRADSHAW SOUTHWEST LP - Applicant/Engineer: Edward Gillum - Developer: Taylor/Village-Sacramento Investments - located at the southwest corner of Bradshaw Road and Gerber Road, in the Vineyard community. (Nottoli)

The County Planning Commission, meeting in regular session on May 24, 2010, considered the contents of the Draft Environmental Impact Report and voted unanimously to make the following recommendations to your Board:

REZONE

Recommend approval of a Rezone of approximately 20 acres from AR-10 (Agricultural-Residential) zone and AR-10(F) (Agricultural-Residential Flood Combining) zone to SC (Shopping Center) zone, subject to the findings and conditions as outlined in Addendum No. 2, amended as follows:

Condition No. 9 amended as follows:

Annex the subject properties to the County of Sacramento, Community Facilities District 2004-2 to support the maintenance of the landscaped medians. The annexation process takes approximately 6 months to complete. Contact Steve Hong 874-5368, Infrastructure Finance Section, Municipal Services Agency to initiate the annexation process. Final map recordation will not be approved until the annexation is complete (Sacramento County Department of Transportation).

Condition No. 36 deleted

Condition No. 47 amended to read:

Adequate funding shall be provided by the applicant to pay for all costs associated with the repair, maintenance and monitoring in perpetuity of the

identified open space in the proposed project through the provision of an endowment (if required by permitting agencies) and/or the designation of funds for this purpose in the financing districts (Southgate Recreation and Park District).

Condition No. 48 amended to read:

This subdivision will be included in the Southgate Recreation & Park District component of the Florin-Vineyard Public Facilities Financing Plan as determined by the Sacramento County Board of Supervisors. 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.

Condition No. 85 added to read:

Connection to SASD's sewer system shall be required to the satisfaction of SASD. SASD Design Standards apply to any on and off-site sewer construction.

Condition No. 86 added to read:

Each parcel with a sewage source shall have a separate connection to SASD public sewer system. If there is more than one building in any single parcel and the parcel is not proposed for split, then each building on that parcel shall have a separate connection to a private on-site sewer line or SASD public sewer line.

Condition No. 87 added to read:

In order to obtain sewer service, construction of both off-site and on-site SASD sewer infrastructure is expected to be required. As per Florin-Vineyard Community Plan Maser Sewer Study this area is expected to flow towards the intersection of Gerber Road and Bradshaw Road. A Level III sewer study may be required if the flow needs to go in a different direction and to account for the flow coming from upstream offsite shed area . If the sewer study is required, it has to be prepared and approved before submission of any improvement plans. Rezone and tentative map recordation can proceed without a sewer study.

Condition No. 88 added to read:

Sewer easements will be required. All sewer easements shall be dedicated to SASD, in a form approved by the District Engineer. All SASD sewer easements shall be at least 20 feet in width and ensure continuous access for installation and maintenance. SASD will provide maintenance only in public right-of-ways and in easements dedicated to SASD.

Condition No. 89 added to read:

The subject property owner(s) and any subsequent buyers shall be responsible for repair and/or replacement of all non-standard and/or enhanced surface treatments of streets and driveways within SASD easements damaged by SASD maintenance and repair operations. This requirement shall be set forth in easement documents and be a covenant running with the land, be the responsibility of successor in interest in future land transfers and divisions and by language approved by SASD.

Condition No. 90 added to read:

SASD requires its sewers to be located a minimum of 10 feet (measured horizontally from edge of pipe to edge of pipe) from all potable water lines. Separation of sewer line from other parallel utilities, such as storm drain and other 'dry' utilities (electrical, telephone, cable, etc.) shall be a minimum of 7 feet (measured horizontally from the center of pipe to the center of pipe). Any deviation from the above separation due to depth and roadway width must be approved by SASD on a case by case basis. Prior to recording the Final Map, the applicant shall prepare a utility plan that will demonstrate that this condition is met.

Condition No. 91 added to read:

All structures along private drives shall have a minimum 10-foot setback (measured horizontally from edge of collector pipe to edge of structure) so that SASD can properly maintain the sewer line.

Condition No. 92 added to read:

Dedicate the Private Drives and the Common Areas as a Public Utility Easement for underground facilities and such underground and aboveground appurtenances and additional areas as required within the Common Areas to provide service as a Public Utility Easement for underground facilities and appurtenances except for those areas where structures are located *(Pacific Gas and Electric Company – PG&E).*

TENTATIVE PARCEL MAP

Recommend approval of a Tentative Parcel Map to divide an approximately 20 acre parcel into six (6) parcels, subject to the findings and conditions as outlined in Addendum No. 2, amended as follows:

Condition No. 19 amended as follows:

Annex the subject properties to the County of Sacramento, Community Facilities District 2004-2 to support the maintenance of the landscaped medians. The

annexation process takes approximately 6 months to complete. Contact Steve Hong 874-5368, Infrastructure Finance Section, Municipal Services Agency to initiate the annexation process. Final map recordation will not be approved until the annexation is complete (Sacramento County Department of Transportation).

Condition No. 29 deleted

Condition No. 59 amended to read:

Adequate funding shall be provided by the applicant to pay for all costs associated with the repair, maintenance and monitoring in perpetuity of the identified open space in the proposed project through the provision of an endowment (if required by permitting agencies) and/or the designation of funds for this purpose in the financing districts (Southgate Recreation and Park District).

Condition No. 60 amended to read:

This subdivision will be included in the Southgate Recreation & Park District component of the Florin-Vineyard Public Facilities Financing Plan as determined by the Sacramento County Board of Supervisors. 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.

Condition No. 85 added to read:

Connection to SASD's sewer system shall be required to the satisfaction of SASD. SASD Design Standards apply to any on and off-site sewer construction.

Condition No. 96 added to read:

Each parcel with a sewage source shall have a separate connection to SASD public sewer system. If there is more than one building in any single parcel and the parcel is not proposed for split, then each building on that parcel shall have a separate connection to a private on-site sewer line or SASD public sewer line.

Condition No. 97 added to read:

In order to obtain sewer service, construction of both off-site and on-site SASD sewer infrastructure is expected to be required. As per Florin-Vineyard Community Plan Maser Sewer Study this area is expected to flow towards the intersection of Gerber Road and Bradshaw Road. A Level III sewer study may be required if the flow needs to go in a different direction and to account for the flow coming from upstream offsite shed area . If the sewer study is required, it

has to be prepared and approved before submission of any improvement plans. Rezone and tentative map recordation can proceed without a sewer study.

Condition No. 98 added to read:

Sewer easements will be required. All sewer easements shall be dedicated to SASD, in a form approved by the District Engineer. All SASD sewer easements shall be at least 20 feet in width and ensure continuous access for installation and maintenance. SASD will provide maintenance only in public right-of-ways and in easements dedicated to SASD.

Condition No. 99 added to read:

The subject property owner(s) and any subsequent buyers shall be responsible for repair and/or replacement of all non-standard and/or enhanced surface treatments of streets and driveways within SASD easements damaged by SASD maintenance and repair operations. This requirement shall be set forth in easement documents and be a covenant running with the land, be the responsibility of successor in interest in future land transfers and divisions and by language approved by SASD.

Condition No. 100 added to read:

SASD requires its sewers to be located a minimum of 10 feet (measured horizontally from edge of pipe to edge of pipe) from all potable water lines. Separation of sewer line from other parallel utilities, such as storm drain and other 'dry' utilities (electrical, telephone, cable, etc.) shall be a minimum of 7 feet (measured horizontally from the center of pipe to the center of pipe). Any deviation from the above separation due to depth and roadway width must be approved by SASD on a case by case basis. Prior to recording the Final Map, the applicant shall prepare a utility plan that will demonstrate that this condition is met.

Condition No. 101 added to read:

All structures along private drives shall have a minimum 10-foot setback (measured horizontally from edge of collector pipe to edge of structure) so that SASD can properly maintain the sewer line.

Condition No. 102 added to read:

Dedicate the Private Drives and the Common Areas as a Public Utility Easement for underground facilities and such underground and aboveground appurtenances and additional areas as required within the Common Areas to provide service as a Public Utility Easement for underground facilities and appurtenances except for those areas where structures are located *(Pacific Gas and Electric Company – PG&E).*

ABANDONMENT

Recommend approval of an Abandonment and Relocation of existing drainage easement(s).

Recommend approval of an Abandonment of right-of-way on Bradshaw Road and Gerber.

The Commission recommends adoption of the Mitigation Monitoring and Reporting Program.

CC:am

cc: In-house

COUNTY OF SACRAMENTO
INTER-OFFICE CORRESPONDENCE

May 18, 2010
Board Date: To Be Determined

TO: BOARD OF SUPERVISORS

FROM: CELIA CORONADO, Secretary
County Planning Commission

SUBJECT: **2004-RZB-SDP-SPP-AHS-0233** - (SACRAMENTO/MICHELINI)
REZONE, TENTATIVE SUBDIVISION MAP, SPECIAL DEVELOPMENT PERMIT, AND AFFORDABLE HOUSING PLAN
CASELMAN PROPERTIES LP - Engineer: Morton And Pitalo - Developer: Carson Development Company - located at the northwest corner of Caselman Road and Elk Grove-Florin Road, in the South Sacramento community.

The County Planning Commission, meeting in regular session on April 26, 2010, voted unanimously to recommend **approval** of the following requests:

REZONE

A Rezone of a total of approximately 50 acres from A-10 (Agricultural-Residential) to RD-5 (Residential)--approximately 30 acres, and to RD-7 (Residential) - approximately 20 acres, subject to findings and conditions recommended by staff and amended as follows:

Amend Condition No. 29 to read:

Based on the 281 **261** single-family lots proposed for this subdivision, the required Quimby parkland dedication would be approximately 4.10 acres. The Southgate Park District is not willing to accept the 2.5-acre park site identified as Lot D. The Park District requests a larger park site of 3-4 acres in order to accommodate joint-use possibilities and allow for incorporation of the basin site with the park site. Southgate is willing to work with the project applicant and Department of Water Resources (DWR) to integrate the design of the water treatment site (Lot C) with the park site (Lot D). Depending on the joint-use potential of the water treatment site and its integration with the park site, the District may or may not require additional park site acreage. The District does not

give Quimby credit for property encumbered or otherwise with restrictions, including land within the 100-yr floodplain.

Prior to final map approval, the Park District shall review the final subdivision map and shall jointly determine final park land dedication requiems and/or in-lieu fees with the Developer and County pursuant to the Subdivision Map Act. (Southgate Parks)

Add Condition No. 62 to read:

Annex the subject properties to the County of Sacramento, Community Facilities District 2004-2 to support the maintenance of the landscaped medians. The annexation process takes approximately six months to complete. Final map recordation will not be approved until the annexation process is complete. (SacDOT)

TENTATIVE SUBDIVISION MAP

A Tentative Subdivision Map to divide approximately 50 acres into 177 single-family lots, 84 half-plex lots, 1 park site lot (Lot D), and 1 treatment basin lot (Lot C), and 2 landscape lots (lots adjacent to Elk Grove-Florin Road), subject to the findings and conditions recommended by staff and amended as follows:

Amend Condition No. 35 to read:

Based on the 281 single-family lots proposed for this subdivision, the required Quimby parkland dedication would be approximately 4.10 acres. The Southgate Park District is not willing to accept the 2.5 acre park site identified as Lot D. The Park District requests a larger park site of 3-4 acres in order to accommodate joint-use possibilities and allow for incorporation of the basin site with the park site. Southgate is willing to work with the project applicant and Department of Water Resources (DWR) to integrate the design of the water treatment site (Lot C) with the park site (Lot D). Depending on the joint-use potential of the water treatment site and its integration with the park site, the District may or may not require additional park site acreage. The District does not give Quimby credit for property encumbered or otherwise with restrictions, including land within the 100-yr floodplain.

Prior to final map approval, the Park District shall review the final subdivision map and shall jointly determine final park land dedication requiems and/or in-lieu fees with the Developer and County pursuant to the Subdivision Map Act. (Southgate Parks)

Add Condition No. 70 to read:

Annex the subject properties to the County of Sacramento, Community Facilities District 2004-2 to support the maintenance of the landscaped medians. The annexation process takes approximately six months to complete. Final map recordation will not be approved until the annexation process is complete. (SacDOT)

SPECIAL DEVELOPMENT PERMIT

A Special Development Permit to deviate from the development standards for minimum lot area and public street frontage for the half-plex lots.

USE PERMIT

A Use Permit to create 84 half-plex lots, subject to the findings and conditions recommended by staff.

AFFORDABLE HOUSING PLAN

An Affordable Housing Plan consisting of on-site construction of affordable lots distributed throughout the project.

The Commission certified the Draft Environmental Impact Report as adequate and complete and recommends adoption of the Mitigation Monitoring and Reporting Program.

CC:kr

cc: In-house
Applicant/Owner
Engineer
Developer

COUNTY OF SACRAMENTO
INTER-OFFICE CORRESPONDENCE

September 15, 2010
(45 Minutes)
Board Date: TBD

TO: BOARD OF SUPERVISORS

FROM: CELIA CORONADO, Secretary
County Planning Commission

SUBJECT: **04-RZB-SDP-AHS-0234** - (SOUTH SACRAMENTO/SINGH)
REZONE, TENTATIVE SUBDIVISION MAP, SPECIAL DEVELOPMENT PERMIT, AFFORDABLE HOUSING PLAN
(Approval by the Planning Commission is a recommendation only. Final Adoption is by the Board of Supervisors.)

MHL INVESTMENTS, INCORPORATED - Engineer: Rose's Engineering - located on the west side of Gardner Avenue, approximately 3,000 feet south of Florin Road, in the South Sacramento community. The property is also located on the south side of Charlemagne Drive, a private street.

The County Planning Commission, meeting in regular session on September 13, 2010, closed the public comment period and directed staff to prepare the Final Environmental Impact Report. The Commission voted unanimously to make the following recommendations to your Board:

REZONE

Recommend approval of a Rezone of approximately 5 acres from AR-5 (Agricultural/Residential) to RD-5 (Single-family Residential), and denied the LC (Limited Commercial), subject to the findings and conditions as outlined in Addendum No. 1, as further amended in the Planning Department memo dated August 13, 2010 as follows:

Condition No. 54 added to read:

The size, number, and location of driveways shall be installed pursuant to the Sacramento County Improvement Standards and to the satisfaction of the Department of Transportation. Driveway locations shall be pursuant to the Sacramento County Improvement Standard Drawing 4-16. Driveway widths of 35 feet shall be provided on the proposed east-west street off of Gardner Avenue.

TENTATIVE SUBDIVISON MAP

Recommend denial of a Tentative Subdivision Map, known as Gardner Country Estates, to divide approximately 5 acres into 26 residential lots (16 single-family lots and 10 half-plex lots), 4 live work lots and one landscaping lot.

SPECIAL DEVELOPMENT PERMIT

Recommend denial of a Special Development Permit to allow an affordable housing density bonus of five single-family lot as permitted by the Affordable Housing Ordinance to off-set those units lost to affordable housing.

Recommend denial of a Special Development Permit to reduce the RD-5 (Single-family Residential) zone lot area, lot width, lot depth and public street frontage requirements.

AFFORDABLE HOUSING PLAN

Recommend denial of an Affordable Housing Plan consisting of on-site construction of affordable housing.

The Commission took no action on the Mitigation Monitoring and Reporting Program.

CC:kr

Cc: In-house
Applicant/Owner
Engineer

COUNTY OF SACRAMENTO
INTER-OFFICE CORRESPONDENCE

August 31, 2010
Board Date: TBD

TO: BOARD OF SUPERVISORS

FROM: CELIA CORONADO, Secretary CGC
County Planning Commission

SUBJECT: **2004-RZB-PMR-EXP-0423** - (VINEYARD / BOSCHEE)
REZONE AND TENTATIVE PARCEL MAP
(Approval by the Planning Commission is a recommendation only. Final Adoption is by the Board of Supervisors)
FELIPE MARTIN - Engineer: Interactive Solutions - The property is located at approximately 330 feet south of Bar Du Lane, approximately 218 feet east of Rogers Road, in the Vineyard community.

The County Planning Commission, meeting in regular session on August 23, 2010, voted unanimously to make the following recommendations on the above referenced matter:

REZONE

Recommend approval of a Rezone of approximately 10 acres from the AR-10 (Agricultural-Residential) zone to the AR-2 (Agricultural-Residential) zone, subject to the findings and conditions as outlined in Addendum No. 3, as amended in the Planning Department Memo dated June 28, 2010.

TENTATIVE PARCEL MAP

Recommend approval of a Tentative Parcel Map to divide a 10-acre parcel into 4 parcels, subject to the findings and conditions as outlined in Addendum No. 3, as amended in the Planning Department Memo dated June 28, 2010.

EXCEPTION

Recommend approval of an Exception from Title 22.24.630(2) (the County Land Development Ordinance) to allow private wells rather than a public water supply, subject to the findings recommended by staff.

The Commission determined the Draft Environmental Impact Report to be adequate and complete and recommends adoption of the Mitigation Monitoring and Reporting Program.

CGC:am

cc: In-house

COUNTY OF SACRAMENTO
INTER-OFFICE CORRESPONDENCE

May 4, 2010

Board Date: July 14, 2010 at 11 AM

TO: BOARD OF SUPERVISORS

FROM: CELIA CORONADO, Secretary
County Planning Commission

SUBJECT: **2004-RZB-PMR-0450** - (VINEYARD/BOSCHE)
REZONE AND TENTATIVE PARCEL MAP
MARIA-TERESA BLACK - located at 9750 Rodgers Road, on the southeast corner of the intersection of Rodgers Road and Bar Du Lane, in the Vineyard community. (Nottoli)

The County Planning Commission, meeting in regular session on April 26, 2010, voted unanimously to recommend **approval** of the following requests:

REZONE

A Rezone of approximately 10 acres from the AR-10 (Agricultural-Residential) zone to the AR-1 (Agricultural-Residential) zone, subject to findings and conditions recommended by staff and amended as follows:

Add Condition No. 39 to read:

Public water and public sewer shall be required for any future land divisions less than two acres in size.

TENTATIVE PARCEL MAP

A Tentative Parcel Map to divide approximately 10 acres into three (3) parcels, subject to the findings and conditions recommended by staff.

EXCEPTION

An Exception from Title 22.24.630(2) (the County Land Development Ordinance) to allow private wells rather than a public water supply.

The Commission certified the Draft Environmental Impact Report as adequate and complete and recommends adoption of the Mitigation Monitoring and Reporting Program.

CC:kr

cc: In-house
Applicant/Owner

COUNTY OF SACRAMENTO
INTER-OFFICE CORRESPONDENCE

August 31, 2010
Board Date: TBD

TO: BOARD OF SUPERVISORS

FROM: CELIA CORONADO, Secretary CGC
County Planning Commission

SUBJECT: **04-RZB-SDP-AHS-0457** - (VINEYARD / SINGH)
REZONE, TENTATIVE SUBDIVISION MAP AND AFFORDABLE HOUSING PLAN
(Approval by the Planning Commission is a recommendation only. Final Adoption is by the Board of Supervisors.)
ISSAC MAGANA - located on the north side of McCoy Avenue, approximately 500 feet east of Elk Grove-Florin Road, in the Vineyard community.

The County Planning Commission, meeting in regular session on August 23, 2010, voted unanimously to make the following recommendations on the above referenced matter:

REZONE

Recommend approval of a Rezone of approximately 8.3 gross acres from AR-2 and AR-5 (Agricultural-Residential) to RD-7 (Residential), subject to the findings and conditions recommended by staff, as amended in the Planning Department memo dated August 9, 2010.

TENTATIVE SUBDIVISION MAP

Recommend approval of a Tentative Subdivision Map to divide the property into fifty-four (54) single-family lots, subject to the findings and conditions recommended by staff, as amended in the Planning Department memo dated August 9, 2010.

AFFORDABLE HOUSING PLAN

Recommend approval of an Affordable Housing Plan consisting of the payment of fees.

The Commission determined the Draft Environmental Impact Report to be adequate and complete and recommends adoption of the Mitigation Monitoring and Reporting Program.

CGC:am

cc: In-house

COUNTY OF SACRAMENTO
INTER-OFFICE CORRESPONDENCE

August 30 2010
Board Date: TBD

TO: BOARD OF SUPERVISORS

FROM: CELIA CORONADO, Secretary
County Planning Commission

SUBJECT: **06-RZB-ABE-0709** - (VINEYARD/BOSCHEE)
REZONE AND ABANDONMENT
(Approval by the Planning Commission is a recommendation only. Final Adoption is by the Board of Supervisors.)

ELK GROVE RESERVE - Applicant: Steven Belzer, Esq. - Engineer: Edward Gillum - located on the northeast corner of Elk Grove-Florin Road and Gerber Road, in the Vineyard community planning area.

The County Planning Commission, meeting in regular session on August 23, 2010, determined the Draft Environmental Impact Report as adequate and complete and voted unanimously to recommend approval of the following requests:

REZONE

Recommend approval of the Rezone of approximately 42.6 gross acres from AR-10 (Agricultural-Residential) and AR-10 (F) (Agricultural-Residential Flood Combining) zoning to RD-5 (Residential), approximately 33.4 gross acres; RD-20 (Residential), approximately 5.0 gross acres; and O (Recreation), approximately 4.2 net acres, subject to the findings and conditions as outlined in Addendum No. 1.

ABANDONMENT

Recommend approval of the Abandonment of excess right-of-way along Elk Grove-Florin Road and Gerber Road, subject to the findings and conditions as outlined in Addendum No. 1.

AFFORDABLE HOUSING PLAN

Recommends adoption of the Affordable Housing Plan (Rezone Only) which requires the applicant/developer to provide a more detailed revised affordable housing plan as part of the submittal of a future subdivision map and other associated entitlements.

The Commission recommends adoption of the Mitigation Monitoring and Reporting Program.

CC:kr

cc: In-house
Owner
Applicant
Engineer

Page: 1

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Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name:

Project Name: Champion Oaks EGR

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO2
2007 TOTALS (lbs/day unmitigated)	9.98	65.19	5,311.84
2008 TOTALS (lbs/day unmitigated)	266.12	83.05	9,181.98

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO2
TOTALS (lbs/day, unmitigated)	1.80	2.47	2,942.71

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO2
TOTALS (lbs/day, unmitigated)	60.47	50.71	40,823.84

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SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO2
TOTALS (lbs/day, unmitigated)	62.27	53.18	43,766.55

JURISDICTIONAL DELINEATION AND SPECIAL STATUS SPECIES EVALUATION

CHAMPION OAK DEVELOPMENT

SACRAMENTO COUNTY, CALIFORNIA

RECEIVED
JUL 23 2007
DEPARTMENT OF ENVIRONMENTAL REVIEW AND ASSESSMENT

SEPTEMBER 2004
Revised September 2005

Prepared For:

LAW OFFICE OF STEPHEN P. BELZER
1201 K Street, Suite 1230
Sacramento, California 95814

Prepared By:

GIBSON & SKORDAL, LLC
Wetland Consultants
2277 Fair Oaks Blvd., Suite 105
Sacramento, California 95825

INTRODUCTION

The purpose of this report is to present the results of a jurisdictional delineation and special status species evaluation conducted for the Champion Oak Development Property.

LOCATION

The study area includes a ± 59.5-acre parcel located south of McCoy Avenue, west of Passalis Lane, and immediately northeast of the intersection of Gerber Road and Elk Grove-Florin Road in the Florin-Vineyard Community Plan development area. It lies in the southwest ¼ of Section 6, Township 7 North, Range 6 East of Sacramento County, California (Latitude 38° 29' North, Longitude 121° 22' West). Figure 1 is a vicinity map.

METHODOLOGY

Field studies were conducted on September 9, 2004 for the purpose of delineating existing waters and wetlands in the study area and evaluating special status species and their habitats.

Jurisdictional Delineation

The boundaries of potential waters and wetlands, data points, and other site features were surveyed in the field by Gibson & Skordal, LLC utilizing a Trimble GPS data logger with sub-meter accuracy. The delineation map was prepared by layering the GPS field data over aerial photography flown in May of 2002 by the United States Geological Survey (USGS).

Mr. Justin Cutler, Regulatory Branch, field verified the property on September 7, 2005. All requested modifications have been incorporated into this report and map.

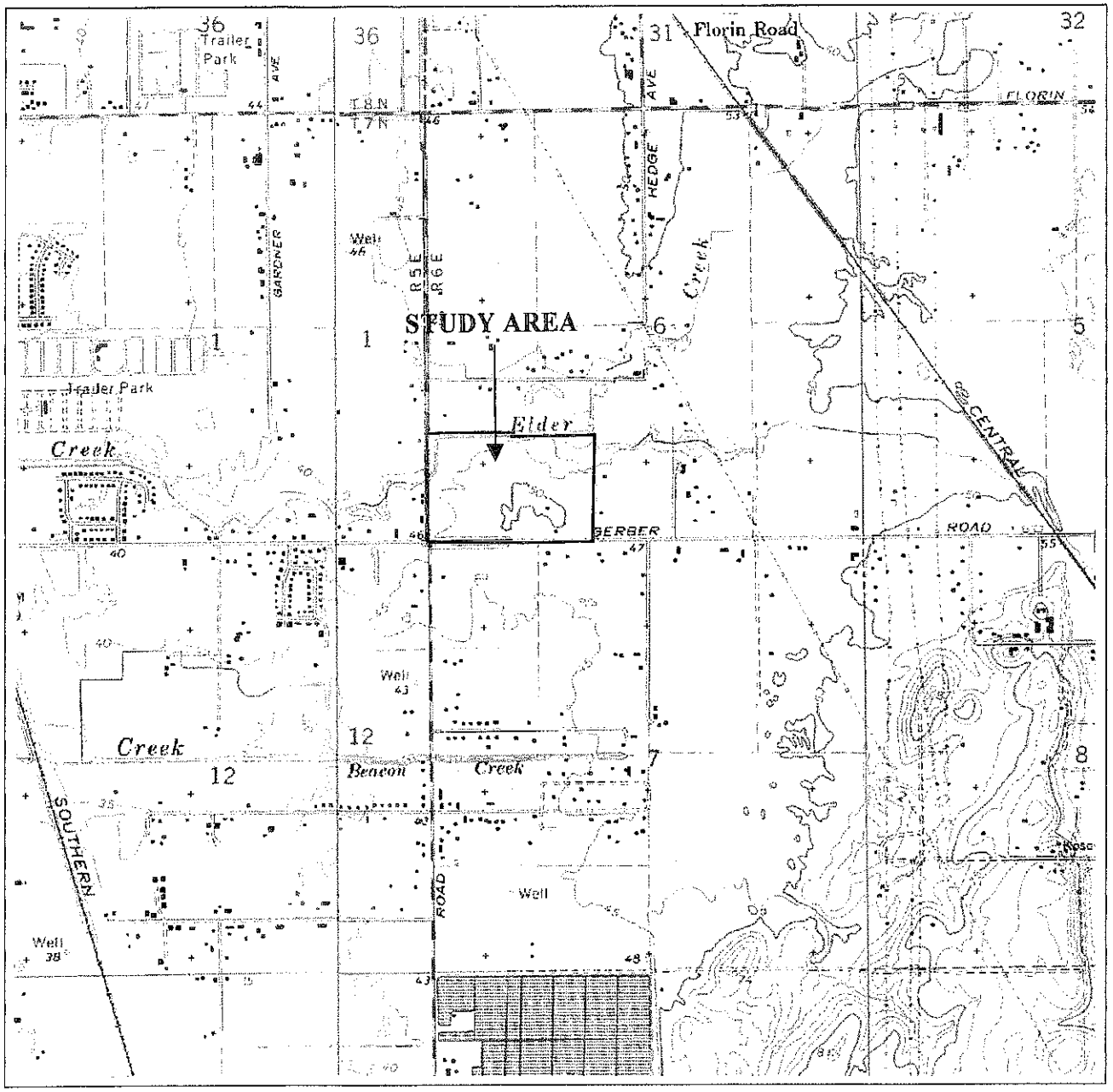
The **"Corps of Engineers Wetlands Delineation Manual"**[1] was used as the standard of determining whether specific areas are wetlands potentially subject to regulation under Section 404 of the Clean Water Act. Corps of Engineers' regulations (33 CFR 328) was used to determine the presence of waters of the United States other than wetlands. The **"National List of Plant Species That Occur in Wetlands: California (Region 0)"**[2] was used to determine the

[1] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station. Vicksburg, Miss.

[2] Reed, P.B. 1988. National List of Plant Species That Occur In Wetlands: California (Region 0). Biological Report 88(26.10). May 1988. National Ecology Research Center, National Wetlands Inventory, U.S. Fish & Wildlife Service, St. Petersburg, Florida.

FIGURE 1

VICINITY MAP



↑
N
(Scale: 1 Inch = 2000 Feet)

Source: Elk Grove 7.5 Minute USGS Topographic Quadrangle

wetland indicator status of plants observed in the study area. The **"Soil Survey of Sacramento County, California"**[3] was used to evaluate soil mapping in the study area.

Detailed data on vegetation, soils, and hydrology characteristics was taken in the field. Data forms documenting the basis for determining which areas are wetland or upland are provided in Appendix A.

Special Status Species Evaluation

The special status species evaluation includes those species identified as having relative scarcity and/or declining populations by the United States Fish & Wildlife Service (USFWS) or California Department of Fish & Game (CDFG). Special status species include those formally listed as threatened or endangered, those proposed for formal listing, candidates for Federal listing, and those considered to be Species of Concern by USFWS or Species of Special Concern by CDFG. In addition to these, we also included those species considered to be "special animals" or "fully protected" by the CDFG and those plant species considered to be rare, threatened or endangered in California by the California Native Plant Society (CNPS).

In our evaluation, we considered those special status species documented by the California Natural Diversity Database (CNDDB) as occurring in the vicinity of the study area. A record search of the CNDDB was conducted for the Elk Grove, Florin, and Carmichael 7.5 Minute USGS quadrangles to identify all documented sightings of special status species in the vicinity of the study area. In addition to these species, we included other special status species that may have some potential for occurring in the study area based on historical range data and/or the presence of suitable habitat.

GENERAL SITE CONDITIONS AND HABITATS

The study area supports the Champions Links Golf Course facility that is generally bounded by existing ranchettes and/or Elder Creek to the north, ranchettes and an access road to the east, Gerber Road to the south, and Elk Grove-Florin Road to the west. The golf course facility includes an executive nine-hole golf course with a driving range, six golf course ponds, and associated clubhouse, pro-shop, and parking facilities.

A majority of the study area is maintained as fairway turf and/or range fairway turf that is sprinkler irrigated and mowed on a regular basis as part of golf course operations. The fairways

[3] USDA, Soil Conservation Service. 1993. Soil Survey of Sacramento County, California.

are generally dominated by Bermuda grass (*Cynodon dactylon*). Other common associates include annual bluegrass (*Poa annua*), dallis grass (*Paspalum dilatatum*), and perennial rye (*Lolium perenne*). Numerous planted trees present along the fairways or in association with the clubhouse facility include California walnut (*Juglans californica*), California sycamore (*Plantanus racemosa*), Fremont cottonwood (*Populus fremontii*), English walnut (*Juglans regia*), arroyo willow (*Salix lasiolepis*), coyote willow (*Salix hindsiana*), and a variety of exotic poplar, pines and other ornamentals.

Soils in the study area are mapped as San Joaquin silt loam, leveled, 0 to 1 percent slopes; and San Joaquin silt loam, 0 to 3 percent slopes. San Joaquin soils are moderately deep, moderately well-drained soils that occur on low terrace features. Although they are not listed as hydric, they do have hydric inclusions in depressions and drainageways. Figure 2 provides a soils map for the site.

JURISDICTIONAL WETLANDS

A total of 2.46 acres of jurisdictional waters and wetlands are located in the study area including 0.63 acre of emergent wetlands, 0.76 acre of golf course ponds, a 0.19 acre channelized drainage, and 0.88 acre of creek channel associated with Elder Creek. Table 1 gives the areas of jurisdictional and non-jurisdictional waters and wetlands by type and reference number. Appendix B provides a delineation map showing the location of waters and wetlands, data points, and the study area boundary. Appendix C provides a list of plant species observed in the study area including their status as wetland indicators.

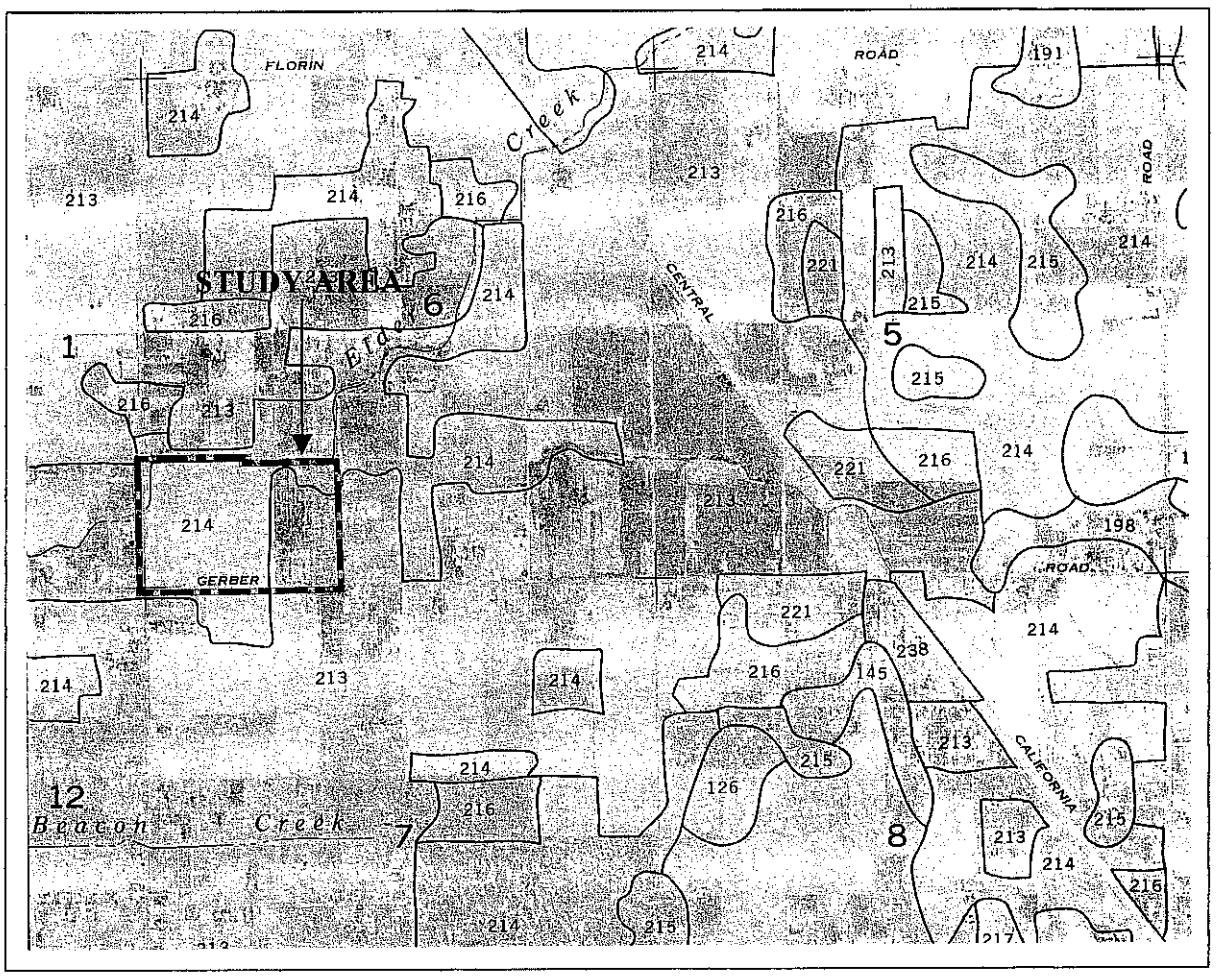
Emergent Wetlands & Ponds

We identified five jurisdictional emergent wetlands (EM1-3, EM5, 6) and two jurisdictional golf course ponds (P1-2) in the study area. A majority of the emergent wetlands and ponds are associated with the golf course and driving range and/or were historically created as part of the Champions Links golf course development project.

The emergent wetlands generally occur in deep defined basins that are heavily augmented by fairway run-off and irrigation run-off generated by the golf course. As a result, they sustain long-term ponding conditions that persist for most, if not all, of the growing season. EM1-EM3 generally sustain marsh habitat dominated by cattails (*Typha spp.*). Other common associates include floating primrose (*Ludwigia peploides*), tall flatsedge (*Cyperus eragrostis*), dallis grass (*Paspalum dilatatum*), bearded sprangle-top (*Leptochloa fascicularis*), smartweed (*Polygonum sp.*), and willow-herb (*Epilobium sp.*). EM5 occurs within a sloping depression along the

FIGURE 2

SOILS MAP



Soil Unit	Soil Name	Soil Classification	Drainage Class
213	San Joaquin silt loam, leveled, 0-1% slopes	Abruptic Durixeralfs	moderately well drained
214	San Joaquin silt loam, 0-3% slopes	Abruptic Durixeralfs	moderately well drained

Source: USDA, Soil Conservation Service. 1993. Soil Survey of Sacramento County, California

TABLE 1

WATERS AND WETLANDS IDENTIFIED ON THE CHAMPION OAK DEVELOPMENT PROPERTY

Emergent Wetlands:

Jurisdictional

Ref. #	Area (Sq.Ft.)
EM1	903
EM2	1,258
EM3	1,296
EM5	23,723
EM6	288
Total =	27,468 Sq. Ft. or 0.63 Acre

Non-Jurisdictional

Ref #	Area (Sq.Ft.)
EM4	1,613
Total =	1,613 Sq.Ft. or 0.04 Acre

Golf Course Ponds:

Jurisdictional

Ref. #	Area (Sq.Ft.)
P1	25,449
P2	7,589
Total =	90,325 Sq. Ft. or 2.07 Acres

Non-Jurisdictional

Ref. #	Area (Sq.Ft.)
P3	10,643
P4	26,827
P5	1,196
P6	18,621
Total =	57,287 Sq.Ft. or 1.32 Acres

Elder Creek (Jurisdictional): = 38,545 Sq. Ft. or 0.88 Acre

Channelized Drainage - CH1 (Jurisdictional): = 8,275 Sq. Ft. or 0.19 Acre

TOTAL JURISDICTIONAL WATERS AND WETLANDS = 2.46 Acres

TOTAL NON-JURISDICTIONAL WATERS AND WETLANDS = 1.36 Acres

northern boundary that functions as a drainage swale for the golf course. It supports emergent wetland habitat similar to EM1-EM3, but it also supports a riparian scrub component that includes arroyo willow, coyote willow, Fremont cottonwood, and California walnut.

All of the existing ponds in the study area were historically constructed as part of the initial golf course development and they are currently used and maintained as golf course ponds. P2 is a pond that was historically constructed entirely in uplands and adjacent to a channel. P1 was constructed on a surface channel feature (CH1). The ponds generally support a mix of open water and emergent marsh habitats that are maintained by golf course irrigation and run-off. P2 is currently dry.

Channelized Drainage

We identified a 0.19-acre intermittent drainage (CH1) that bisects the northeast corner of the study area and drains into Elder Creek at the northern boundary of the site. The drainage has been modified and channelized as part of the original golf course development. It is characterized by a broad linear drainageway that sustains intermittent flow and/or inundation conditions that are significantly augmented by irrigation and golf course-generated run-off. The drainage channel supports an emergent wetland plant community generally dominated by tall flatsedge, dallis grass, smartweed, and knot grass (*Paspalum distichum*).

Elder Creek

We identified a total of 0.88 acre (38,545-sq. ft.) of creek channel associated with Elder Creek as it extends along a portion of the northern boundary and along the western boundary of the study area. Elder Creek is generally characterized by a deeply incised channel bed and bank, and it sustains perennial flow conditions that are augmented by summer irrigation and urban run-off.

Associated emergent wetland vegetation within the creek channel includes floating primrose, smartweed, tall flatsedge, dallis grass, knotgrass, smartweed, bearded sprangle-top, willow herb, and annual rabbit-foot grass. Sparse trees along the top of the bank of the creek include coyote willow and California walnut.

Jurisdictional Status

Existing wetlands and waters in the study area including EM5, P1, and CH1 are part of surface drainage features or they have a direct hydrology connection with surface drainage features that drain into Elder Creek. Given this surface connection with a tributary to navigable waters, these

areas are subject to regulation by the Corps of Engineers (Corps) under Section 404 of the Clean Water Act. EM1, EM2, EM3, and P2 are adjacent to a tributary to Gerber Creek and are, therefore, also subject to regulation.

The remaining wetlands and waters in the study area, including EM4 and P3-P6, are determined by the Corps to be isolated depressions that lack a surface connection with drainage features. All of these areas were historically created as part of the golf course development.

SPECIAL STATUS SPECIES FINDINGS

Table 2 provides a list of special status species that were evaluated including their listing status, habitat associations, and whether potential habitats occur in the study area. Of the twenty-four special status species evaluated in Table 2, ten species including the bank swallow, Bogg's Lake hedge-hyssop, California tiger salamander, giant garter snake, Sacramento orcutt grass, slender orcutt grass, Swainson's hawk, valley elderberry longhorn beetle, vernal pool fairy shrimp, and vernal pool tadpole shrimp are Federal and/or State listed threatened and/or endangered species. The following is a detailed summary of special status species and their habitats as they relate to the study area.

Swainson's Hawk and Other Raptors

Swainson's hawk (*Buteo swainsoni*) is a raptor species currently listed as threatened in California by the CDFG. They typically nest in tall cottonwoods, valley oaks, or willows associated with riparian corridors with adjacent grassland, pasture, and/or cropland with a high density of rodents. The Central Valley population typically breeds and nests in late spring through early summer before migrating to Central America and South America for the fall and winter seasons.

Based on CNDDB sighting records, active Swainson's hawk nests have been documented within a 3 to 5-mile radius of the study area including several older nests that were located along the east side of Highway 99 between Calvine Road and Sheldon Road, and a number of nests within Deer Creek and the Cosumnes River corridor to the south.

The golf course fairways and golf range turf that comprises a majority of the study area lacks sufficient rodent populations generally associated with suitable raptor foraging habitat. As such, these areas provide low potential for raptor foraging. There are patches of annual grassland habitat including the abandoned field in the southeast corner and a fringe along the northern boundary south of Elder Creek that would provide marginally suitable foraging habitat for Swainson's hawk. The grassland habitat also provides potential foraging for other raptors

TABLE 2

EVALUATION OF SPECIAL STATUS SPECIES HABITATS FOR THE CHAMPION OAK DEVELOPMENT PROPERTY

	State Status	Federal Status	CNPS Listing	Habitat Association	Potential Habitat In Study Area
Birds					
Accipiter cooperi (Cooper's hawk)	Species of Special Concern	None		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes -suitable nesting & marginal foraging habitat
Accipiter striatus (sharp-shinned hawk)	Species of Special Concern	None		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes -suitable nesting & marginal foraging habitat
Agelaius tricolor (tricolored blackbird)	Species of Special Concern	Species of Concern		Colonial nester in cattails, bullrush, or blackberries associated with marsh habitats.	Yes -suitable foraging & nesting haitat
Athene cunicularia (burrowing owl)	Species of Special Concern	Species of Concern		Nests in abandoned ground squirrel burrows associated with open grassland habitats.	Yes -habitat present, but no owls observed on site.
Buteo swainsoni (Swainson's hawk)	Threatened	None		Nests in tall cottonwoods, valley oaks or willows. Forages in fields, cropland, irrigated pature, and grassland near large riparian corridors.	Yes -suitable nesting & marginal foraging habitat
Circus cyaneus (northern harrier)	Species of Special Concern	None		Forages in open grasslands, nests on ground in shrubby vegetation.	Yes -marginal nesting & foraging habitat
Elanus leucurus (white-tailed kite)	Fully Protected	None		Nests in riparian corridors along streams and rivers, and forages in nearby grasslands and fields.	Yes -suitable nesting & marginal foraging habitat
Riparia riparia (bank swallow)	Threatened	Species of Concern		Colonial nester in vertical cliffs and banks associated with riparian zones along streams, rivers, and lakes.	No
Amphibians & Reptiles					
Ambystoma trigrinum californiense (California tiger salamander)	Species of Special Concern	Threatened		Breeds in ponds or other deeply ponded wetlands, and uses gopher holes and ground squirrel burrows in adjacent grasslands for upland refugia/foraging.	No -marginal habitat in ponds/EM's, but not highly suitable for CTS
Clemmys marmorata marmorata (northwestern pond turtle)	Species of Special Concern	Species of Concern		Ponds, rivers, streams, wetlands, and irrigation ditches with associated marsh habitat.	Yes
Scaphiopus hammondii (western spadefoot)	Species of Special Concern	Species of Concern		Breeds in vernal pools, seasonal wetlands and associated swales. Forages and hibernates in adjacent grasslands.	No
Thamnophis gigas (giant garter snake)	Threatened	Threatened		Rivers, canals, irrigation ditches, rice fields, and other aquatic habitats with slow moving water and heavy emergent vegetation.	Yes -marginal habitat exists, but lacks nexis with known GGS sites

TABLE 2

EVALUATION OF SPECIAL STATUS SPECIES HABITATS FOR THE CHAMPION OAK DEVELOPMENT PROPERTY

Invertebrates					
Branchinecta lynchi (vernal pool fairy shrimp)	None	Threatened		Vernal pools and other seasonally ponded wetlands.	No
Branchinecta mesovallensis (midvalley fairy shrimp)	None	None		Vernal pools and other seasonally ponded wetlands.	No
Desmocerus californicus dimorphus (valley elderberry longhorn beetle)	None	Threatened		Dependent upon elderberry plant (Sambucus mexicana) as primary host species	No
Lepidurus packardi (vernal pool tadpole shrimp)	None	Endangered		Vernal pools and other deeply ponded seasonal wetlands.	No
Linderiella occidentalis (California linderiella)	None	None		Vernal pools and other seasonally ponded wetlands.	No
Plants					
Downingia pusilla (dwarf downingia)	None	None	CNPS-2	Vernal pools	No
Gratiola heterosepala (Bogg's Lake hedge-hyssop)	Endangered	None	CNPS-1B	Vernal pools and margins of lakes/ponds	No
Juncus leiospermus var. ahartii (Ahart's dwarf rush)	None	Species of Concern	CNPS-1B	Vernal pools	No
Legenere limosa (legenere)	None	Species of Concern	CNPS-1B	Vernal pools	No
Orcuttia tenuis (slender orcutt grass)	Endangered	Threatened	CNPS-1B	Vernal pools	No
Orcuttia viscida (Sacramento orcutt grass)	Endangered	Threatened	CNPS-1B	Vernal pools	No
Sagittaria sanfordii (Sanford's arrowhead)	None	Species of Concern	CNPS-1B	Deep aquatic habitats associated with canals, drainages, and ditches.	Yes -habitat present, but species was not found in surveys.

including northern harrier, white-tailed kite, sharp-shinned hawk, Cooper's hawk, and red-tailed hawk. Additionally, there are a number of suitable nest trees in the study area that provide potential nesting habitat for most of these raptors.

Burrowing owl (*Athene cunicularia*) is a ground nesting raptor species afforded protection by CDFG as a species of special concern due to potentially declining populations in the Central Valley of California. They typically inhabit open grassland habitats where they nest in abandoned ground squirrel burrows and other nesting cavities associated with raised mounds, levees, or soft berm features. The grassland/pasture habitat in the study area provides suitable foraging habitat for burrowing owls. However, we did not observe any burrowing owls or evidence of burrowing owl nesting activity in the study area.

Tricolored Blackbird

Tricolored blackbirds (*Agelaius tricolor*) are afforded protection by CDFG as a species of special concern due to declining populations in the region. They are colonial nesters preferring to nest in dense stands of cattails and/or bullrush, but they also commonly nest in blackberry thickets associated with drainages, ditches, and canals. There have been a number of documented sightings of tricolored blackbird nesting colonies in the Florin and Elk Grove quadrangles, but the locations have been excluded from CNDDB records for protection issues.

Portions of Elder Creek, EM5, and some of the other emergent wetlands and ponds in the study area support suitable nesting habitat for tricolored blackbirds. However, surveys were conducted too late in the summer to adequately evaluate potential tricolored nesting activity at the site.

California Tiger Salamander

The California tiger salamander (*Ambystoma trigrinum californiense*) is a Federal threatened species and a California Species of Special Concern that typically breeds in seasonal or permanent ponds. California tiger salamander (CTS) may also breed in deeper ponded vernal pools, seasonal wetlands and/or other seasonal pools within swales or channels. They typically spend a majority of their life cycle living below ground in ground squirrel burrows or pocket gopher burrows in grasslands situated adjacent to suitable breeding sites.

The emergent wetlands and ponds in the study area support suitable habitat conditions associated with CTS breeding habitats. However, the current land use (i.e. golf course operation) would greatly reduce any reasonable potential for CTS to utilize these habitats. Additionally, CTS has not been documented as occurring in the Florin or Elk Grove USGS quadrangle areas. Also, the

study area occurs outside the "*critical habitat*" areas for this species as designated by USFWS. Given this and given the disturbances of the current golf course operations, the potential for CTS to occur in the study area appears to be very low.

Giant Garter Snake

Giant garter snake (GGS) is designated as a Federal threatened and State threatened species afforded special protection by USFWS and CDFG. GGS is generally associated with larger canals, irrigation ditches, and other semi-permanent to permanent aquatic sites with slow moving water and an abundance of emergent vegetation. The closest documented GGS sightings in relation to the study area include a 2002 sighting in a ditch along Waterman Road located east of Highway 99 and south of Elk Grove, and a 1982 sighting in the Elk Grove Creek situated roughly 0.4 mile west of Highway 99 and ½ mile north of Elk Grove Boulevard.

Based on CNDDB records, GGS has not been documented in Elder Creek or any of its tributaries located east of Highway 99. Regardless, the study area does support marginally suitable breeding habitat for GGS including portions of Elder Creek along the western boundary of the site. The USFWS may or may not consider this to be potential habitat for GGS.

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (*Desmocerus californicus*) is a Federal threatened species that is dependent upon the elderberry plant (*Sambucus sp.*) as a primary host species. Elderberry shrubs are a common component of riparian areas throughout the Sacramento Valley region, and they have been documented as occurring at numerous locations in the vicinity of the study area.

Given the absence of elderberry shrubs in the study area, there is no potential for valley elderberry longhorn beetle to occur at the site.

Vernal Pool Branchiopods

Federally listed vernal pool branchiopods including the threatened vernal pool fairy shrimp (*Branchinecta lynchi*) and the endangered vernal pool tadpole shrimp (*Lepidurus packardi*) have been documented as occurring in Elk Grove and Florin USGS quadrangles. Other non-listed branchiopods known to occur in the region include California linderiella (*Linderiella occidentalis*) and midvalley fairy shrimp (*Branchinecta mesovallensis*).

The branchiopod species listed above are generally restricted to vernal pools and/or other seasonally ponded wetlands that sustain inundation during the winter before drying up in the late spring. The existing emergent wetlands and ponds in the study area do not provide suitable habitat for special status branchiopods given their extended ponding regimes and perennial nature. Given this, there is little if any potential for special status branchiopods to occur at the site.

Special Status Plants

Special status plant species identified on the CNDDB as occurring in the vicinity of the study area, or may potentially occur in the area, include Ahart's dwarf rush (*Juncus leiospermus ahartii*), Bogg's Lake hedge-hyssop (*Gratiola heterosepala*), dwarf downingia (*Downinia pusilla*), legenere (*Legenere limosa*), Sacramento orcutt grass (*Orcuttia viscida*), slender orcutt grass (*Orcuttia tenuis*), and Sanford's arrowhead (*Sagittaria sanfordii*).

Ahart's dwarf rush, Bogg's Lake hedge-hyssop, dwarf downingia, legenere, Sacramento orcutt grass, and slender orcutt grass are all strongly associated with vernal pool habitats. Bogg's Lake hedge-hyssop can also occur around the perimeter of lakes and ponds. Conversely, Sanford's arrowhead generally occurs in deep aquatic habitats associated with drainages, canals, and larger ditches that sustain inundation and/or slow moving water into early summer.

Portions of the emergent wetlands, ponds, channelized drainage, and Elder Creek sustain aquatic habitat conditions suitable for supporting Sanford's arrowhead. However, we did not observe this species present in the study area during our field surveys. Given the absence of suitable wetland habitats, there is little if any potential for Ahart's dwarf rush, Bogg's Lake hedge-hyssop, dwarf downingia, legenere, Sacramento orcutt grass, or slender orcutt grass to occur at the site.

SUMMARY

We identified a total of 3.8 acres of potential waters and wetlands in the study area including 0.66 acre of emergent wetlands, 2.07 acres of golf course ponds, a 0.19-acre channelized drainage, and 0.88 acre of creek channel associated with Elder Creek. Some or all of these areas are subject to regulation by the Corps under Section 404 of the Clean Water Act.

In regards to special status species and their habitats, a number of special status raptors including Swainson's hawk, sharp-shinned hawk, Cooper's hawk, white-tailed kite, northern harrier, and burrowing owl may have a reasonable potential for occurring in the study area based on the

presence of potential foraging and/or nesting habitat. In the event that future development of the site occurs during the raptor nesting season, we recommend that a raptor nesting survey be completed within two weeks of the start of project construction.

Portions of the existing emergent wetlands, ponds, and Elder Creek channel in the study area provide potential habitat for northwestern pond turtle, tricolored blackbird (nesting), and Sanford's arrowhead. Elder Creek may also provide marginal habitat for giant garter snake, and the existing emergent wetlands and ponds may provide marginal habitat for California tiger salamander. In our opinion, however, the potential for either of these species to occur in the study area would be low given the lack or documented sightings in the vicinity and given the current land uses at the site.

Other Federal or State listed species including the bank swallow, Bogg's Lake hedge-hyssop, Sacramento orcutt grass, slender orcutt grass, valley elderberry longhorn beetle, vernal pool fairy shrimp, and vernal pool tadpole shrimp would have little if any potential for occurring in the study area based on the absence of potential or suitable habitat.

APPENDIX A

DATA FORMS

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Champion Oak Development	Date: 9-9-04
Applicant/Owner: Stephen P. Belzer	City/County: Sacramento Co.
Investigator(s): D. Skorda	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Emergent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 1
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: A

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Typha angustifolia (D)		OBL	9.		
2. Ludwigia peploides		OBL	10.		
3. Cyperus eragrostis		FACW	11.		
4. Polygonum sp.		OBL	12.		
5. Epilobium sp.		FACW-OBL	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ✓ Water Marks
- ___ Drift Lines
- ✓ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ✓ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ✓ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Located in defined depression w/ algae matting, oxidized rootchannels etc. Area constructed as part of golf course!

SOILS

Map Unit Name (Series and Phase): (213) San Joaquin silt loam, leveled, 0-1% slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-8	7.5YR 3/4	yes / heavy		fine sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ✓ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: Hydric Soils assumed based on strong indicators of aquic Moisture regime!

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	No	Is this Data Point Within a Wetland?	Yes No
Wetland Hydrology Present?	Yes	No		
Hydric Soils Present?	Yes	No		

Remarks:

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Champion Oak Development	Date: 9-9-04
Applicant/Owner: Stephen P. Belzer	City/County: Sacramento Co.
Investigator(s): D. Skorda	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Adjacent upland - G.C. fairway
Is the site significantly disturbed (Atypical Situation)? Yes No	Transect ID: 1
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: B

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Cynodon dactylon (D)		FAC	9.		
2. Poa annua		FACW	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100% FAC

Remarks: Maintained golf course fairway

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Located on sloping "fairway" → area is irrigated and Mowed as part of golf course operations

SOILS

Map Unit Name (Series and Phase): (213) San Joaquin silt loam, leveled, 0-1% slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-6	7.5 YR 3/4	None		fine sandy silt loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	FAC	Yes (circled)	No
Wetland Hydrology Present?		Yes	No (circled)
Hydric Soils Present?		Yes	No (circled)

Is this Data Point Within a Wetland? Yes No (circled)

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Champion Oak Development	Date: 9-9-04
Applicant/Owner: Stephen P. Belzer	City/County: Sacramento Co.
Investigator(s): D. Skorda	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Upland grassland (disked)
Is the site significantly disturbed (Atypical Situation)? Disked (Yes) No	Transect ID:
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: 2

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus mollis (D)		FACU-	9.		
2. Vulpia myuros (D)		FACU	10.		
3. Bromus diandrus		UPL	11.		
4. Lolium perenne		FAC	12.		
5. Holocarpha virgata		UPL	13.		
6. Cynodon dactylon (D)		FAC	14.		
7. Brita minor		FACW-	15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 33%

Remarks: Fallow field supporting grassland habitat that has been sprinkler irrigated & mowed/disked in last several months.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Gently sloping to nearly level terrain adjacent to golf course fairway. Area lacks wetland hydrology indicators.

SOILS

Map Unit Name (Series and Phase): (213) San Joaquin silt loam, leveled, 0-1% slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-8	10YR 4/4	None		loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	(No)	Is this Data Point Within a Wetland?	Yes	(No)
Wetland Hydrology Present?	Yes	(No)			
Hydric Soils Present?	Yes	(No)			

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Champion Oak Development	Date: 9-9-04
Applicant/Owner: Stephen P. Belzer	City/County: Sacramento Co.
Investigator(s): D. Skorda	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Emergent Wetland - Swale
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 3
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: A

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Typha latifolia (D)	H	OBL	9.		
2. Polygonum sp. (D)	H	OBL	10.		
3. Ludwigia peploides (D)	H	OBL	11.		
4. Salix lasiolepis (D)	T/SH	FACW	12.		
5. Juncus effusus	H	OBL	13.		
6. Rubus procerus	SH	FAC	14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ✓ Sediment Deposits/Organic Detritus/Algae
- ✓ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ✓ Oxidized Root Channels in Upper 12 inches
- ✓ Water-Stained Leaves
- ___ Local Soil Survey Data
- ✓ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Linear sloping depression w/ algae matting, water stains & oxidized root channels. Heavily augmented by Golf Course run-off!

SOILS

Map Unit Name (Series and Phase): (214) - San Joaquin silt loam, 0-3 % slopes

Drainage Class: mod. well drained

Taxonomy (Subgroup): Abruptic Durixeralfs

Field Observations Confirm Mapped Type? Yes No

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
Hydric Soils Assumed				

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ✓ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: Hydric soils assumed based on strong indicators of aquic moisture regime!

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No
Wetland Hydrology Present? (Yes) No
Hydric Soils Present? (Yes) No

Is this Data Point Within a Wetland? (Yes) No

Remarks:

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Champion Oak Development	Date: 9-9-04
Applicant/Owner: Stephen P. Belzer	City/County: Sacramento Co.
Investigator(s): D. Skorda	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Golf Course Fairway - Uplands
Is the site significantly disturbed (Atypical Situation)? Maintained Fairway (Yes) No	Transect ID: 3
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: 8

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Cynodon dactylon (D)		FAC	9.		
2. Lolium perenne		FAC	10.		
3. Paspalum dilatatum		FAC	11.		
4. Poa annua		FACW	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Sloping terrain lacking indicators of wetland hydrology. Area is irrigated & mowed as part of fairway maintenance.

SOILS

Map Unit Name (Series and Phase): (214) - San Joaquin silt loam, 0-3 % slopes

Drainage Class: mod. well drained

Taxonomy (Subgroup): Abruptic Durixeralfs

Field Observations Confirm Mapped Type? Yes No

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-6	10YR 4/6	none		fine sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Fairway (Yes) No

Wetland Hydrology Present? Yes (No)

Hydric Soils Present? Yes (No)

Is this Data Point Within a Wetland? Yes (No)

Remarks: Non-wetland

APPENDIX B

DELINEATION MAP

APPENDIX C

PLANT LIST

LIST OF PLANTS OBSERVED ON THE CHAMPION OAK DEVELOPMENT PROPERTY AND THEIR STATUS AS WETLAND INDICATOR SPECIES

Scientific Name	Common Name	Status [1&2]
Alisma plantago-aquatica	broad-leaf water plantain	OBL
Amsinckia intermedia	fiddleneck	UPL
Asclepias fascicularis	slender milkweed	FAC
Avena fatua	wild oats	UPL
Avena barbata	slender oats	UPL
Baccharis pilularis	coyote brush	UPL
Boisduvalia densiflora	dense flower spike-primrose	OBL
Brassica sp.	mustard	NI
Briza minor	little quaking grass	FACW-
Brodiaea sp.	brodiaea	---
Bromus diandrus (*B. rigidus*)	rip-gut grass	UPL
Bromus mollis	soft chess	FACU-
Centaurea solstitialis	yellow star-thistle	UPL
Cichorium intybus	chicory	UPL
Cirsium sp.	thistle	---
Conyza canadensis	Canada horseweed	FAC
Cynodon dactylon	Bermuda grass	FAC
Cyperus eragrostis	tall flatsedge	FACW
Echinochloa crusgalli	barnyard grass	FACW
Eleocharis macrostachya	creeping spikerush	OBL
Eremocarpus setigerus	doveweed	UPL
Erodium sp.	filaree	UPL
Festuca arundinacea	tall fescue	FAC-
Ficus carica	fig	UPL
Geranium dissectum	cut-leaf geranium	UPL
Holocarpha virgata	tarweed	UPL
Hordeum hystrix (*H. geniculatum*)	Mediterranean barley	FAC
Hordeum leporinum	hare barley	UPL
Hypochaeris glabra	smooth cats tongue	UPL
Juglans californica	California walnut	UPL
Juglans regia	English walnut	UPL
Juncus bufonius	toad rush	FACW+
Juncus effusus	soft rush	FACW
Lactuca serriola	prickly lettuce	FAC
Leptochloa fascicularis	bearded sprangle-top	OBL

[1] Reed, P.B. 1988. National List of Plant Species That Occur in Wetlands: California (Region 0). Biological Report 88(26.10) May 1988. National Ecology Research Center, National Wetland Inventory, U.S. Fish and Wildlife Service, St. Petersburg, Fl.

[2] OBL = obligate; FACW = facultative wetland; FAC = facultative; FACU = facultative upland; UPL = upland; and NI = no indicator.

Scientific Name	Common Name	Status
Leontodon leysseri	hairy hawkbit	FACU
Lolium perenne (*L. multiflorum*)	perennial ryegrass	FAC*
Lippia nodiflora	common frog-fruit	FACW
Lotus corniculatus	bird's foot trefoil	FAC
Lotus purshianus	Spanish clover	FAC
Ludwigia peploides	floating primrose	OBL
Lythrum hyssopifolia	loosestrife	FACW
Malva sp.	mallow	---
Mentha pulegium	penny-royal	OBL
Paspalum dilatatum	dallis grass	FAC
Paspalum distichum	knot grass	OBL
Plantago lanceolata	English plantain	FAC-
Plantanus racemosa	California sycamore	FACW
Poa annua	annual bluegrass	FACW-
Polygonum aviculare	knotweed	FAC
Polypogon monspeliensis	annual rabbit-foot grass	FACW+
Populus fremontii	Fremont cottonwood	FACW
Raphanus sativus	wild radish	UPL
Rorippa sp.	yellow-cress	---
Rosa californica	wild rose	FAC+
Rubus procerus	Himalayan blackberry	FAC
Rumex conglomeratus	clustered dock	FACW
Rumex crispus	curly dock	FACW-
Salix hindsiana	sandbar willow	FACW
Salix lasiolepis	arroyo willow	FACW
Silybum marianum	milk thistle	UPL
Taeniatherum caput-medusae	medusa-head	UPL
Trifolium sp.	clover	---
Typha angustifolia	narrow-leaf cattail	OBL
Typha latifolia	broad-leaf cattail	OBL
Vicia villosa	winter vetch	---
Vulpia myuros	rat-tail fescue	FACU
Xanthium strumarium	rough cocklebur	FAC+

Page: 1

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Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name:

Project Name: Florin Vineyards 04-0207

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2009 TOTALS (lbs/day unmitigated)	22.72	127.86	64.21	650.14	6.96	657.10	135.79	6.40	142.19	12,528.10
2010 TOTALS (lbs/day unmitigated)	1,632.08	159.14	187.58	650.70	8.90	659.60	135.99	8.16	144.15	27,792.89

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	44.97	10.73	33.66	0.10	0.10	13,318.30

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	63.16	62.34	758.70	92.47	17.90	58,145.36

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SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	108.13	73.07	792.36	92.57	18.00	71,463.66

Construction Emissons Mitigation Fee Calculation

PART 1: PROJECT INFORMATION

Project Name:	Florin Vineyards		
Control/Application #:	04-0207		
Single Family Dwelling Units:	656	*Note: Enter information only in blue bordered cells*	
Multi Family Dwelling Units:	94	Total Residential Acreage:	102
Non-residential Square Feet:	14000	Total Non-residential Acreage:	29

PART 2: EMISSIONS INFORMATION

Year	Activity Phase	NOx (lbs/day) unmitigated	NOx (lbs/day) mitigated*	NOx over threshold (lbs/day)	duration (days)	Total significant NOx (lbs)
	Demolition (on road)					
	Demolition (off road)		0.00			
	TOTAL Demolition		0.00	0	0	0.00
	Grading		0.00	0	0	0.00
	Building Construction	159.14	127.31	42.31	31	1311.67
	Building Construction	127.86	102.29	17.29	234	4045.39
	Building Construction		0.00	0	0	0.00
	Asphalt		0.00	0	0	0.00
	Total project Nox over threshold (lbs)		*5357.06*			
	Total project Nox over threshold (tons)		*2.68*			

PART 3: MITIGATION FEE RESULTS

*MITIGATION FEE ($14,300/TON)***	*$38,303*
ADMINISTRATIVE FEE (5.0%)	*$1,915*
TOTAL FEE	***$40,218***

>>> *Fee is to be paid to the SMAQMD, either in total or on a by acre basis, prior to any ground disturbance.*

Mitigation Fee ($/acre) **$292.39**

* Assumes a construction mitigation plan which achieves a 20% reduction in NOx from on-site, off-road equipment.

** Or the $/ton of NOx cost-effectiveness value in effect at the time the fee is collected.

REVISED JURISDICTIONAL DELINEATION AND SPECIAL STATUS SPECIES EVALUATION

KB FLORIN VINEYARDS PROPERTY

SACRAMENTO COUNTY, CALIFORNIA

RECEIVED
JUL 23 2007
DEPARTMENT OF ENVIRONMENTAL REVIEW AND ASSESSMENT

AUGUST 2004
REVISED OCTOBER 2006

Prepared For:

KB HOME
2420 Del Paso Road, Suite 200
Sacramento, California 95834

Prepared By:

GIBSON & SKORDAL,LLC
Wetland Consultants
2277 Fair Oaks Blvd., Suite 105
Sacramento, California 95825

INTRODUCTION

The purpose of this report is to present the results of a jurisdictional delineation and special status species evaluation conducted for the KB Florin Vineyards Property.

LOCATION

The study area is approximately 130 acres and located north of Florin Road and east and west of South Watt Avenue, Sacramento County, California. The study area lies within Sections 31 and 36, Township 8 North and Range 5 East. The coordinates for the center of the property are Latitude 38°, 29' and 56" North and Longitude 121°, 22', and 26" West. Figure 1 is a vicinity map showing the location of the study area.

METHODOLOGY

Field studies were conducted on May 16 and August 7, 2004 for the purpose of delineating existing waters including wetlands in the study area and evaluating special status species and their habitats.

Jurisdictional Delineation

The boundaries of wetlands, data points, and other site features were surveyed in the field by Gibson & Skordal, LLC utilizing a Trimble GPS data logger with sub-meter accuracy. The delineation map was prepared by layering the GPS field data over aerial photography flown in May of 2002 by the United States Geological Survey (USGS). Mr. Dave Leput field verified our delineation on March 29, 2006. All requested changes are incorporated into this report.

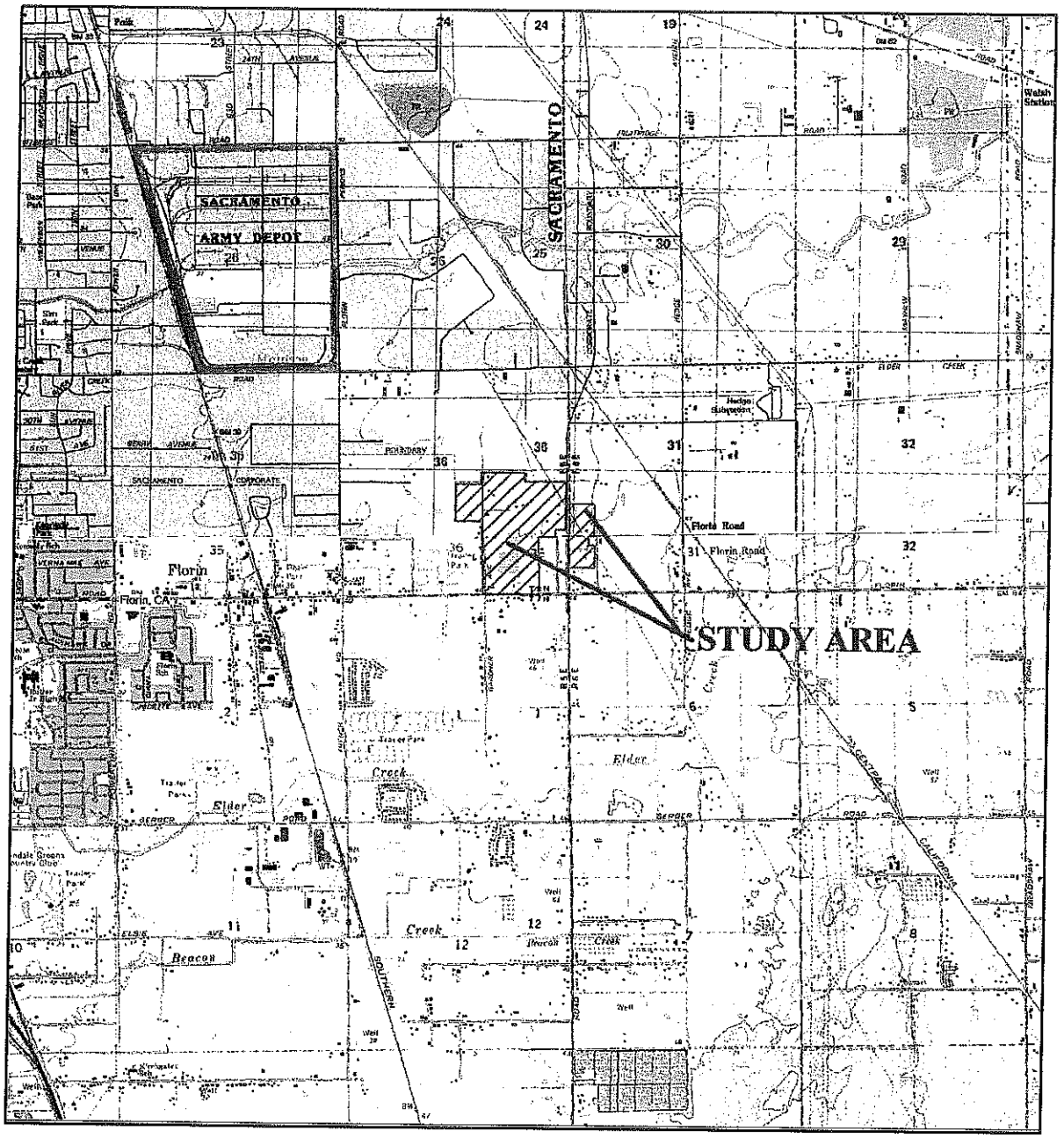
The **"Corps of Engineers Wetlands Delineation Manual"**[1] was used as the standard of determining whether specific areas are wetlands potentially subject to regulation under Section 404 of the Clean Water Act. Corps of Engineers' regulations (33 CFR 328) was used to determine the presence of waters of the United States other than wetlands. The **"National List of Plant Species That Occur in Wetlands: California (Region 0)"**[2] was used to determine the

[1] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station. Vicksburg, Miss.

[2] Reed, P.B. 1988. National List of Plant Species That Occur In Wetlands: California (Region 0). Biological Report 88(26.10). May 1988. National Ecology Research Center, National Wetlands Inventory, U.S. Fish & Wildlife Service, St. Petersburg, Florida.

FIGURE 1

VICINITY MAP



N

SOURCE: Elk Grove, Florin, Sacramento East and Carmichael, CA USGS 7.5 Minute Topographic Maps, N.T.S.

wetland indicator status of plants observed in the study area. The **"Soil Survey of Sacramento County, California"**[3] was used to evaluate soil mapping in the study area.

Detailed data on vegetation, soils, and hydrology characteristics was taken in the field. Data forms documenting the basis for determining which areas are wetland or upland are provided in Appendix A. The delineation map is included in Appendix B.

Special Status Species Evaluation

The special status species evaluation includes those species identified as having relative scarcity and/or declining populations by the United States Fish & Wildlife Service (FWS) or California Department of Fish & Game (CDFG). Special status species include those formally listed as threatened or endangered, those proposed for formal listing, candidates for Federal listing, and those considered to be Species of Concern by FWS or Species of Special Concern by CDFG. In addition to these, we also included those species considered to be "special animals" or "fully protected" by the CDFG and those plant species considered to be rare, threatened or endangered in California by the California Native Plant Society (CNPS).

In our evaluation, we considered those special status species documented by the California Natural Diversity Database (CNDDB) as occurring in the vicinity of the study area. A record search of the CNDDB was conducted for the Elk Grove, Florin, Carmichael, and Sloughhouse 7.5 Minute USGS quadrangles to identify all documented sightings of special status species in the vicinity of the study area. In addition to these species, we included other special status species that may have some potential for occurring in the study area based on historical range data and/or the presence of suitable habitat.

GENERAL SITE CONDITIONS AND HABITATS

The study area is approximately 130 acres in size. Approximately 110 acres are located west of Watt Avenue and approximately 20 acres are located east of Watt Avenue. The terrain is flat with elevation being approximately 45 feet. Surface water drains to the west though channelized ditches. These ditches are tributaries to Florin Creek which is a tributary of Morrison Creek. The land has been historically farmed but over half is currently fallow. The portions that are farmed include a small area of land in the western portion of the study area along Gardner Road currently used for vegetables, a small area in the northern portion of the study area managed for

[3] USDA, Soil Conservation Service. 1993. Soil Survey of Sacramento County, California.

irrigated pasture and an area that is dry-farmed hay in the southern portion of the study area. Portions of the land are disked each year for fire control. There are numerous rural residences within the study area.

The soil mapping unit within the study area is San Joaquin silt loam, leveled, 0 to 1 percent slopes. San Joaquin soils are classified as Durixeralfs. San Joaquin soils are not classified as hydric soils but they can have inclusions of hydric soils in depressions and along drainages.

The predominant plant community within the study area is non-native annual grassland. The most common species comprising the non-native annual grassland community are medusa head (*Taeniatherum caput-medusae*), ripgut grass *(Bromus diandrus*), soft chess (*Bromus mollis*), yellow star-thistle (*Centaurea solstitialis*) and wild oats (*Avena fatua*). Trees within the study area are largely limited to ornamental species associated with residences. There are two interior live oaks (*Quercus wislizenii*) and one fig (*Ficus sp.*) located away from residences in non-native annual grassland habitat in the southern portion of the study area. A partial list of plants observed in the study area is provided in Appendix C.

EXISTING WATERS/WETLANDS

A total of 2.1000 acres of jurisdictional wetlands/waters of the United States were delineated within the study area. Of this total, approximately 0.1270 acre is comprised of vernal pool, 0.9426 acre is comprised of seasonal wetlands, 0.813 acre is comprised of Florin Creek, and 0.2114 acre is comprised of a tributary ditch to Florin Creek. In addition, there is 0.0283 acre of non-jurisdictional seasonal wetlands and 0.1610 acre of non-jurisdictional ditches. The delineation map is included in Appendix B. Table 1 provides a breakdown of the delineated waters/wetlands.

Vernal pools are shallow depressions underlain by a hardpan that restricts the downward movement of water and act to perch groundwater near the surface during periods of precipitation. They typically flood after a series of storms in the late fall and early winter and normally dry out in the spring. We delineated one vernal pool within the study area. This vernal pool appears to have been created within a scraped area that may have been a road. The dominant vegetation within this vernal pool is purple hairgrass (*Deschampsia danthonioides*) and slender popcorn flower (*Plagiobothrys stipitatus micranthus*). Other associate species include creeping spikerush (*Eleocharis macrostachya*), perennial rye (*Lolium perenne*), Mediterranean barley (*Hordeum hystrix*), and hairy hawkbit (*Leontodon leysseri*).

TABLE 1

AREAS OF EXISTING WETLANDS IDENTIFIED ON THE KB FLORIN VINEYARDS PROPERTY

Vernal Pools:

Ref. #	Area (Sq.Ft.)
VP1	5,472
VP2	47
Total =	5,519 Sq. Ft. or 0.127 Acre

Seasonal Wetlands Jurisdictional:

Ref. #	Area (Sq.Ft.)	Ref. #	Area (Sq.Ft.)
SW1	3,931	SW27	37
SW2	174	SW28	764
SW4	3,833	SW29	1,039
SW5	523	SW30	73
SW6	1,917	SW31	1,624
SW7	1,374	SW32	1,391
SW8	1,686	SW33	331
SW10	1,574	SW34	91
SW11	40	SW35	105
SW12	505	SW36	1,839
SW13	2,851	SW37	2,338
SW15	734	SW38	3,117
SW16	30	SW39	291
SW17	72	SW40	149
SW18	41	SW41	1,507
SW19	222	SW42	274
SW20	113	SW43	92
SW21	461	SW44	202
SW22	120	SW45	341
SW23	211	SW46	107
SW24	940	SW47	2,038
SW25	731	SW48	908
SW26	114	SW49	206
			41,061 Sq. Ft. or 0.9426 Acre

TABLE 1 (Cont.)

Seasonal Wetlands Non-Jurisdictional:

Ref. #	Area (Sq.Ft.)
SW3	346
SW9	119
SW14	766
	1,231 Sq. Ft. or 0.0283 Acre

Ditch Jurisdictional:

9,210 Sq. Ft.
or 0.2114 Acre

Ditch Non-Jurisdictional:

7,015 Sq. Ft.
or 0.1610 Acre

Florin Creek:

Ref. #	Area (Sq.Ft.)
FC1	14,723
FC2	20,691
	35,414 Sq. Ft. or 0.813 Acre

Total Jurisdictional Waters/Wetlands = 2.1000 Acres
Total Non-jurisdictional Waters/Wetlands = 0.1893 Acre

Seasonal wetland depressions are similar to vernal pools in that they are shallow depressions that pond water in the winter and spring. Like vernal pools, they are underlain by a hardpan. They experience ponding during times of heavier precipitation. We differentiated between vernal pools and depressional seasonal wetlands based on their characteristic plant community. Whereas, vernal pools are dominated by native species endemic to vernal pools, seasonal wetlands are dominated by non-native grasses. The most common plants within these seasonal wetlands are perennial rye and Mediterranean barley. All of the seasonal wetlands have been substantially degraded by disking and plowing.

Florin Creek enters the property midway along its eastern boundary and flows west across the study area, and then north along the western border. Several lateral ditches connect with this ditch within the study area. The plant community within the delineated areas is sparse and generally characteristic of seasonal wetlands.

Corps of Engineers regulations (33 CFR Part 328) normally excludes irrigation and drainage ditches constructed in uplands from regulation under Section 404 of the Clean Water Act. Whether the ditches are jurisdictional depend on whether they were constructed totally in uplands. We reviewed the USGS topographic maps and the Sacramento County Soil Survey to assess whether they provide an indication of whether the ditches were constructed totally in uplands. Neither of these references provided any indication that the ditches were either excavated in wetlands or previously existing channelized natural drainage courses. We then consulted historic aerial photographs obtained from the Natural Resources Conservation Service. We obtain copies of aerial photographs taken in 1937, 1957, 1964, and 1972. These photographs are included in Appendix D.

The 1937 aerial photograph shows that the entire study area and surrounding lands had been leveled and converted to orchards and vineyards. The large irrigation/drainage ditch, as well as the lateral ditches, appears to be in place at their approximate current location. The 1957 aerial photograph shows that a majority of the orchards and vineyards were eliminated with the remainder of the land in grassland or irrigated pasture. That pattern of agricultural uses as well as the location and extent of irrigation/drainage ditches appears to remain approximately the same in subsequent aerial photographs to the present. Based on this, it is not possible to determine whether the irrigation/drainage ditches were constructed in wetlands or previously existing channelized watercourses.

While the delineated waters exhibit the requisite characteristics of waters of the United States, they must either be part of a surface tributary system to navigable waters or adjacent to waters

that are part of a surface tributary system in order to be classified as jurisdictional waters of the United States. As stated previously, surface drainage from the study areas flow west in an excavated drainage ditch. This ditch continues to flow west to Florin Creek. Florin Creek is a tributary of Morrison Creek which is a tributary to the Sacramento River, a navigable water of the United States. The Corps of Engineers made their final determination as to the jurisdiction of all features on the property.

SPECIAL STATUS SPECIES

Table 2 provides a list of special status species that were evaluated including their listing status, habitat associations, and whether potential habitats occur in the study area. Of the twenty-four special status species evaluated in Table 2, ten species including the bank swallow, Bogg's Lake hedge-hyssop, California tiger salamander, giant garter snake, Sacramento orcutt grass, slender orcutt grass, Swainson's hawk, valley elderberry longhorn beetle, vernal pool fairy shrimp, and vernal pool tadpole shrimp are Federal and/or State listed threatened and/or endangered species. The following is a detailed summary of special status species and their habitats as they relate to the study area.

Swainson's Hawk and Other Raptors

Swainson's hawk (*Buteo swainsoni*) is a raptor species currently listed as threatened in California by the CDFG. They typically nest in tall cottonwoods, valley oaks, or willows associated with riparian corridors with adjacent grassland, pasture, and/or cropland with a high density of rodents. The Central Valley population typically breeds and nests in late spring through early summer before migrating to Central America and South America for the fall and winter seasons.

The NDDB records lists several documented nest sites in the vicinity, the closest being approximately 4 miles away near the Wilton Road crossing of Deer Creek. Swainson's hawks have been shown to forage in grasslands up to 10 miles from their nesting sites. Given this, the pasture and grassland habitat in the study area provides potential foraging habitat for Swainson's hawk. Additionally, there is suitable foraging habitat present for a variety of other raptors including white-tailed kite, northern harrier, red-tailed hawk, sharp-shinned hawk, and Cooper's hawk. The larger trees in the study area provide suitable nesting habitat for white tailed kites, Swainson's hawk, sharp-shinned hawk, Cooper's hawk and red-tailed hawks.

TABLE 2

EVALUATION OF SPECIAL STATUS SPECIES HABITATS

	State Status	Federal Status	CNPS Listing	Habitat Association	Potential Habitat In Study Area
Birds					
Accipiter cooperi (Cooper's hawk)	Species of Special Concern	None		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes -suitable foraging & marginal nesting habitat
Accipiter striatus (sharp-shinned hawk)	Species of Special Concern	None		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes -suitable foraging & marginal nesting habitat
Agelaius tricolor (tricolored blackbird)	Species of Special Concern	Species of Concern		Colonial nester in cattails, bullrush, or blackberries associated with marsh habitats.	No
Athene cunicularia (burrowing owl)	Species of Special Concern	Species of Concern		Nests in abandoned ground squirrel burrows associated with open grassland habitats.	Yes -habitat present, but no owls observed on site.
Buteo swainsoni (Swainson's hawk)	Threatened	None		Nests in tall cottonwoods, valley oaks or willows. Forages in fields, cropland, irrigated pature, and grassland near large riparian corridors.	Yes -suitable foraging & nesting habitat
Circus cyaneus (northern harrier)	Species of Special Concern	None		Forages in open grasslands, nests on ground in shrubby vegetation.	Yes - foraging only
Elanus leucurus (white-tailed kite)	Fully Protected	None		Nests in riparian corridors along streams and rivers, and forages in nearby grasslands and fields.	Yes -suitable foraging & nesting habitat present
Riparia riparia (bank swallow)	Threatened	Species of Concern		Colonial nester in vertical cliffs and banks associated with riparian zones along streams, rivers, and lakes.	No
Amphibians & Reptiles					
Ambystoma trigrinum californiense (California tiger salamander)	Species of Special Concern	Threatened		Breeds in ponds or other deeply ponded wetlands, and uses gopher holes and ground squirrel burrows in adjacent grasslands for upland refugia/foraging.	Marginal breeding habitat present in vernal pool
Clemmys marmorata marmorata (northwestern pond turtle)	Species of Special Concern	Species of Concern		Ponds, rivers, streams, wetlands, and irrigation ditches with associated marsh habitat.	No
Scaphiopus hammondii (western spadefoot)	Species of Special Concern	Species of Concern		Breeds in vernal pools, seasonal wetlands and associated swales. Forages and hibernates in adjacent grasslands.	Yes
Thamnophis gigas (giant garter snake)	Threatened	Threatened		Rivers, canals, irrigation ditches, rice fields, and other aquatic habitats with slow moving water and heavy emergent vegetation.	No

TABLE 2

EVALUATION OF SPECIAL STATUS SPECIES HABITATS

Invertebrates					
Branchinecta lynchi (vernal pool fairy shrimp)	None	Threatened		Vernal pools and other seasonally ponded wetlands.	Yes -potential habitat in VP & SW's
Branchinecta mesovallensis (midvalley fairy shrimp)	None	None		Vernal pools and other seasonally ponded wetlands.	Yes -potential habitat in VP & SW's
Desmocerus californicus dimorphus (valley elderberry longhorn beetle)	None	Threatened		Dependent upon elderberry plant (Sambucus mexicana) as primary host species	No
Lepidurus packardi (vernal pool tadpole shrimp)	None	Endangered		Vernal pools and other deeply ponded seasonal wetlands.	Yes -marginal habitat in VP
Linderiella occidentalis (California linderiella)	None	None		Vernal pools and other seasonally ponded wetlands.	Yes -potential habitat in VP & SW's
Plants					
Downingia pusilla (dwarf downingia)	None	None	CNPS-2	Vernal pools	Yes -suitable habitat in VP
Gratiola heterosepala (Bogg's Lake hedge-hyssop)	Endangered	None	CNPS-1B	Vernal pools and margins of lakes/ponds	Yes -suitable habitat in VP
Juncus leiospermus var. ahartii (Ahart's dwarf rush)	None	Species of Concern	CNPS-1B	Vernal pools	Yes -suitable habitat in VP
Legenere limosa (legenere)	None	Species of Concern	CNPS-1B	Vernal pools	Yes -suitable habitat in VP
Orcuttia tenuis (slender orcutt grass)	Endangered	Threatened	CNPS-1B	Vernal pools	Yes-marginal habitat in VP.
Orcuttia viscida (Sacramento orcutt grass)	Endangered	Threatened	CNPS-1B	Vernal pools	Yes-marginal habitat in VP.
Sagittaria sanfordii (Sanford's arrowhead)	None	Species of Concern	CNPS-1B	Deep aquatic habitats associated with canals, drainages, and ditches.	No

Burrowing owl (*Athene cunicularia*) is a ground nesting raptor species afforded protection by CDFG as a species of special concern due to potentially declining populations in the Central Valley of California. They typically inhabit open grassland habitats where they nest in abandoned ground squirrel burrows and other nesting cavities associated with raised mounds, levees, or soft berm features. Although there is potential nesting and foraging habitat available for burrowing owls, we did not observe any potential nesting burrows or any indication of current burrowing owl activity at the site.

Tricolored Blackbird

Tricolored blackbirds (*Agelaius tricolor*) are afforded protection by CDFG as a species of special concern due to declining populations in the region. They are colonial nesters preferring to nest in dense stands of cattails and/or bullrush, but they also commonly nest in blackberry thickets associated with drainages, ditches, and canals. There have been a number of documented sightings of tricolored blackbird nesting colonies in the Florin and Elk Grove quadrangles, but the locations have been excluded from CNDDB records for protection purposes.

The absence of suitable nesting habitat in the study area would eliminate any reasonable potential for tricolored blackbirds to nest at the site.

California Tiger Salamander

The California tiger salamander (*Ambystoma trigrinum californiense*) is a Federally threatened species and a California Species of Special Concern that typically breeds in seasonal or permanent ponds. California tiger salamander (CTS) may also breed in deeper ponded vernal pools, seasonal wetlands and/or other seasonal pools within swales or channels. They typically spend a majority of their life cycle living below ground in ground squirrel burrows or pocket gopher burrows in grasslands situated adjacent to suitable breeding sites.

There is marginal breeding habitat in the delineated vernal pool. The lack of connectivity with other potential CTS breeding sites would greatly restrict if not eliminate any potential for CTS to utilize the site.

Giant Garter Snake

The giant garter snake is a Federal and State-listed threatened species. The habitat of giant garter snakes (GGS) is rivers, canals, drainage and irrigation ditches and other aquatic habitats with

slow moving water and emergent vegetation. The irrigation/drainage ditches within the study area do not experience ponded water during the summer under current conditions. As a result, they do not support the requisite habitat for GGS. There are no documented sightings of the GGS in the vicinity of the study area. There is one documented sighting within the Morrison Creek drainage basin. That sighting, made in 1965, is located at the downstream terminus of Morrison Creek, approximately 9.5 stream miles southwest of the study area. GGS have been observed at numerous locations in and along Laguna Creek, east of Highway 99, which is a separate drainage basin.

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (*Desmocerus californicus*) is a Federal threatened species that is dependent upon the elderberry plant (*Sambucus sp.*) as a primary host species. Elderberry shrubs are a common component of riparian areas throughout the Sacramento Valley region, and they have been documented as occurring at numerous locations in the vicinity of the study area.

Given the absence of elderberry shrubs in the study area, there is no potential for valley elderberry longhorn beetle to occur at the site.

Vernal Pool Branchiopods

Federally listed vernal pool branchiopods including the threatened vernal pool fairy shrimp (*Branchinecta lynchi*) and the endangered vernal pool tadpole shrimp (*Lepidurus packardi*) have been documented as occurring in Elk Grove and Florin USGS quadrangles. Other non-listed branchiopods known to occur in the region include California linderiella (*Linderiella occidentalis*) and midvalley fairy shrimp (*Branchinecta mesovallensis*).

The branchiopod species listed above are generally restricted to vernal pools and/or other seasonally ponded wetlands that sustain inundation during the winter before drying up in the late spring. The vernal pool and the seasonal wetlands in the study area provide potential habitat for special status branchiopods including the vernal pool fairy shrimp, mid-valley fairy shrimp, and California linderiella. The vernal pool in the study area provides potential habitat for the vernal pool tadpole shrimp.

Special Status Plants

Special status plant species identified on the CNDDB as occurring in the vicinity of the study area, or may potentially occur in the area, include Ahart's dwarf rush (*Juncus leiospermus ahartii*), dwarf downingia (*Downinia pusilla*), Bogg's Lake hedge-hyssop (*Gratiola heterosepala*), legenere (*Legenere limosa*), Sacramento orcutt grass (*Orcuttia viscida*), slender orcutt grass (*Orcuttia tenuis*), and Sanford's arrowhead (*Sagittaria sanfordii*).

Ahart's dwarf rush, dwarf downingia, legenere, Bogg's Lake hedge-hyssop, Sacramento orcutt grass, and slender orcutt grass are all strongly associated with vernal pool habitats. Bogg's Lake hedge-hyssop can also occur around the perimeter of lakes and ponds. Conversely, Sanford's arrowhead generally occurs in deep aquatic habitats associated with drainages, canals, and larger ditches that sustain inundation and/or slow moving water into early summer.

The vernal pool in the study provides potential habitat for Ahart's dwarf rush, Bogg's Lake hedge-hyssop, dwarf downingia, Sacramento orcutt grass, slender orcutt grass, and legenere. The drainage ditches in the study area do not support suitable long-term flows or ponding conditions typically associated with the establishment of Sanford's arrowhead populations. Moreover, we did not observe Sanford's arrowhead during our field surveys.

SUMMARY

We identified a total of 2.1000 acres of jurisdictional waters/wetlands in the study area including 0.1270 acre of vernal pool, 0.9426 acre of seasonal wetland, 0.813 acres of Florin Creek, and 0.2114 acre of ditch which is tributary to Florin Creek.

In regards to special status species and their habitats, a number of special status raptors including Swainson's hawk, sharp-shinned hawk, Cooper's hawk, white-tailed kite, northern harrier, and burrowing owls would have a reasonable potential for occurring in the study area based on the presence of suitable foraging and/or nesting habitat. In the event that future development of the site occurs during the raptor nesting season, we recommend that a raptor nesting survey be completed within two weeks of the start of project construction.

The vernal pool and seasonal wetlands in the study area provide potential habitat for special status branchiopods including vernal pool fairy shrimp, mid-valley fairy shrimp, California tadpole shrimp and California linderiella. At this time, protocol branchiopod surveys have not

been conducted for this site. The vernal pool may also provide potential habitat for California tiger salamander and special status plants including Ahart's dwarf rush, Bogg's Lake hedge-hyssop, dwarf downingia, and legenere.

Other Federally listed special status species including the giant garter snake, valley elderberry longhorn beetle, and Sanford's arrowhead would have little, if any, potential for occurring in the study area based on the absence of suitable habitat.

APPENDIX A

DATA FORMS

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Deane Florin Vineyards Applicant/Owner: Natomas Gardner Investment Grp Investigator(s): Tom Skordal & Jim Gibson	Date: 8/16/04 City/County: Sacramento County State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Excavated Ditch Transect ID: 1 Data Point ID: A

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Xanthium strumarium (D)	herb	FAC+	9.		
2. Lolium perenne (D)	"	FAC	10.		
3. Lythrum hyssopifolia	"	FACW	11.		
4. Hordeum hystrix	"	FAC	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ✓ Water Marks
- ✓ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: clear OHW line

Map Unit Name
(Series and Phase): San Joaquin Silt Loam, leveled, 0-1% slopes Drainage Class: Moderately well drained
Field Observations
Taxonomy (Subgroup): Abruptic Durixeralfs Confirm Mapped Type? Yes (No)

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
8"	10YR4/2	10YR4/4		loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ✓ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is this Data Point Within a Wetland?	(Yes)	No
Wetland Hydrology Present?	(Yes)	No			
Hydric Soils Present?	(Yes)	No			

Remarks:

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Deane Florin Vineyards Applicant/Owner: Natomas Gardner Investment Grp Investigator(s): Tom Skordal & Jim Gibson	Date: 5/16/04 City/County: Sacramento County State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Upland Transect ID: 1 Data Point ID: B

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus mollis (D)	herb	FACU	9.		
2. Avena fatua (D)	"	UPL	10.		
3. Hordeum leporinum (D)	"	UPL	11.		
4. Brica minor	"	FACW-	12.		
5. Erodium botrys	"	UPL	13.		
6. Geranium dissectum	"	UPL	14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: No hydrology indicators observed

Map Unit Name
(Series and Phase): San Joaquin Silt Loam, leveled, 0-1% slope

Drainage Class: Moderately well drained

Field Observations
Confirm Mapped Type? Yes (No)

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
5"	10YR3/4			Sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: No hydric soil indicators observed

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes (No)	Is this Data Point Within a Wetland? Yes (No)
Wetland Hydrology Present?	Yes (No)	
Hydric Soils Present?	Yes (No)	

Remarks:

Non-Wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Deane Florin Vineyards Applicant/Owner: Natomas Gardens Investment Grp Investigator(s): Tom Skordal & Jim Gibson	Date: 5/16/04 City/County: Sacramento County State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Upland Transect ID: Data Point ID: 2

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus mollis (D)	HERB	FACU	9.		
2. Bromus diandrus (D)	"	UPL	10.		
3. Convolvulus arvensis (D)	"	UPL	11.		
4. Hordeum leporinum	"	UPL	12.		
5. Erodium botrys	"	UPL	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks): ___ Streams, Lake, or Tide Gauge ___ Aerial Photographs ___ Other ___ No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: ___ Inundated ___ Saturated in Upper 12 inches ___ Water Marks ___ Drift Lines ___ Sediment Deposits/Organic Detritus ___ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ___ Oxidized Root Channels in Upper 12 inches ___ Water-Stained Leaves ___ Local Soil Survey Data ___ FAC-Neutral Test ___ Other (Explain in Remarks)
Field Observations: Depths of Surface Water: _____(in.) Depth to Free Water in Pit: _____(in.) Depth to Saturated Soil: _____(in.)	

Remarks: No hydrology indicators observed

Map Unit Name
(Series and Phase): San Joaquin Silt Loam, leveled, 0-1% slopes

Drainage Class: Moderately well drained

Field Observations
Confirm Mapped Type? Yes (No)

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
5"	10YR 3/4			Sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: No hydric soil indicators observed

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes (No)	Is this Data Point Within a Wetland? Yes (No)
Wetland Hydrology Present?	Yes (No)	
Hydric Soils Present?	Yes (No)	

Remarks:

Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Deane Florin Vineyards Applicant/Owner: Natomas Gardner Investment Grp Investigator(s): Tom Skordal & Jim Gibson	Date: 5/16/04 City/County: Sacramento County State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Vernal Pool Transect ID: 3 Data Point ID: A

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Deschampsia dantsioides (D)	herb	FACW	9.		
2. Plagiobothrys stipitatus (D)	"	OBL	10.		
3. Eleocharis macrostachya	"	OBL	11.		
4. Hordeum hystrix	"	FAC	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks): ___ Streams, Lake, or Tide Gauge ___ Aerial Photographs ___ Other ___ No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: ___ Inundated ___ Saturated in Upper 12 inches ___ Water Marks ___ Drift Lines ✓ Sediment Deposits/Organic Detritus ___ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ___ Oxidized Root Channels in Upper 12 inches ___ Water-Stained Leaves ___ Local Soil Survey Data ✓ FAC-Neutral Test ___ Other (Explain in Remarks)
Field Observations: Depths of Surface Water: _____(in.) Depth to Free Water in Pit: _____(in.) Depth to Saturated Soil: _____(in.)	

Remarks:

Map Unit Name
(Series and Phase): San Joaquin Silt Loam, leveled, 0-1% slopes

Drainage Class: Moderately well drained

Field Observations
Confirm Mapped Type? Yes (No)

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1"	10YR4/2	10YR4/6		Sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ✓ Aquic Moisture Regime
- ___ Reducing Conditions
- ✓ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is this Data Point Within a Wetland? (Yes) No
Wetland Hydrology Present?	(Yes)	No	
Hydric Soils Present?	(Yes)	No	

Remarks:

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Deane Florin Vineyards Applicant/Owner: Natomas Gardner Investment Grp Investigator(s): Tom Skordal & Jim Gibson	Date: 5/16/04 City/County: Sacramento County State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Upland Transect ID: 3 Data Point ID: B

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus diandrus (D)	herb	UPL	9.		
2. Bromus mollis (D)	"	FACU	10.		
3. Erodium botrys (D)	"	UPL	11.		
4. Convolvulus arvensis	"	UPL	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks): ___ Streams, Lake, or Tide Gauge ___ Aerial Photographs ___ Other ___ No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: ___ Inundated ___ Saturated in Upper 12 inches ___ Water Marks ___ Drift Lines ___ Sediment Deposits/Organic Detritus ___ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ___ Oxidized Root Channels in Upper 12 inches ___ Water-Stained Leaves ___ Local Soil Survey Data ___ FAC-Neutral Test ___ Other (Explain in Remarks)
Field Observations: Depths of Surface Water: _____(in.) Depth to Free Water in Pit: _____(in.) Depth to Saturated Soil: _____(in.)	

Remarks: No Positive hydrology indicators observed

Map Unit Name
(Series and Phase): San Joaquin Silt Loam, leveled, 0-1% slopes

Drainage Class: Moderately well drained

Field Observations
Confirm Mapped Type? Yes (No)

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
4"	10YR 3/4	10YR 5/6		Sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: No positive soil indicators observed.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	(No)	Is this Data Point Within a Wetland? Yes (No)
Wetland Hydrology Present?	Yes	(No)	
Hydric Soils Present?	Yes	(No)	

Remarks:

Non-Wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Deane Florin Vineyards Applicant/Owner: Natomas Gardner Investment Grp Investigator(s): Tom Skordal & Jim Gibson	Date: 5/16/04 City/County: Sacramento County State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Seasonal Wetland Transect ID: 4 Data Point ID: A

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Hordeum hystrix (D)	herb	FAC	9.		
2. Lolium perenne (D)	"	FAC	10.		
3. Bromus mollis	"	FACU	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ✓ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ✓ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks:

Map Unit Name
(Series and Phase): San Joaquin Silt Loam, leveled, 0-1% slopes

Drainage Class: Moderately well drained

Field Observations
Confirm Mapped Type? Yes (No)

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
2"	10YR4/2	10YR4/6		Silty loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ✓ Aquic Moisture Regime
- ___ Reducing Conditions
- ✓ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is this Data Point Within a Wetland? (Yes) No
Wetland Hydrology Present?	(Yes)	No	
Hydric Soils Present?	(Yes)	No	

Remarks:

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Deane Florin Vineyards Applicant/Owner: Natomas Gardens Investment Grp Investigator(s): Tom Skendal & Jim Gibson	Date: 5/16/04 City/County: Sacramento County State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Upland Transect ID: 4 Data Point ID: B

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus mollis (D)	herb	FACU	9.		
2. Lolium perenne (D)	"	FAC	10.		
3. Bromus rigidus	"	UPL	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 50%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: No positive indicators observed

Map Unit Name
(Series and Phase): San Joaquin Silt Loam, leveled, 0-1% slopes

Drainage Class: Moderately well drained

Field Observations
Confirm Mapped Type? Yes (No)

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
3"	10YR 4/2			fine sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: No positive indicators observed

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes (No)	Is this Data Point Within a Wetland? Yes (No)
Wetland Hydrology Present?	Yes (No)	
Hydric Soils Present?	Yes (No)	

Remarks:

Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Deane Florin Vineyards Applicant/Owner: Natomas Gardner Investment Grp Investigator(s): Tom Skordal & Jim Gibson	Date: 5/16/04 City/County: Sacramento County State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Transect ID: Data Point ID: 5

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus mollis (D)	herb	FACU	9.		
2. Lolium perenne (D)	"	FAC	10.		
3. Medicago polymorpha (D)	"	UPL	11.		
4. Bromus rigidus	"	UPL	12.		
5. Hordeum hystrix	"	FAC	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 33%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: No positive indicators observed

Map Unit Name
(Series and Phase): San Joaquin Silt Loam, leveled, 0-1% slopes Drainage Class: Moderately well drained
Field Observations
Taxonomy (Subgroup): Abruptic Durixeralfs Confirm Mapped Type? Yes (No)

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
3"	10YR3/3			Silty loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: No Positive indicators observed

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes (No)	Is this Data Point Within a Wetland?	Yes (No)
Wetland Hydrology Present?	Yes (No)		
Hydric Soils Present?	Yes (No)		

Remarks:

Non wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Deane Florin Vineyards Applicant/Owner: Natomas Gardens Investment Grp Investigator(s): Tom Skordal & Jim Gibson	Date: 5/16/04 City/County: Sacramento County State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Transect ID: Data Point ID: 6

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Avena fatua (D)	Herb	UPL	9.		
2. Bromus mollis (D)	"	FACU	10.		
3. Convolvulus arvensis D	"	UPL	11.		
4. Erodium botrys	"	UPL	12.		
5. Lolium perenne (D)	"	FAC	13.		
6. Geranium dissectum	"	UPL	14.		
7. Bromus diandrus	"	UPL	15.		
8. Hordeum hystrix	"	FAC	16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 25%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: No positive indicators observed

Map Unit Name
(Series and Phase): San Joaquin Silt Loam, leveled, 0-1% slopes

Drainage Class: Moderately well drained

Field Observations
Confirm Mapped Type? Yes (No)

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
3"	10YR3/3			sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: No positive indicators observed

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes (No)	Is this Data Point Within a Wetland? Yes (No)
Wetland Hydrology Present?	Yes (No)	
Hydric Soils Present?	Yes (No)	

Remarks:

Non-wetland

APPENDIX B

DELINEATION MAP

APPENDIX C

PLANT LIST

LIST OF PLANTS OBSERVED ON THE DEANE FLORIN VINEYARDS PROPERTY AND THEIR STATUS AS WETLAND INDICATOR SPECIES

Scientific Name	Common Name	Status [1&2]
Agrostis avenacea	hairy flower bentgrass	FACW*
Aira caryophyllea	silver hairgrass	UPL
Avena sp.	wild oats	UPL
Brassica sp.	mustard	NI
Briza minor	little quaking grass	FACW-
Brodiaea sp.	brodiaea	---
Bromus diandrus (*B. rigidus*)	rip-gut grass	UPL
Bromus mollis	soft chess	FACU-
Centaurea solstitialis	yellow star-thistle	UPL
Cichorium intybus	chickory	UPL
Cirsium sp.	thistle	---
Convolvulus arvensis	bindweed	UPL
Cynodon dactylon	Bermuda grass	FAC
Cyperus eragrostis	tall flatsedge	FACW
Deschampsia danthonioides	purple hairgrass	FACW
Eremocarpus setigerus	doveweed	UPL
Erodium sp.	filaree	UPL
Geranium dissectum	cut-leaf geranium	UPL
Holocarpha virgata	tarweed	UPL
Hordeum hystrix (*H. geniculatum*)	Mediterranean barley	FAC
Hordeum leporinum	barley	NI
Hypochaeris glabra	smooth cats tongue	UPL
Juncus bufonius	toad rush	FACW+
Lactuca serriola	prickly lettuce	FAC
Lasthenia sp.	goldfields	NI
Leontodon leysseri	hairy hawkbit	FACU
Lolium perenne (*L. multiflorum*)	perennial ryegrass	FAC*
Lotus purshianus	Spanish clover	FAC
Marrubium vulgare	common horehound	FAC
Paspalum dilatatum	dallis grass	FAC
Plagiobothrys stipitatus var. *micranthus*	slender popcorn flower	OBL
Plantago lanceolata	English plantain	FAC-
Poa annua	annual bluegrass	FACW-

[1] Reed, P.B. 1988. National List of Plant Species That Occur in Wetlands: California (Region 0). Biological Report 88(26.10) May 1988. National Ecology Research Center, National Wetland Inventory, U.S. Fish and Wildlife Service, St. Petersburg, Fl.

[2] OBL = obligate; FACW = facultative wetland; FAC = facultative; FACU = facultative upland; UPL = upland; and NI = no indicator.

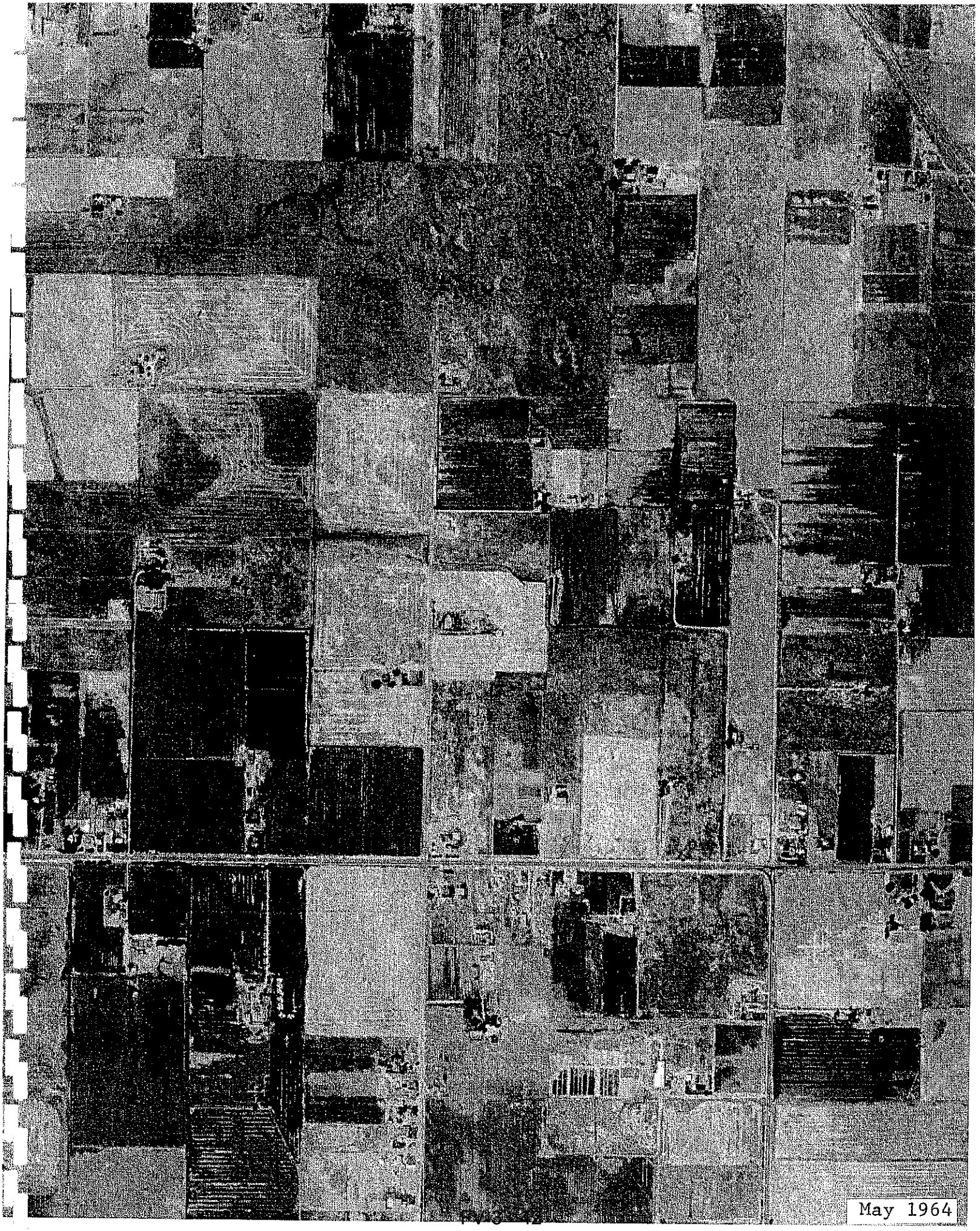
Scientific Name	Common Name	Status
Polypogon monspeliensis	annual rabbit-foot grass	FACW+
Raphanus sativus	wild radish	UPL
Rubus procerus	Himalayan blackberry	FAC
Rumex conglomeratus	clustered dock	FACW
Rumex crispus	curly dock	FACW-
Silybum marianum	milk thistle	UPL
Sonchus arvensis	field sow thistle	FACU
Taeniatherum caput-medusae	medusa-head	UPL
Trifolium sp.	clover	---
Vicia villosa	winter vetch	---
Vulpia myuros	rat-tail fescue	FACU

APPENDIX D

AERIAL PHOTOGRAPHS

Clodfelter
August 1937

September 1957


May 1964

August 1972

7819-00
Supplement to
Florin Vineyards

SIERRA NEVADA ARBORISTS

NATOMAS GARDENS INVESTMENT GROUP

APN 064-0080-043

Florin Vineyard Gap Area
County of Sacramento, California

***INITIAL* ARBORIST REPORT**
AND
INVENTORY SUMMARY

Submitted by:

Edwin E. Stirtz, Consulting Arborist
ISA Certified Arborist WE-0510A
Member, American Society of Consulting Arborists
SIERRA NEVADA ARBORISTS

September 3, 2004

503 Anthony Court ◆ Roseville, CA 95678 ◆ 916-784-7940 ◆ 916-784-1901 Fax

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COPYRIGHT STATEMENT

This consultant's report, dated September 3, 2004, is for the exclusive and confidential use of Natomas Gardens Investment Group concerning development of APN 064-0080-043 located within the Florin Vineyard Community Plan Area in the County of Sacramento, 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

September 3, 2004

Mr. Larry Deane
NATOMAS GARDENS INVESTMENT GROUP
2264 Fair Oaks Boulevard, Suite 100
Sacramento, California 95825

Re: ***Initial Arborist Report and Inventory Summary:***
APN 064-0080-043 – Florin Vineyard Gap Area, County of Sacramento

Dear Mr. Deane:

On September 2, 2004, Sierra Nevada Arborists visited APN 064-0080-043 located within the Florin Vineyard Community Plan Area in the County of Sacramento, California. The purpose of this site visit was to conduct a field inspection to identify, inventory and evaluate all trees within the project boundaries which measure 4 inches and greater in diameter at breast height ("DBH"), specifically including the identification of any native oaks, California Sycamore, Northern California Black Walnut, Oregon Ash, Goodding's Black Willow, California Box Elder and White Alder, and any other significant trees which measure 19 inches DBH and larger. The trees which met the defined criteria were identified in the field with a round, metal-stamped number tag beginning with Tree No. 196 which was affixed to the tree's trunk. For your reference, the numbers utilized in this report correspond to the tree tag affixed to the tree in the field, and those numbers have been rough-plotted on the enclosed excerpt from the site plan which was provided for reference by Bruce Walters of MacKay & Somps Civil Engineers.

SUMMARY

As you will see, 53 trees totaling 800 aggregate diameter inches have been documented within this report. Our site visit found that the vast majority of these trees are ***non-native species*** which are not protected by the County of Sacramento Tree Preservation and Protection Ordinance; however, these trees have been memorialized within this report due to their size (i.e., all trees which measure 4"+ DBH) to accurately document the trees' species, diameter and dripline measurements for mapping purposes as requested by DERA. For ease of reference, the ***non-ordinance*** trees have been highlighted in blue within the accompanying Inventory Summary.

Our site visit found 11 trees totaling 312 aggregate diameter inches which may be protected by Ordinance either due to their species and/or size. Composition of these 11 trees is exclusively non-native species which measure 19"+DBH.

Recommended Removals

At this time no trees have been recommended for removal from the project site due to noted defects. It should also be noted that a few trees within the project boundaries possess structural defects and/or characteristics which warrant further evaluation and/or annual monitoring to assess the trees' ongoing structural integrity. For reference, these trees have been separately highlighted in yellow within the accompanying Inventory Summary. At this juncture these trees have not been recommended for removal since development plans have not yet been finalized. We draw your attention to these trees, however, and note that ***precaution should be taken if development and/or pedestrian activity will occur within the fall zone of these trees.*** If retained, these trees should be monitored on an annual basis by an ISA Certified Arborist to assess the trees' ongoing structural integrity and potential for hazard in a developed environment.

Construction Impact Assessment

Please note that while this is a detailed review of the trees within the current project boundaries specific tree impacts cannot be definitively assessed until development plans have been finalized. As you know, trees are living organisms whose condition may change at any time. Therefore, a complete assessment of construction impacts and specific mitigation recommendations cannot be made until those development plans have been refined and finalized. At that time an ISA Certified Arborist should review the improvement plans to provide an analysis of construction impacts, including identification of trees which may require removal for home construction and other contemplated development activities. This will be particularly important if home construction and/or pedestrian activities will fall within or near the fall zone of a tree which has been noted as having structural defects, questionable long-term longevity and/or a conditional rating which is less than "fair". The review should also include an assessment of impacts which will be sustained by those trees which will be preserved within the project boundaries, along with associated mitigation recommendations. In the meantime, this report provides recommendations for pre-construction maintenance, as well as General Preservation Recommendations which should be utilized as a guideline for the protection of trees which may be preserved within the development area.

GENERAL COMMENTS AND ARBORIST'S DISCLAIMER

As you know, a tree permit and/or authorization to develop should be obtained from the County of Sacramento approving contemplated development activities, including the removal of protected trees, within the project area. All terms and conditions of the tree permit are the sole and exclusive responsibility of the developer. It should also be noted that prior to final inspection the County *may* require written verification from an ISA Certified Arborist certifying the approved removal activities and/or implementation of the mitigation measures outlined for the preserved trees on the site. Sierra Nevada Arborists cannot provide written Certification of Compliance unless we have been provided with a copy of the approved site development plans and applicable permits, and are on site to monitor and observe regulated activities during the course of construction. Therefore, it will be necessary for the developer to notify Sierra Nevada

Arborists well in advance (at least 48-hours prior notice) of any regulated activities which are scheduled to occur on site so that those activities can be properly monitored and documented for compliance certification.

Lastly, at this juncture we believe implementation of the general recommendations outlined within this report will attempt to afford the trees the best possibility for survival. However, these recommendations and their implementation should not be viewed as a guarantee or warranty against the trees' ultimate demise and/or failure in the future, and are being provided solely for the purpose of obtaining development authorization from the County of Sacramento. Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of the trees and ***attempt to reduce the risk of living near trees***. Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Since trees are living organisms, conditions are often hidden within the tree and below ground, and their condition may change at any time. Arborists cannot guarantee that a tree will be healthy and/or safe under all circumstances, or for a specific period of time. Likewise remedial treatments cannot be guaranteed. Trees can be managed but they cannot be controlled. To develop land and live near trees is to accept some degree of risk and the only way to eliminate all risk associated with trees is to eliminate all of the trees. ***An entity who develops land and/or builds homes with a tree in the vicinity should be aware of this Arborists' Disclaimer and be further advised that the developer and their future homeowners assume the risk that a tree could at any time suffer a branch and/or limb failure, blow over in a storm and/or fail for no apparent reason which may cause bodily injury or property damage.*** Sierra Nevada Arborists cannot predict acts of nature including, without limitation, storms of sufficient strength which can take down even a healthy tree. The information contained within this report is believed to be true to the best of the author's knowledge and experience as of the date it was prepared; however, certain conditions may exist which only a comprehensive, scientific, investigation might reveal which should be performed by other consulting professionals. Neither this author nor Sierra Nevada Arborists has assumed any responsibility for liability associated with the preserved trees on or adjacent to APN 064-0080-043, their future demise and/or any damage which may result therefrom.

Thank you for allowing Sierra Nevada Arborists to assist you with this review and analysis. 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
Member, American Society of Consulting Arborists

EES:ks
Enclosures
cc: Mr. Bruce Walters, MacKay & Somps Civil Engineers (w/enclosures)

NATOMAS GARDENS INVESTMENT GROUP
APN 064-0080-043 (Florin Community Plan Area)
County of Sacramento, California
ARBORIST INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ARBORIST REMOVALS (inches)	NOTABLE CHARACTERISTICS	MAINTENANCE RECOMMENDATIONS
						RT CR	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
196	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	10,11	21	14	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Weak primary crotch; callusing wounds, south side, at 2' above grade with no decay apparent at this time; slightly above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
197	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	9,10,10	29	15	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Weak primary crotches; slightly above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
198	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		18	24	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
199	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	8,9	17	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
200	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		13	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
201	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		13	20	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
202	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	9,10,11,17	47	21	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Weak primary crotches	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
203	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		14	19	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
204	Modesto Ash	*(Fraxinus velutina)*		24	30	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Weak primary crotches; slightly above average amount of deadwood	Clean out crown; prune to reduce weight; consider use of cable system to help support primary crotches
205	Modesto Ash	*(Fraxinus velutina)*		17	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
206	Foothill Pine	*(Pinus sabiniana)*		31	26	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood/failures	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
207	Fruitless Mulberry	*(Morus alba)*		25	22	Fair	Fair	Poor to fair	Fair	Fair	Fair		Pruned for utility line clearance	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
208	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	3,3,4,4,4	18	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
209	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	5,11	16	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
210	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	2,3,3,4	12	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
211	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	3,4	7	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
212	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		8	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
213	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	4,7	11	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
214	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		6	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
215	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		9	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
216	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		17	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
217	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		9	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
218	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		5	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
219	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		10	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
220	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		11	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
221	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	5,5	10	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
222	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	7,9	16	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
223	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	5,6	11	5	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
224	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	5,6	11	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
225	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	3,15	18	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
226	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	4,5	9	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
227	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		15	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
228	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		5	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
229	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	10,13	23	22	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Weak primary crotch; easterly stem failed at 10' above grade	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
230	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	11,11	22	20	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Weak primary crotch	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
231	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		8	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
232	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	3,4,5	12	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
233	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	5,7	12	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								

NATOMAS GARDENS INVESTMENT GROUP
APN 064-0080-043 (Florin Community Plan Area)
County of Sacramento, California
ARBORIST INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ARBORIST REMOVALS (inches)	NOTABLE CHARACTERISTICS	MAINTENANCE RECOMMENDATIONS
						RT CR	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
234	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	2,6	8	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
235	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	2,4	6	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
236	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	2,2,3,4,4	15	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
237	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	3,4,5	12	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
238	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	2,3,3,3,4	15	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
239	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	4,4	8	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
240	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	3,3	6	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
241	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	8,8,9,9,9	43	20	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Weak primary crotches; slightly above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
242	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	7,8	15	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
243	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	3,4,4,4,5,7	27	13	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Weak primary crotches; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
244	Lombardi Poplar	*(Populus lombardii)*	2,4,4,4	14	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
245	Lombardi Poplar	*(Populus lombardii)*		20	13	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
246	Lombardi Poplar	*(Populus lombardii)*	3,3,3,4,4	17	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
247	Lombardi Poplar	*(Populus lombardii)*	2,3	5	5	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
248	Lombardi Poplar	*(Populus lombardii)*	4,5	9	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								

TOTAL INVENTORIED TREES = 53 Trees (800 aggregate diameter inches)
ARBORIST-RECOMMENDED TREE REMOVALS = 0 Trees
PRECAUTIONARY TREES SEPARATELY HIGHLIGHTED FOR REFERENCE

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.

STREET AND UTILITY MITIGATIVE MEASURES

Generally, impacts from street construction alone are less of an impact than those occurring with dry and wet utility construction. Often it is very difficult or impossible to effectively preserve a tree with more than 30% of its critical root zone area falling within the PUE/street.

Dry Utilities.

Since dry utilities are typically located behind the curb and gutter and/or sidewalks, where applicable, they fall within the closest proximity to trees preserved outside of the roadway. The dry utilities tend to be shallow, within the top 5 feet of the soil profile. Unfortunately, in this region that is also typically where tree roots are found. Where possible, dry utilities should be routed on the opposite side of the street from tree locations. This would require more street crossings than normally planned; however, impacts to trees would be greatly lessened. In some circumstances, hand digging the utilities through critical root zone areas may be an option. Since the dry utility profile is usually 3-4 in depth and includes multiple conduits or plumbing due to the various utilities, boring beneath the critical root zone area is not usually effective.

Wet Utilities.

The greatest conflicts with wet utilities typically arise from deep sanitary sewers or storm drains. Soil conditions and safety concerns often require than trench openings at ground level be quite large. Therefore, the storm and sewer locations must be carefully considered. In some circumstances where a particularly valuable tree may be impacted by wet utilities boring may be an option. Since water main construction tends to be more shallow than storm drains or sewers, and flow lines are not as critical, boring can often be most effective in preserving tree roots.

Streets/Hardscape.

Should the street construction sections be 18" or less, the percentage of encroachment into the critical root zone area may be able to exceed 20%. If this is possible, determinations cannot be made until an accurate evaluation of the root system profiles on the site has been completed. It is impossible to preserve roots within the street section profile. Further, the construction of the street alters the gaseous exchange and oxygen to the tree's root system. In some circumstances aeration systems may mitigate a small portion of these impacts.

Hardscape (concrete slabs, walkways, etc.) should be minimized within the critical root zone area. Grade cuts in excess of 12" should be avoided. In some circumstances aeration systems may be required to reduce root system stress.

CONCLUSION

In an effort to minimize tree removals in the early phases of a project a category for potential tree removals should be established. This category would include those trees which are located in areas that would expose them to moderate or significant encroachments and/or construction impacts. As construction occurs and construction staking is installed, assessment of impacts are much more accurate than those based simply on plan review. At that time, determinations by the Project Arborist and Agency Representatives may result in preservation of trees which may have previously appeared as requiring removal on the plans.

DEFINITIONS AND RATINGS

Within this report you will find the following information defined as follows:

Tree Number:	Corresponds to aluminum tag attached to the tree.
Species Identification:	Scientific and common species name.
Diameter ("DBH"):	This is the trunk diameter as measured at breast height (industry standard 4.5 feet above ground level).
Dripline radius ("DLR"):	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.

Structure and Vigor Ratings:

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.

Encroachment Ratings:

MINOR - No anticipated long-term negative effects

MODERATE – Potential long-term negative effects

SIGNIFICANT – Probable long-term negative effects

Maintenance Recommendations:

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.

SUBSURFACE LIQUID FERTILIZATION INJECTION/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.

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Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: P:\2004\04-0177 Legends Meadow\Env Docs\Technical Studies\040177 urbemis.urb924

Project Name: Legends Meadows

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2008 TOTALS (lbs/day unmitigated)	11.15	65.77	34.85	0.01	220.05	4.04	224.10	45.96	3.72	49.68	5,753.70
2009 TOTALS (lbs/day unmitigated)	560.58	62.20	64.57	0.06	220.05	3.82	223.87	45.96	3.51	49.48	7,454.97

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	20.00	4.09	8.52	0.00	0.03	0.03	5,133.81

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	27.45	25.89	315.08	0.25	38.40	7.44	24,147.16

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SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	47.45	29.98	323.60	0.25	38.43	7.47	29,280.97

REVISED JURISDICTIONAL DELINEATION AND SPECIAL STATUS SPECIES EVALUATION

LEGENDS MEADOWS PROPERTY

RECEIVED
AUG 28 2007
DEPARTMENT OF ENVIRONMENTAL REVIEW AND ASSESSMENT

SACRAMENTO COUNTY, CALIFORNIA

AUGUST 2004
REVISED OCTOBER 2006
2ND REVISION AUGUST 2007

Prepared For:

LAJ CONSTRUCTION, INC
c/o Baker Williams Engineering Group
6020 Rutland Drive, Suite 19
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Prepared By:

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INTRODUCTION

The purpose of this report is to present the results of a jurisdictional delineation and special status species evaluation conducted for the Legends Meadows Property.

LOCATION

The study area includes a ± 41.6-acre parcel situated east of Elk Grove-Florin Road, west of Florencia Lane, north of Leland Avenue, and south of Gerber Road in the Florin-Vineyard Community Plan development area. It lies in the northwest ¼ of Section 7, Township 7 North, Range 6 East of Sacramento County, California (Latitude 38° 28' North, Longitude 121° 21' West). Figure 1 is a vicinity map.

METHODOLOGY

Field studies were conducted on July 26, 2004 for the purpose of delineating existing waters and wetlands in the study area and evaluating special status species and their habitats.

Jurisdictional Delineation

The boundaries of wetlands, data points, and other site features were surveyed in the field by Gibson & Skordal, LLC utilizing a Trimble GPS data logger with sub-meter accuracy. The delineation map was prepared by layering the GPS field data over aerial photography flown in May of 2002 by the United States Geological Survey (USGS). Mr. Dave Leput, Corps of Engineers, field verified our delineation on March 15, 2006. All requested changes are incorporated in this report.

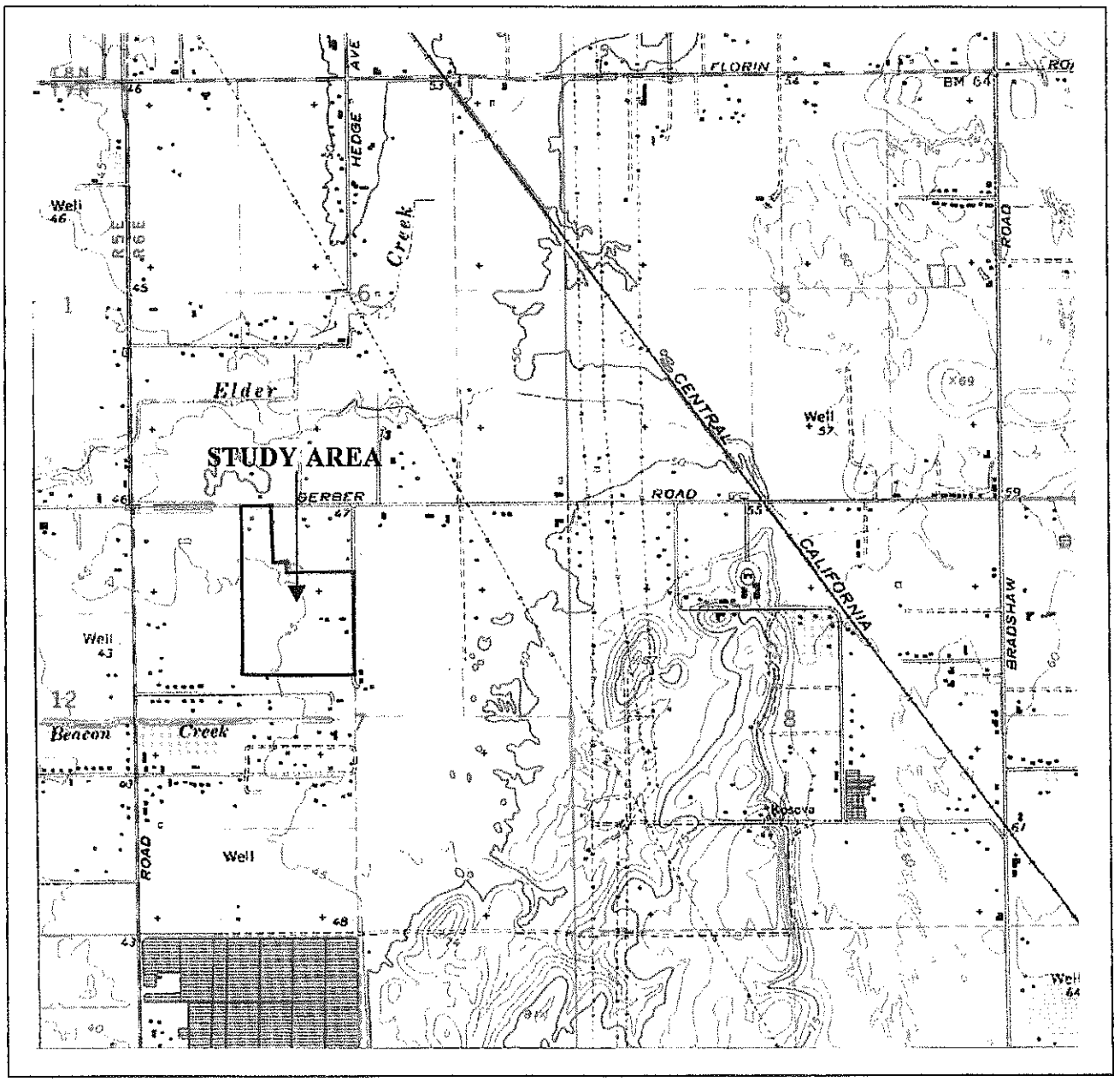
The **"Corps of Engineers Wetlands Delineation Manual"**[1] was used as the standard of determining whether specific areas are wetlands potentially subject to regulation under Section 404 of the Clean Water Act. Corps of Engineers' regulations (33 CFR 328) was used to determine the presence of waters of the United States other than wetlands. The **"National List of Plant Species That Occur in Wetlands: California (Region 0)"**[2] was used to determine the

[1] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station. Vicksburg, Miss.

[2] Reed, P.B. 1988. National List of Plant Species That Occur In Wetlands: California (Region 0). Biological Report 88(26.10). May 1988. National Ecology Research Center, National Wetlands Inventory, U.S. Fish & Wildlife Service, St. Petersburg, Florida.

FIGURE 1

VICINITY MAP



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N
(Scale: 1 Inch = 2000 Feet)

Source: Elk Grove 7.5 Minute USGS Topographic Quadrangle

wetland indicator status of plants observed in the study area. The **"Soil Survey of Sacramento County, California"**[3] was used to evaluate soil mapping in the study area.

Detailed data on vegetation, soils, and hydrology characteristics was taken in the field. Data forms documenting the basis for determining which areas are wetland or upland are provided in Appendix A.

Special Status Species Evaluation

The special status species evaluation includes those species identified as having relative scarcity and/or declining populations by the United States Fish & Wildlife Service (FWS) or California Department of Fish & Game (CDFG). Special status species include those formally listed as threatened or endangered, those proposed for formal listing, candidates for Federal listing, and those considered to be Species of Concern by FWS or Species of Special Concern by CDFG. In addition to these, we also included those species considered to be "special animals" or "fully protected" by the CDFG and those plant species considered to be rare, threatened or endangered in California by the California Native Plant Society (CNPS).

In our evaluation, we considered those special status species documented by the California Natural Diversity Database (CNDDB) as occurring in the vicinity of the study area. A record search of the CNDDB was conducted for the Elk Grove, Florin, Carmichael, and Sloughhouse 7.5 Minute USGS quadrangles to identify all documented sightings of special status species in the vicinity of the study area. In addition to these species, we included other special status species that may have some potential for occurring in the study area based on historical range data and/or the presence of suitable habitat.

GENERAL SITE CONDITIONS AND HABITATS

The study area is bordered by Gerber Road and ranchettes to the north, Florencia Lane to east, and a mix of ranchettes, irrigated pasture, cropland, and grassland to the east and south. The study area supports level to nearly level terrain that has been historically irrigated for use as grazing pasture, but it is not currently irrigated. Several existing home sites with associated out-structures, barns, and sheds are located in the northwest corner and along the eastern boundary of the study area.

[3] USDA, Soil Conservation Service. 1993. Soil Survey of Sacramento County, California.

A majority of the study area supports annual grassland habitat dominated soft chess (*Bromus mollis*), rat-tail fescue (*Vulpia myuros*), and filaree (*Erodium sp.*). Other common species include hare barley (*Hordeum leporinum*), rip-gut brome (*Bromus diandrus*), wild oats (*Avena sp.*), Mediterranean barley (*Hordeum hystrix*), hairy hawkbit (*Leontondon leysseri*), perennial rye (*Lolium perenne*), tarweed (*Holocarpha virgata*), little quaking grass (*Briza minor*), and Bermuda grass (*Cynodon dactylon*). A few scattered trees associated with the home sites include California sycamore (*Plantanus racemosa*), California walnut (*Juglans californica*), blue gum (*Eucalyptus sp.*), Modesto Ash, olive (*Olea europaea*), fig (*Ficus carica*), and a variety of other ornamentals.

Soils in the study area are mapped as San Joaquin silt loam, leveled, 0 to 1 percent slopes. San Joaquin soils are moderately deep, moderately well-drained soils that occur in low terrace features. Although they are not listed as hydric, they do have hydric inclusions in depressions and drainageways. Figure 2 provides a soils map for the site.

EXISTING WETLANDS

We identified a total of 1.662 acres of waters/wetlands in the study area including 1.403 acres of seasonal wetlands and a 0.259 acre of drainage ditches. Appendix B provides a delineation map showing the location of existing wetlands and waters, data points, and the study area boundary. Appendix C provides a list of plant species observed in the study area including their status as wetland indicators. Appendix D contains a topographic map for the site.

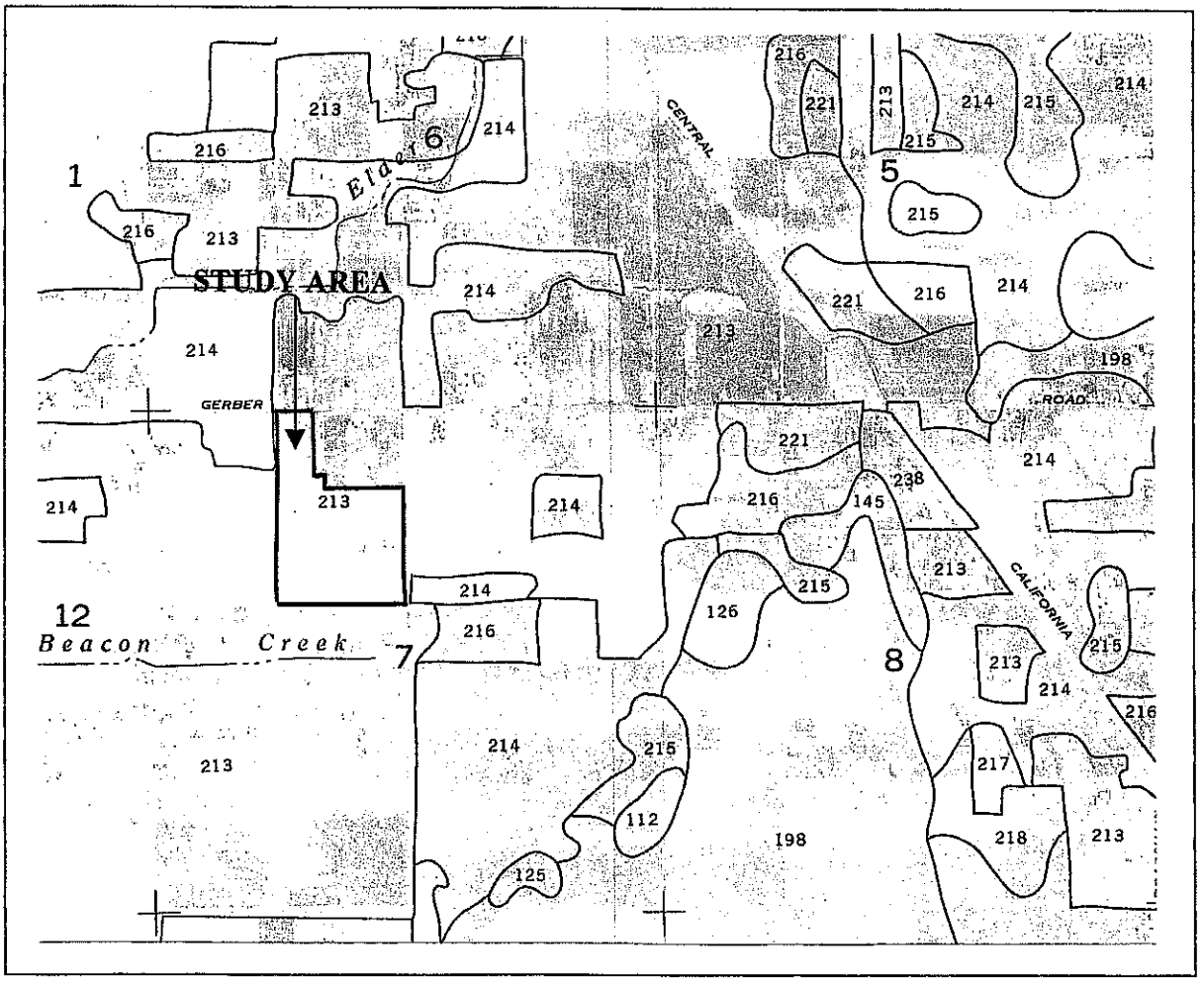
Seasonal Wetlands

Seasonal wetlands in the study area occur in shallow depressions that experience ponding and saturation conditions that persist for a long duration following periods of heavy precipitation in the winter and early spring. Wetland hydrology field indicators observed include location within a defined depression overlying tight or restrictive soils, oxidized root channels on live roots, and algae matting in the deeper zones of the wetlands. Hydric soils were assumed present in most of the seasonal wetlands based on field indicators of an aquic moisture regime.

A majority of the seasonal wetlands support a facultative plant community dominated by perennial rye and Mediterranean barley. Other common associates include Carter's buttercup (*Ranunculus alveolatus*), annual rabbit-foot grass (*Polypogon monspeliensis*), creeping spikerush

FIGURE 2

SOILS MAP



Soil Unit	Soil Name	Soil Classification	Drainage Class
213	San Joaquin silt loam, leveled, 0-1% slopes	Abruptic Durixeralfs	moderately well drained

Source: USDA, Soil Conservation Service. 1993. Soil Survey of Sacramento County, California

(*Eleocharis macrostachya*), loosestrife (*Lythrum hyssopifolia*), and curly dock (*Rumex crispus*). The adjacent upland is marked by a gentle rise in landscape position, a lack of wetland hydrology and hydric soil indicators, and the emergence of an upland grassland plant community typically dominated by non-hydrophytes.

Drainage Ditch

We identified two drainage ditches totaling 0.259 acre. Based on review of aerial photography dating back to 1937, it appears that the drainage ditches are part of historical waters of the United States that were channeled and ditched prior to 1937 as part of historical farming and irrigation practices.

Jurisdictional Status

After field review by the Corps of Engineers, they determined that all mapped features are jurisdictional.

SPECIAL STATUS SPECIES

Table 1 provides a list of special status species that were evaluated including their listing status, habitat associations, and whether potential habitats occur in the study area. Of the twenty-four special status species evaluated in Table 1, ten species including the bank swallow, Bogg's Lake hedge-hyssop, California tiger salamander, giant garter snake, Sacramento orcutt grass, slender orcutt grass, Swainson's hawk, valley elderberry longhorn beetle, vernal pool fairy shrimp, and vernal pool tadpole shrimp are Federal and/or State listed threatened and/or endangered species. The following is a detailed summary of special status species and their habitats as they relate to the study area.

Swainson's Hawk and Other Raptors

Swainson's hawk (*Buteo swainsoni*) is a raptor species currently listed as threatened in California by the CDFG. They typically nest in tall cottonwoods, valley oaks, or willows associated with riparian corridors with adjacent grassland, pasture, and/or cropland with a high density of rodents. The Central Valley population typically breeds and nests in late spring through early summer before migrating to Central America and South America for the fall and winter seasons.

TABLE 1

EVALUATION OF SPECIAL STATUS SPECIES HABITATS FOR THE LEGENDS MEADOWS PROPERTY

	State Status	Federal Status	CNPS Listing	Habitat Association	Potential Habitat In Study Area
Birds					
Accipiter cooperi (Cooper's hawk)	Species of Special Concern	None		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes -suitable foraging & marginal nesting habitat
Accipiter striatus (sharp-shinned hawk)	Species of Special Concern	None		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes -suitable foraging & marginal nesting habitat
Agelaius tricolor (tricolored blackbird)	Species of Special Concern	Species of Concern		Colonial nester in cattails, bullrush, or blackberries associated with marsh habitats.	No
Athene cunicularia (burrowing owl)	Species of Special Concern	Species of Concern		Nests in abandoned ground squirrel burrows associated with open grassland habitats.	Yes -habitat present, but no owls observed on site.
Buteo swainsoni (Swainson's hawk)	Threatened	None		Nests in tall cottonwoods, valley oaks or willows. Forages in fields, cropland, irrigated pature, and grassland near large riparian corridors.	Yes -suitable foraging & marginal nesting habitat
Circus cyaneus (northern harrier)	Species of Special Concern	None		Forages in open grasslands, nests on ground in shrubby vegetation.	Yes - foraging habitat present, but not suitable for nesting.
Elanus leucurus (white-tailed kite)	Fully Protected	None		Nests in riparian corridors along streams and rivers, and forages in nearby grasslands and fields.	Yes -suitable foraging & marginal nesting habitat
Riparia riparia (bank swallow)	Threatened	Species of Concern		Colonial nester in vertical cliffs and banks associated with riparian zones along streams, rivers, and lakes.	No
Amphibians & Reptiles					
Ambystoma trigrinum californiense (California tiger salamander)	Species of Special Concern	Threatened		Breeds in ponds or other deeply ponded wetlands, and uses gopher holes and ground squirrel burrows in adjacent grasslands for upland refugia/foraging.	No
Clemmys marmorata marmorata (northwestern pond turtle)	Species of Special Concern	Species of Concern		Ponds, rivers, streams, wetlands, and irrigation ditches with associated marsh habitat.	No
Scaphiopus hammondii (western spadefoot)	Species of Special Concern	Species of Concern		Breeds in vernal pools, seasonal wetlands and associated swales. Forages and hibernates in adjacent grasslands.	Yes - marginal habitat exists, but not highly suitable for species
Thamnophis gigas (giant garter snake)	Threatened	Threatened		Rivers, canals, irrigation ditches, rice fields, and other aquatic habitats with slow moving water and heavy emergent vegetation.	No

TABLE 1

EVALUATION OF SPECIAL STATUS SPECIES HABITATS FOR THE LEGENDS MEADOWS PROPERTY

	State Status	Federal Status	CNPS Listing	Habitat Association	Potential Habitat In Study Area
Invertebrates					
Branchinecta lynchi (vernal pool fairy shrimp)	None	Threatened		Vernal pools and other seasonally ponded wetlands.	Yes -marginal habitat in SW's
Branchinecta mesovallensis (midvalley fairy shrimp)	None	None		Vernal pools and other seasonally ponded wetlands.	Yes -marginal habitat in SW's
Desmocerus californicus dimorphus (valley elderberry longhorn beetle)	None	Threatened		Dependent upon elderberry plant (Sambucus mexicana) as primary host species	No
Lepidurus packardi (vernal pool tadpole shrimp)	None	Endangered		Vernal pools and other seasonally ponded wetlands.	Yes -marginal habitat in SW's
Linderiella occidentalis (California linderiella)	None	None		Vernal pools and other seasonally ponded wetlands.	Yes -marginal habitat in SW's
Plants					
Downingia pusilla (dwarf downingia)	None	None	CNPS-2	Vernal pools	No - SW's lack suitable ponding regimes & VP plant associates
Gratiola heterosepala (Bogg's Lake hedge-hyssop)	Endangered	None	CNPS-1B	Vernal pools and margins of lakes/ponds	No - SW's lack suitable ponding regimes & VP plant associates
Juncus leiospermus var. ahartii (Ahart's dwarf rush)	None	Species of Concern	CNPS-1B	Vernal pools	No - SW's lack suitable ponding regimes & VP plant associates
Legenere limosa (legenere)	None	Species of Concern	CNPS-1B	Vernal pools	No - SW's lack suitable ponding regimes & VP plant associates
Orcuttia tenuis (slender orcutt grass)	Endangered	Threatened	CNPS-1B	Vernal pools	No - SW's lack suitable ponding regimes & VP plant associates
Orcuttia viscida (Sacramento orcutt grass)	Endangered	Threatened	CNPS-1B	Vernal pools	No - SW's lack suitable ponding regimes & VP plant associates
Sagittaria sanfordii (Sanford's arrowhead)	None	Species of Concern	CNPS-1B	Deep aquatic habitats associated with canals, drainages, and ditches.	No

Based on CNDDB sighting records, active Swainson's hawk nests have been documented within a 2 ½ to 3-mile radius of the study area including several nests along the east side of Highway 99 between Calvine Road and Sheldon Road. Given this, the pasture and grassland habitat in the study area provides potential foraging habitat for Swainson's hawk. Additionally, there is suitable foraging habitat present for a variety of other raptors including white-tailed kite, northern harrier, red-tailed hawk, sharp-shinned hawk, and Cooper's hawk. The trees in the study area provide only marginal nesting potential for raptors.

Burrowing owl (*Athene cunicularia*) is a ground nesting raptor species afforded protection by CDFG as a species of special concern due to potentially declining populations in the Central Valley of California. They typically inhabit open grassland habitats where they nest in abandoned ground squirrel burrows and other nesting cavities associated with raised mounds, levees, or soft berm features. Although there is potential nesting and foraging habitat available for burrowing owls, we did not observe any indication of current burrowing owl activity at the site.

Tricolored Blackbird

Tricolored blackbirds (*Agelaius tricolor*) are afforded protection by CDFG as a species of special concern due to declining populations in the region. They are colonial nesters preferring to nest in dense stands of cattails and/or bullrush, but they also commonly nest in blackberry thickets associated with drainages, ditches, and canals. There have been a number of documented sightings of tricolored blackbird nesting colonies in the Florin and Elk Grove quadrangles, but the locations have been excluded from CNDDB records for protection issues.

The absence of suitable nesting habitat in the study area would eliminate any reasonable potential for tricolored blackbirds to nest at the site.

California Tiger Salamander

The California tiger salamander (*Ambystoma trigrinum californiense*) is a Federally threatened species and a California Species of Special Concern that typically breeds in seasonal or permanent ponds. California tiger salamander (CTS) may also breed in deeper ponded vernal pools, seasonal wetlands and/or other seasonal pools within swales or channels. They typically spend a majority of their life cycle living below ground in ground squirrel burrows or pocket gopher burrows in grasslands situated adjacent to suitable breeding sites.

The absence of potential breeding habitat in or adjacent to the study area and the history of irrigation at the site would eliminate any reasonable potential for CTS to occur in the study area.

Giant Garter Snake

Giant garter snake (GGS) is designated as a Federal threatened and State threatened species afforded special protection by FWS and CDFG. GGS is generally associated with larger canals, irrigation ditches, and other semi-permanent to permanent aquatic sites with slow moving water and an abundance of emergent vegetation.

Although GGS has been documented within Elk Grove Creek and lower Morrison Creek situated to the west of Highway 99, there have not been any documented GGS sightings along the east side of Highway 99 including the region surrounding the study area. Given this and given the absence of potential or suitable breeding habitat in or near the study area, there is little if any potential for GGS to utilize this site.

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (*Desmocerus californicus*) is a Federal threatened species that is dependent upon the elderberry plant (*Sambucus sp.*) as a primary host species. Elderberry shrubs are a common component of riparian areas throughout the Sacramento Valley region, and they have been documented as occurring at numerous locations in the vicinity of the study area.

Given the absence of elderberry shrubs in the study area, there is no potential for valley elderberry longhorn beetle to occur at the site.

Vernal Pool Branchiopods

Federally listed vernal pool branchiopods including the threatened vernal pool fairy shrimp (*Branchinecta lynchi*) and the endangered vernal pool tadpole shrimp (*Lepidurus packardi*) have been documented as occurring in Elk Grove and Florin USGS quadrangles. Other non-listed branchiopods known to occur in the region include California linderiella (*Linderiella occidentalis*) and midvalley fairy shrimp (*Branchinecta mesovallensis*).

The branchiopod species listed above are generally restricted to vernal pools and/or other seasonally ponded wetlands that sustain inundation during the winter before drying up in the late spring. Given that some or all of the seasonal wetlands in the study area support seasonal

ponding conditions, they are considered as potential habitat for special status branchiopods including the vernal pool fairy shrimp, mid-valley fairy shrimp, and California linderiella. However, given the history or irrigation at this site, the potential for special status branchiopods to occur here would be minimal. In our opinion, the seasonal wetlands do not support suitable ponding regimes typically associated with tadpole shrimp populations.

Special Status Plants

Special status plant species identified on the CNDDB as occurring in the vicinity of the study area, or may potentially occur in the area, include Ahart's dwarf rush (*Juncus leiospermus ahartii*) dwarf downingia (*Downinia pusilla*), Bogg's Lake hedge-hyssop (*Gratiola heterosepala*), legenere (*Legenere limosa*), Sacramento orcutt grass (*Orcuttia viscida*), slender orcutt grass (*Orcuttia tenuis*), and Sanford's arrowhead (*Sagittaria sanfordii*).

Ahart's dwarf rush, dwarf downingia, legenere, Bogg's Lake hedge-hyssop, Sacramento orcutt grass, and slender orcutt grass are all strongly associated with vernal pools habitats. Bogg's Lake hedge-hyssop can also occur around the perimeter of lakes and ponds. Conversely, Sanford's arrowhead generally occurs in deep aquatic habitats associated with drainages, canals, and larger ditches that sustain inundation and/or slow moving water into early summer.

The seasonal wetlands in the study area typically lack suitable ponding regimes and vernal pool plant associates considered as indicative of or endemic to vernal pools. Given this and given the history or irrigation at this site, it is our opinion that the existing seasonal wetlands do not provide suitable habitat for Ahart's dwarf rush, Bogg's Lake hedge-hyssop, dwarf downingia, legenere, Sacramento orcutt grass, or slender orcutt grass. Additionally, the drainage ditch and irrigation ditches do not support suitable long-term flow conditions or ponding conditions sufficient to support Sanford's arrowhead.

SUMMARY

We identified a total of 1.662 acres of wetlands/waters in the study area including seasonal wetlands and two drainage ditches that are subject to regulation by the Corps under Section 404 of the Clean Water Act.

In regards to special status species and their habitats, a number of special status raptors including Swainson's hawk, sharp-shinned hawk, Cooper's hawk, white-tailed kite, and northern harrier would have a reasonable potential for occurring in the study area based on the presence of

suitable foraging habitat. There is also suitable foraging and nesting habitat available for burrowing owls.

The seasonal wetlands may provide potential habitat for special status branchiopods including vernal pool fairy shrimp, mid-valley fairy shrimp, and California linderiella. At this time, protocol branchiopod surveys have not been conducted for this site. Other Federally listed special status species including the California tiger salamander, giant garter snake, and valley elderberry longhorn beetle would have little if any potential for occurring in the study area based on the absence of suitable habitat.

APPENDIX A

DATA FORMS

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Legends Meadows	Date: 7-26-04
Applicant/Owner: ———	City/County: Sacramento Co.
Investigator(s): D. Skordal, J. Gibson	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Seasonal Wetland
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 1
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: A

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Hordeum hystrix (D)		FAC	9.		
2. Lolium perenne (D)		FAC	10.		
3. Rumex conglomeratus		FACW	11.		
4. Polygonum hanspeliensis		FACW+	12.		
5. Eleocharis macrostachya		OBL	13.		
6. Vulpia myuros		FACU	14.		
7. Rumex crispus		FACW	15.		
8. Ranunculus alveolatus		OBL	16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100% FAC Dominated

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ✓ Water Marks
- ___ Drift Lines
- ✓ Sediment Deposits/Organic Detritus – Algae
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ✓ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ✓ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Shallow depression w/ algae matting in low spots, & oxidized root channels on live roots!

SOILS

Map Unit Name (Series and Phase): (2/3) San Joaquin silt loam, leveled, 0-1 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-8	10YR 4/3	Yes	—	fine sandy loam / silt loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ✓ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: Hydric Soils assumed based on field indicators of aquic Moisture regime!

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	No	Is this Data Point Within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No	
Hydric Soils Present?	Yes	No	

Remarks:

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Legends Meadows	Date: 7-26-04
Applicant/Owner: —	City/County: Sacramento Co.
Investigator(s): D. Skordal, J. Gibson	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Adjacent upland - grassland
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 1
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: B

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Vulpia myuros (D)		FACU	9.		
2. Bromus mollis (D)		FACU	10.		
3. Rumex crispus		FACW-	11.		
4. Hordeum hystrix		FAC	12.		
5. Lactuca serriola		FAC	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). None

Remarks: Annual grassland Habitat!

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Nearly level terrain ± 4-6" above elev. of adjacent wetland.

SOILS

Map Unit Name (Series and Phase): (2/3) San Joaquin silt loam, leveled, 0-1 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-6	10YR 4/3	faint		sandy silt loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	No
Wetland Hydrology Present?	Yes	No
Hydric Soils Present?	Yes	No

Is this Data Point Within a Wetland? Yes No

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Legends Meadows	Date: 7-26-04
Applicant/Owner: —	City/County: Sacramento Co.
Investigator(s): D. Sklordal, J. Gibson	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Seasonal Wetland
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 2
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: A

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Lolium perenne (D)		FAC	9.		
2. Hordeum hystrix (D)		FAC	10.		
3. Ranunculus alveolatus (D)		OBL	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ✓ Sediment Deposits/Organic Detritus/Algae
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ✓ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ✓ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Shallow, defined depression w/ algae matting and oxidized root channels on live roots.

SOILS

Map Unit Name (Series and Phase): (2/3) San Joaquin silt loam, leveled, 0-1 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-6	10YR 4/3	yes		sandy silt loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ✓ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: Hydric soils assumed based on field indicators of aquic moisture regime.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes) No	Is this Data Point Within a Wetland?	(Yes) No
Wetland Hydrology Present?	(Yes) No		
Hydric Soils Present?	(Yes) No		

Remarks:

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Legends Meadows	Date: 7-26-04
Applicant/Owner: ———	City/County: Sacramento Co.
Investigator(s): D. Skordal, J. Gibson	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Adjacent upland - grassland
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 2
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: B

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Vulpia myuros (D)		FACU	9.		
2. Bromus Mollis (D)		FACU-	10.		
3. Erodium sp.		UPL	11.		
4. Lactuca Serriola		FAC	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). None

Remarks: Annual Grassland Habitat

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Nearly level terrain located above adj. wetland, lacks indicators of wetland hydrology.

SOILS

Map Unit Name (Series and Phase): (213) San Joaquin silt loam, leveled, 0-1 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-6	10YR 3/4	None	—	sandy loam / silt loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (No)
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? Yes (No)

Is this Data Point Within a Wetland? Yes (No)

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Legends Meadows	Date: 7-26-04
Applicant/Owner: ———	City/County: Sacramento Co.
Investigator(s): D. Skordal, J. Gibson	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Upland Grassland
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID:
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: 3

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Holocarpha virgata (D)		UPL	9.		
2. Vulpia myuros (D)		FACU	10.		
3. Brize minor		FACW	11.		
4. Erodium sp.		UPL	12.		
5. Lolium perenne		FAC	13.		
6. Leontodon leysseri		FACU	14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). None

Remarks: Annual Grassland Habitat

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Level terrain lacking indicators of wetland hydrology.

SOILS

Map Unit Name (Series and Phase): (213) San Joaquin silt loam, leveled, 0-1 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-6	10YR 3/4	Yes/faint	—	fine sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	No
Wetland Hydrology Present?	Yes	No
Hydric Soils Present?	Yes	No

Is this Data Point Within a Wetland? Yes No

Remarks: Non-wetland

APPENDIX B

DELINEATION MAP

APPENDIX C

PLANT LIST

PARTIAL LIST OF PLANTS OBSERVED ON THE LEGEND MEADOWS PROPERTY AND THEIR STATUS AS WETLAND INDICATOR SPECIES

Scientific Name	Common Name	Status [1&2]
Asclepias fascicularis	slender milkweed	FAC
Avena barbata	slender wild oat	UPL
Avena fatua	wild oats	UPL
Briza minor	little quaking grass	FACW-
Brodiaea sp.	brodiaea	---
Bromus diandrus (*B. rigidus*)	rip-gut grass	UPL
Bromus mollis	soft chess	FACU-
Cichorium intybus	chickory	UPL
Convolvulus arvensis	bindweed	UPL
Cynodon dactylon	Bermuda grass	FAC
Cyperus eragrostis	tall flatsedge	FACW
Dactylis glomerata	orchard grass	FACU
Deschampsia danthonioides	purple hairgrass	FACW
Echinochloa crusgalli	barnyard grass	FACW
Eleocharis macrostachya	creeping spikerush	OBL
Eremocarpus setigerus	doveweed	UPL
Erodium botrys	filaree	UPL
Eucalyptus sp.	gum	---
Ficus carica	garden fig	UPL
Hemizonia pungens	common tarweed	FAC
Holocarpha virgata	tarweed	UPL
Hordeum hystrix (*H. geniculatum*)	Mediterranean barley	FAC
Hordeum leporinum	barley	NI
Hypochaeris glabra	smooth cats tongue	UPL
Juglans californica (J. nigra)	California walnut	UPL
Juncus bufonius	toad rush	FACW+
Lactuca serriola	prickly lettuce	FAC
Leontodon leysseri	hairy hawkbit	FACU
Leptochloa fascicularis	bearded sprangle-top	OBL
Lippia nodiflora (*Phyla nodiflora*)	common frog-fruit	FACW
Lolium perenne (*L. multiflorum*)	perennial ryegrass	FAC*
Lotus purshianus	Spanish clover	FAC
Olea europaea	olive	UPL

[1] Reed, P.B. 1988. National List of Plant Species That Occur in Wetlands: California (Region 0). Biological Report 88(26.10) May 1988. National Ecology Research Center, National Wetland Inventory, U.S. Fish and Wildlife Service, St. Petersburg, Fl.

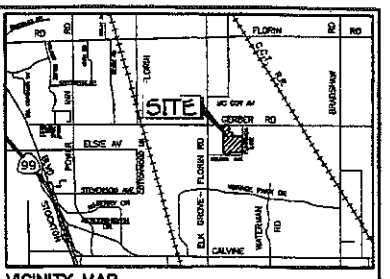
[2] OBL = obligate; FACW = facultative wetland; FAC = facultative; FACU = facultative upland; UPL = upland; and NI = no indicator.

Scientific Name	Common Name	Status
Phalaris sp.	canary grass	---
Plantago lanceolata	English plantain	FAC-
Platanus racemosa	California sycamore	FACW
Poa annua	annual bluegrass	FACW-
Polygonum aviculare	knotweed	FAC
Polypogon monspeliensis	annual rabbit-foot grass	FACW+
Ranunculus alveolatus (*R. bonariensis var. trisepalus*)	Carter's buttercup	OBL
Rumex acetosella	sheep sorrel	FAC-
Rumex conglomeratus	clustered dock	FACW
Rumex crispus	curly dock	FACW-
Salix hindsiana (*S. sessilifolia*)	sandbar willow	FACW
Taeniatherum caput-medusae	medusa-head	UPL
Trifolium sp.	clover	---
Vicia villosa	winter vetch	---
Vitis californica	wild grape	UPL
Vulpia myuros	rat-tail fescue	FACU

APPENDIX D

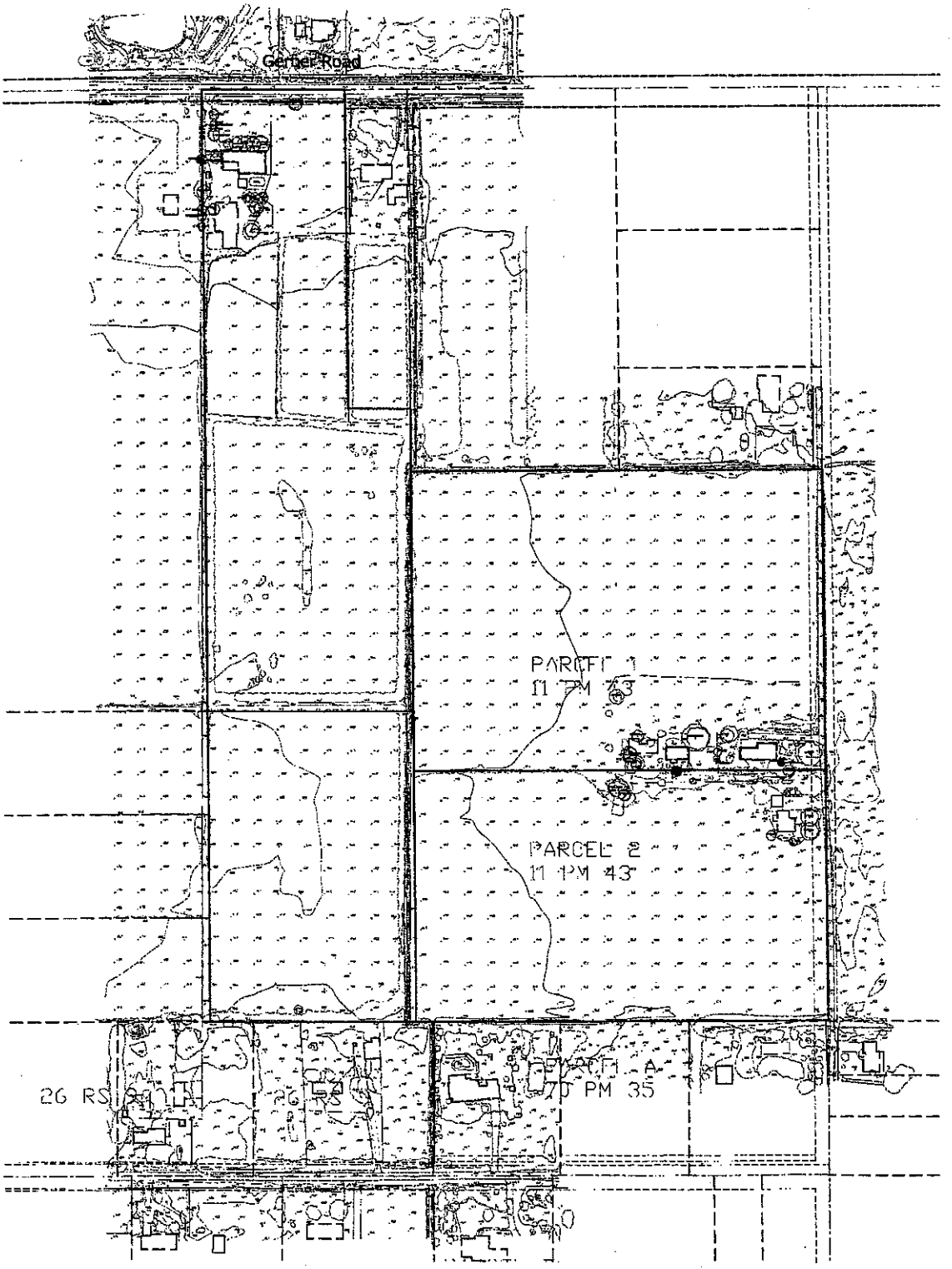
TOPOGRAPHIC MAP

Legends Meadows



VICINITY MAP

NO SCALE



BAKER-WILLIAMS ENGINEERING GROUP

Engineering / Surveying / Land Planning / Entitlement Processing / GPS Services

8020 Rutland Drive, Suite 19 – Carmichael, CA 95608

(916) 331-4326 – fax (916) 331-4480 – office@bwengineers.com

Job No. 03-05-050

DATE 07/27/2006 09:40:19 ESS Exec 07-26-06

Page: 1

12/22/2008 10:26:43 AM

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name:

Project Name: Gerber Creek 04-0187

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2009 TOTALS (lbs/day unmitigated)	9.34	57.19	32.33	200.04	3.49	203.54	41.78	3.21	44.99	5,318.80
2010 TOTALS (lbs/day unmitigated)	538.03	75.67	79.13	200.23	4.71	204.94	41.85	4.33	46.17	11,209.18

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	14.76	3.52	11.05	0.04	0.04	4,371.65

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	20.73	20.46	249.04	30.35	5.88	19,085.88

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SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	35.49	23.98	260.09	30.39	5.92	23,457.53

JUL 20 2004

Fallen Leaf Tree Service
INCORPORATED

REVISED

Kimball Hill Homes
Attn: Michelle Thompson - Land Acquisition Manager
Land Department
10535 East Stockton Blvd., Suite K
Elk Grove, CA 95624
Phone: (916) 714-1153
Cell: (916) 439-3183
Fax: (916)714-3663

RECEIVED
SEP 1 2004 04 0187
PLANNING DEPT.
County of Sacramento
~~04-0817~~

July 8, 2004

Re: Arborist Report – Gerber Creek Project

Michelle,

First, I'd like to thank you for choosing Fallen Leaf Tree Service, Inc. for your tree care needs. As requested, I visited the above mentioned site on June 27, 2004 . Our findings, as well as our recommendations, are contained in the attached report.

Data Collected:
Data collected was similar for the trees surveyed. The following information was collected:

Tree Number:
Each tree is physically numbered with a metal tag attached to the tree trunk approximately 6½ feet above ground. The trees at Gerber Creek Project were numbered 01-26.

Name:
The Latin and common name of each tree is stated.

Trunk Diameter:
Diameter at standard height. The trunk diameter is taken at 4½ feet above ground or at the narrowest point on the trunk between the ground and the lowest primary limb. If the tree has more than one trunk, the largest and smallest trunks are listed and the total number of trunks is stated (in parentheses).

Drip Line Radius:
This is the distance from the trunk to the tip of the farthest extending limb.

Structural Condition:
This is one of the two most important tree conditions (the other condition is "vigor"). The two are not necessarily related. Structural condition relates to the ability of the tree to hold itself upright and remain intact.

Vigor Condition:

This other important tree condition relates to viability, or the ability of the tree to exhibit life.

Crown Class:

This explains how the tree stands in relation to others. Dominant means that it stands alone and does not compromise crown area. Co-dominant means that it shares crown with other trees. Suppressed means that it has been forced to lean by more dominant trees. Under story means that the tree is growing beneath the dominant trees.

Drip Line Environment:

This includes a description of the environmental factors, which affect the tree's root zone. This also includes significant, man-made structures and use within the tree's canopy.

Prognosis:

This is the best estimate for the trees future prospects based upon its current structural and vigor conditions.

Construction Impact:

This is included when any proposed building layout is known. All predictable impacts are stated as to how the grade cuts or fill will affect the health of the tree.

Recommendations:

The recommendations are based upon what the tree needs to maintain or improve its vigor and/or structure. They are made without regard to whether or not the tree is to be kept in the project. Recommendation for removal is made in the case where the tree has very weak structure or vigor that cannot be corrected.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

04 0187

Fallen Leaf Tree Service Inc.

Roger Poulson
Fallen Leaf Tree Service, Inc.
ISA Certified Arborist #WE-0127A
State Contractors License #799677

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Fallen Leaf Tree Service, Inc.

6000 Midway Street, Suite 400
Sacramento, CA 95828

Name: Kimball Hill Homes
Address: Gerber Creek Project

Date: July 8, 2004

Tree # : 01 *Ulmus americana* (American elm)

Trunk Diameter	15"
Drip Line Radius	16'
Structural Condition	Fair
Vigor Condition	Poor
Crown Class	Dominant
Drip Line Environment	Un-irrigated field
Prognosis	Decline
Construction Impact	Planned for removal
Discussion/Recommendation	Remove

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Tree # : 02 *Albizia julibrissin* (silk tree)

Trunk Diameter	12"
Drip Line Radius	12'
Structural Condition	Fair
Vigor Condition	Fair
Crown Class	
Drip Line Environment	
Prognosis	
Construction Impact	Planned for removal
Discussion/Recommendation	None at this time

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Tree # : 03 *Juglans californica* (California black walnut)

Trunk Diameter	10"
Drip Line Radius	12'
Structural Condition	Poor
Vigor Condition	Fair
Crown Class	
Drip Line Environment	Fence line by road
Prognosis	Decline
Construction Impact	Planned for removal
Discussion/Recommendation	Remove

Tree # : 04 *Juglans californica* (California black walnut)

Trunk Diameter	14"
Drip Line Radius	16'
Structural Condition	Fair
Vigor Condition	Fair
Crown Class	
Drip Line Environment	Fence line, field
Prognosis	Decline
Construction Impact	Planned for removal
Discussion/Recommendation	None at this time

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Tree # : 05 *Olea europaea* (olive trees)

Trunk Diameter	
Drip Line Radius	
Structural Condition	
Vigor Condition	
Crown Class	
Drip Line Environment	
Prognosis	
Construction Impact	
Discussion/Recommendation	There is a group of eight olive trees ranging in size from 6" to 18" and conditions range from poor to fair

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Tree # : 06 *Quercus lobata* (valley oak)

Trunk Diameter	13"
Drip Line Radius	8'
Structural Condition	Multiple small trunk wounds
Vigor Condition	Poor to fair
Crown Class	Dominant
Drip Line Environment	Field
Prognosis	Moderate rate of decline
Construction Impact	Planned for removal
Discussion/Recommendation	Remove tree

Tree # : 07 *Quercus wislizenii* (interior live oak)

Trunk Diameter	9"
Drip Line Radius	8'
Structural Condition	Weak; primary crotch partially suppressed
Vigor Condition	Fair
Crown Class	Co-dominant
Drip Line Environment	On top of ditch bank, new fence along road
Prognosis	Decline
Construction Impact	Planned for removal
Discussion/Recommendation	Remove tree

Tree # : 08 *Olea europaea* (olive)

Trunk Diameter	11"
Drip Line Radius	8'
Structural Condition	Fair
Vigor Condition	Fair
Crown Class	
Drip Line Environment	
Prognosis	
Construction Impact	Planned for removal
Discussion/Recommendation	None at this time

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Tree # : 09 *Sempervirens* (Italian cypress)

Trunk Diameter	16"-9""
Drip Line Radius	
Structural Condition	
Vigor Condition	
Crown Class	
Drip Line Environment	
Prognosis	
Construction Impact	
Discussion/Recommendation	This is a group of five italian cypress, ranging in size from 9" to 16", & condition form "Poor/Fair" to "Fair".

Tree # : 10 *Patanus x acerifolia* (London plane)

Trunk Diameter	39"
Drip Line Radius	14'
Structural Condition	Poor to fair Hurline tapwatering
Vigor Condition	Fair
Crown Class	
Drip Line Environment	Compacted soil junk piles and parking
Prognosis	
Construction Impact	Planned for removal
Discussion/Recommendation	Large Trunk, Small crown

Tree # : 11 *Sempervirens* (Italian cypress)

Trunk Diameter	20"
Drip Line Radius	8'
Structural Condition	Fair
Vigor Condition	Fair
Crown Class	Dominant
Drip Line Environment	On top of ditch bank, new fence along road
Prognosis	Decline
Construction Impact	Planned for removal
Discussion/Recommendation	

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Tree # : 12 *Olea europaea* (olive trees)

Trunk Diameter	6"-17"
Drip Line Radius	
Structural Condition	
Vigor Condition	
Crown Class	
Drip Line Environment	
Prognosis	
Construction Impact	
Discussion/Recommendation	This is a group of nine olive trees ranging in size from 6-17", Ranging from poor to fair condition.

Tree # : 13 *Morus alba* (Mulberry)

Trunk Diameter	10"
Drip Line Radius	12'
Structural Condition	Fair
Vigor Condition	Fair
Crown Class	
Drip Line Environment	
Prognosis	
Construction Impact	
Discussion/Recommendation	

Tree # : 14 *Juglans californica* (California black walnut)

Trunk Diameter	12"
Drip Line Radius	12'
Structural Condition	Fair
Vigor Condition	Fair
Crown Class	
Drip Line Environment	
Prognosis	
Construction Impact	
Discussion/Recommendation	None at this time

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Tree # : 15 *Quercus lobata* (valley oak)

Trunk Diameter	11-10-9-9 "
Drip Line Radius	21'
Structural Condition	Poor to fair; co dominant primary crotch
Vigor Condition	Fair
Crown Class	Dominant
Drip Line Environment	Creek bank
Prognosis	Moderate decline
Construction Impact	None planned
Discussion/Recommendation	Remove dead wood, install limb support

Tree # : 16 *Quercus lobata* (valley oak)

Trunk Diameter	6"
Drip Line Radius	5'
Structural Condition	Poor to Fair; co-dominant primary crotch
Vigor Condition	Fair to good
Crown Class	Dominant
Drip Line Environment	NAT creek bank
Prognosis	Slow decline
Construction Impact	None planned
Discussion/Recommendation	Prune for structure

Tree # : 17 (cottonwood)

Trunk Diameter	36-37"
Drip Line Radius	24'
Structural Condition	Poor
Vigor Condition	Poor
Crown Class	
Drip Line Environment	
Prognosis	
Construction Impact	
Discussion/Recommendation	Remove

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Tree # : 18 *Calocedrus decurrens* (incense cedar)

Trunk Diameter	29"
Drip Line Radius	18'
Structural Condition	Fair
Vigor Condition	Fair
Crown Class	Dominant
Drip Line Environment	Front yard planter
Prognosis	Slow decline
Construction Impact	Planned for removal
Discussion/Recommendation	None at this time

Tree # : 19 *Juglans nigra* (English walnut)

Trunk Diameter	9,8,7"
Drip Line Radius	10'
Structural Condition	Poor to Fair
Vigor Condition	Fair
Crown Class	
Drip Line Environment	
Prognosis	
Construction Impact	
Discussion/Recommendation	

Tree # : 20 *Patanus x acerifolia* (London plane)

Trunk Diameter	11"
Drip Line Radius	10'
Structural Condition	Top pruned
Vigor Condition	Fair
Crown Class	
Drip Line Environment	
Prognosis	
Construction Impact	
Discussion/Recommendation	

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Tree # : 21 *Patanus x acerifolia* (London plane)

Trunk Diameter	16"
Drip Line Radius	12'
Structural Condition	Fair; topped
Vigor Condition	Fair
Crown Class	
Drip Line Environment	
Prognosis	
Construction Impact	
Discussion/Recommendation	

Tree # : 22 *Populus alba* (white poplar)

Trunk Diameter	10-9"
Drip Line Radius	12'
Structural Condition	Poor; co-dominant primary crotch
Vigor Condition	Fair
Crown Class	
Drip Line Environment	
Prognosis	
Construction Impact	
Discussion/Recommendation	

Tree # : 23 *Juglans californica* (California black walnut)

Trunk Diameter	17"
Drip Line Radius	18'
Structural Condition	Fair
Vigor Condition	Fair
Crown Class	
Drip Line Environment	
Prognosis	
Construction Impact	
Discussion/Recommendation	

Tree # : 24 *Populus alba* (white poplar)

Trunk Diameter
Drip Line Radius
Structural Condition
Vigor Condition
Crown Class
Drip Line Environment
Prognosis
Construction Impact

Discussion/Recommendation This is a group of 15 white poplar trees, ranging in size from 4" to 11" and condition from "poor" to "fair".

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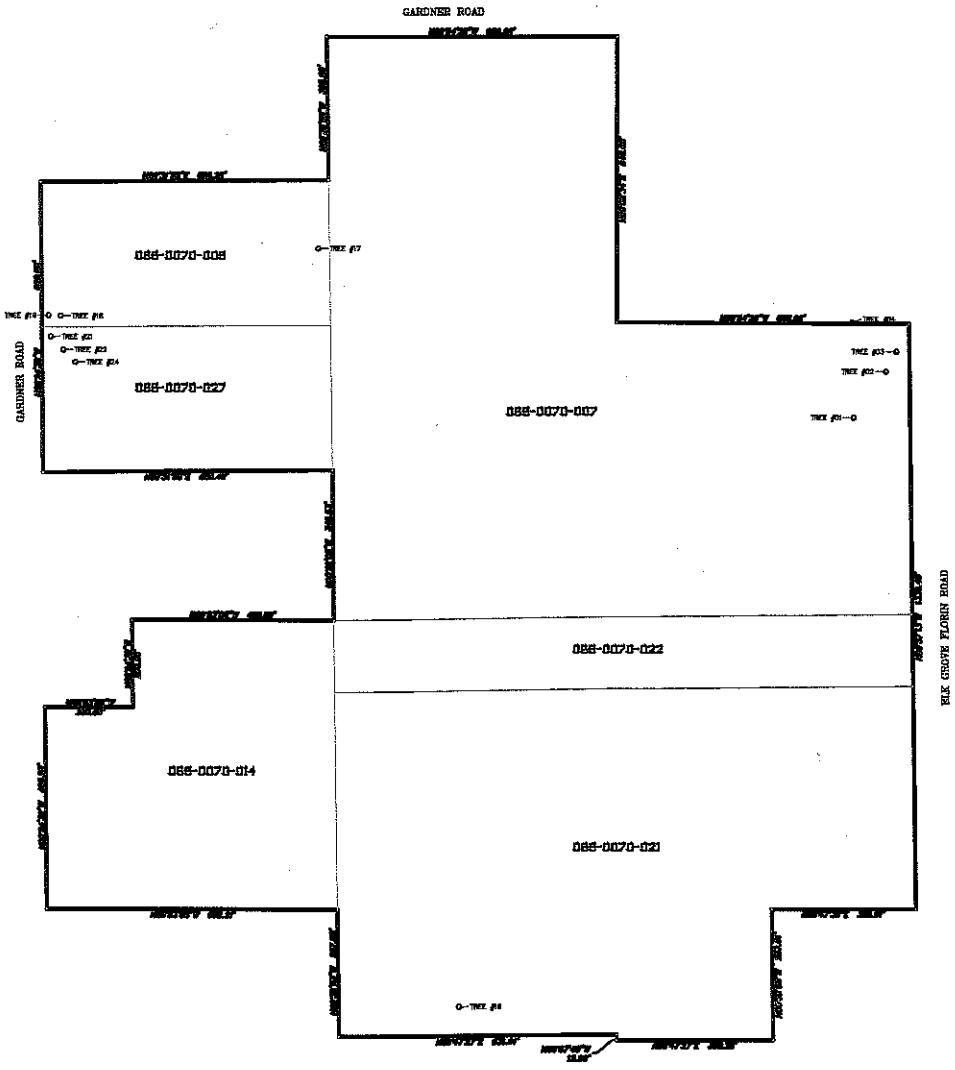
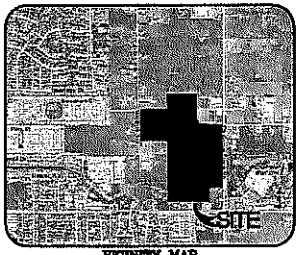
County of Sacramento





VICINITY MAP
NOT TO SCALE

#	SPECIES	DBH.	Ht.	RECOMMENDATIONS
01	AMERICAN ELM	15"	18'	PLANNED FOR REMOVAL
02	BLK TREE	13"	12'	PLANNED FOR REMOVAL
03	CALIFORNIA BLACK WALNUT	15"	15'	PLANNED FOR REMOVAL
04	BLACK WALNUT	14"	18'	PLANNED FOR REMOVAL
16	VALLEY OAK	8"	5'	NONE AT THIS TIME
17	COTTONWOOD	36"-22"	24'	REMOVE
18	INCENSE CEDAR	24"	18'	PLANNED FOR REMOVAL
19	ENGLISH WALNUT	6"-7"	10'	NONE AT THIS TIME
20	LONDON PLANE	16"	12'	NONE AT THIS TIME
22	WHITE POPLAR	6"-10"	12'	NONE AT THIS TIME
24	LONDON PLANETREE	4"-11		THERE IS A GROUP OF 15 WHITE POPLAR TREES RANGING IN SIZE FROM 4" TO 11" AND CONDITIONS RANGE FROM POOR TO FAIR.

100' 50' 0 100' 200'
SCALE: 1" = 100'

RECEIVED
JAN 26 2007
DEPARTMENT OF ENVIRONMENTAL
REVIEW AND ASSESSMENT

SURVEY NOTES:

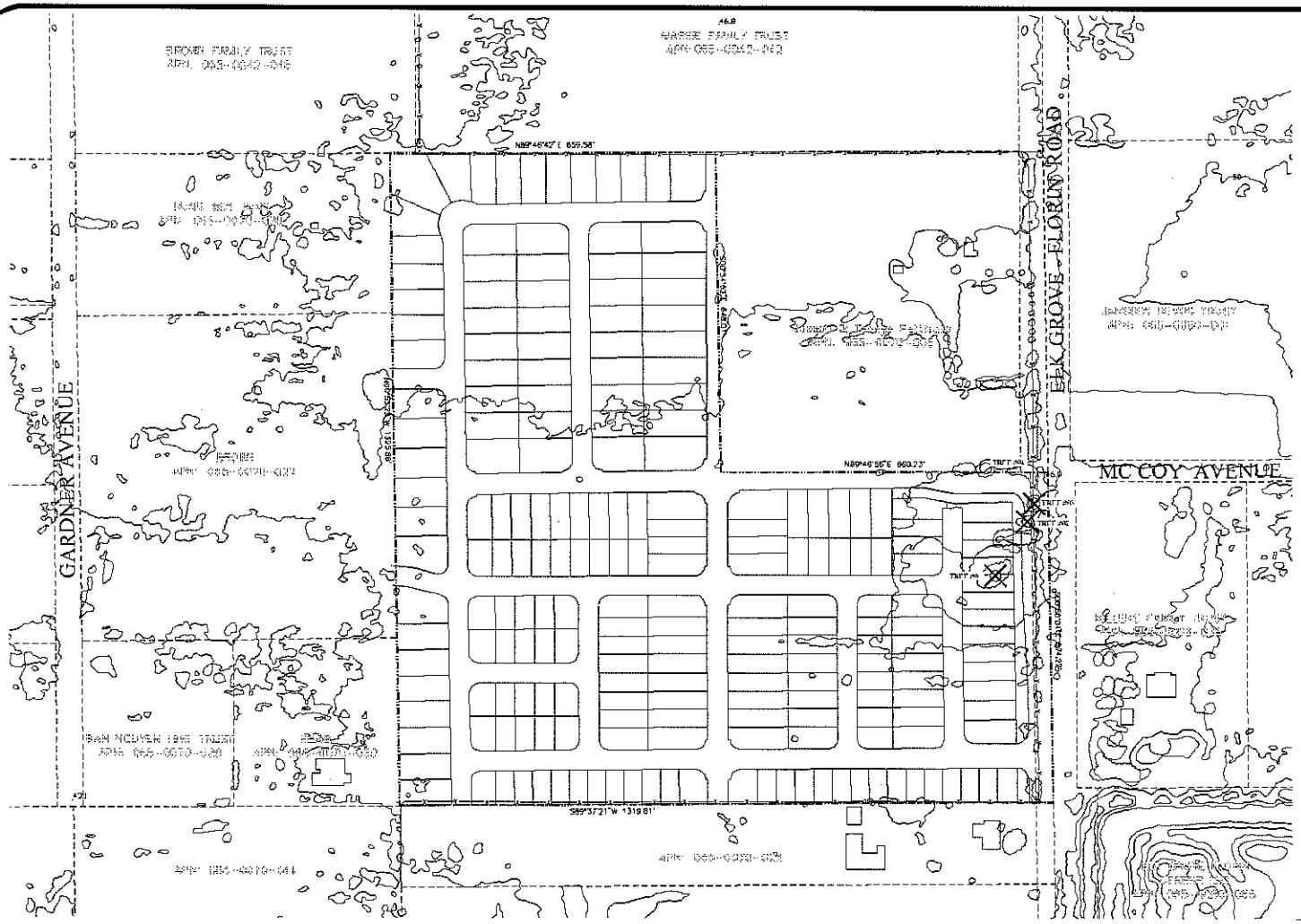
1. THE BOUNDARY INFORMATION SHOWN HEREON IS DERIVED FROM RECORD INFORMATION AND HAS NOT BEEN VERIFIED FROM A FIELD SURVEY.
2. THE TREE INFORMATION SHOWN HEREON IS FROM AN ARBORIST REPORT DATED JULY 8, 2004 PREPARED BY FALLEN LEAF TREE SERVICE AND SIGNED BY ROGER W. POULSON WC-0122
3. NOT ALL TREES LISTED IN THE ARBORIST REPORT ARE SHOWN HEREON SINCE THEY LIE OUTSIDE OF THE PROJECT BOUNDARY

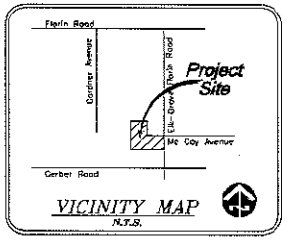
Proj Mgr.
Proj Mgr.
Drawn by
Date / /

Carter-Burgess

Gerber Creek
Kimball Hill Homes
Topographic Tree Survey

SHEET 1 OF 1





TREE SURVEY

#	SPECIES	DBH	DL
01	AMERICAN ELM	15"	16'
02	SICK TREE	12"	12'
03	CALIFORNIA BLACK WALNUT	16"	12'
04	BLACK WALNUT	14"	16'

Legend

TREES TO BE REMOVED

SURVEY NOTES:

1. THE BOUNDARY INFORMATION SHOWN HEREON IS DERIVED FROM RECORD INFORMATION AND HAS NOT BEEN VERIFIED FROM A FIELD SURVEY
2. THE TREE INFORMATION SHOWN HEREON IS FROM AN ARBORIST REPORT DATED JULY 8, 2004, PREPARED BY FALLEN LEAF TREE SERVICE AND SIGNED BY ROGER W. POULSON WC-0127
3. NOT ALL TREES LISTED IN THE ARBORIST REPORT ARE SHOWN HEREON SINCE THEY LIE OUTSIDE OF THE PROJECT BOUNDARY

0 100 200 feet

Tree Exhibit

Gerber Creek

County of Sacramento, California

Scale: 1"= 100'

July 15, 2008

MACKAY & SOMPS
CIVIL ENGINEERS, INC.
SACRAMENTO, CALIFORNIA (916) 979-6000

27020-00

Kimball Gerber Cr

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

RECEIVED
JUL 16 2008
DEPARTMENT OF ENVIRONMENTAL REVIEW AND ASSESSMENT

REPLY TO
ATTENTION OF

March 28, 2008

RECEIVED
JUL 15 2008
PLANNING DEPT.
County of Sacramento

Regulatory Division (200400655)

04 0187

Michelle Thompson
Kimball Hill Homes
9355 East Stockton Blvd., Suite 100
Elk Grove, California 95624-9476

REVISED

Dear Ms. Thompson:

We are responding to your consultant's request for a revisions to your approved jurisdictional determination for the Kimball-Gerber Creek Assemblage. This approximately 77-acre site is located in Section 1, Township 7, Range 5, Latitude 38 29' 8.94112" North, Longitude 121 22' 26.4415 West, City of Sacramento, Sacramento County, California. **This letter supersedes the March 16, 2007, jurisdictional determination for this site.**

Based on available information, we concur with the estimate of waters of the United States, as depicted on the June 2007 "Revised Jurisdictional Delineation Map, Kimball-Gerber Creek Assemblage" prepared by Gibson and Skordal, LLC. Approximately 2.2660 acres of waters of the United States, including wetlands, are present within the survey area. These waters are regulated under Section 404 of the Clean Water Act since they are adjacent to Elder Creek.

The 0.5422 acres of waters identified as SW12-SW21 on the above drawing are intrastate isolated waters with no apparent interstate or foreign commerce connection. As such, these waters are not currently regulated by the Corps of Engineers. This disclaimer of jurisdiction is only for Section 404 of the Federal Clean Water Act. Other Federal, State, and local laws may apply to your activities. In particular, you may need authorization from the California State Water Resources Control Board and/or the U.S. Fish and Wildlife Service.

This verification is valid for five years from the date of this letter, unless new information warrants revision of the determination before the expiration date. This letter contains an approved jurisdictional determination for your subject site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331.

A Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form is enclosed. If you request to appeal this determination you must submit a completed RFA form to the South Pacific Division Office at the following address: Administrative Appeal Review Officer, Army Corps of Engineers, South Pacific Division, CESPD-PDS-O, 1455 Market Street, San Francisco, California 94103-1399, Telephone: 415-503-6574, FAX: 415-503-6646.

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within 60 days of the NAP. Should you decide to submit an RFA form, it must be received at the above address by 60 days from the date of this letter. It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this letter.

You should provide a copy of this letter and notice to all other affected parties, including any individual who has an identifiable and substantial legal interest in the property.

This determination has been conducted to identify the limits of Corps of Engineers' Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

Please refer to identification number 200400655 in any correspondence concerning this project. If you have any questions, please contact Andrea Jones at andrea.j.jones@usace.army.mil, or telephone 916-557-7745.

Sincerely,

Original Signed

Kathleen A. Dadey, Ph.D.
Chief, California South Branch

Enclosure(s)

Copy furnished without enclosure(s):

Jim Gibson, Gibson and Skordal, LLC, 2277 Fair Oaks Blvd., Suite 395, Sacramento, California 95825-5500

Copies furnished with wetland delineation map:

William Marshall, Storm Water and Water Quality Certification Unit, Central Valley Regional Water Quality Control Board, 11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114

Water Quality Certification Unit, California State Water Resources Control Board, 1001 I Street, Sacramento, California 95814-2828

04-0187

GIBSON & SKORDAL, LLC

Wetland Consultants

2277 Fair Oaks Blvd., Suite 105
Sacramento, California 95825
Telephone (916) 569-1830
Facsimile (916) 569-1835

James C. Gibson
Thomas M. Skordal
Ginger E. Fodge
Karen Shaffer
Samuel R. Garcia

RECEIVED
AUG 28 2007
DEPARTMENT OF ENVIRONMENTAL REVIEW AND ASSESSMENT

June 13, 2007

Ms. Andrea Jones
U.S. Army Corps of Engineers
Regulatory Branch
1325 J Street
Sacramento, California 95814

Subject: Revised Jurisdictional Delineation and Special Status Species Evaluation – Kimball Gerber Creek Assemblage, Corps Action ID: 200400655, Sacramento County, California

Dear Ms. Jones:

Attached for your records is a copy of the revised Kimball Gerber Creek Assemblage Jurisdictional Delineation and Special Status Species Evaluation.

Since receiving the March 16, 2007, verification letter, we discovered and corrected an acreage discrepancy in the April 2007 delineation map, which states the site encompasses 2.24 acres of waters of the United States; the site actually contains 2.2660 acres of jurisdictional water features. We are requesting a revised verification letter to reflect this change.

As you know, the applicant/contact for this project is Ms. Michelle Thompson of Kimball Hills Homes, and she can be reached during office hours at (916) 525-4100. Her business address is listed below in the "cc" section of this letter.

If you have any questions or need additional information concerning this report, feel free to contact me at (916) 569-1830.

Sincerely,

Matt Hirkala
Wetland Associate

Attachments

cc: Ms. Michelle Thompson
Kimball Hill Homes
9355 East Stockton Blvd. Suite 100
Elk Grove, California 95624
Attachments

04-0187

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

REPLY TO
ATTENTION OF

March 16, 2007

Regulatory Branch (200400655)

RECEIVED
AUG 28 2007
DEPARTMENT OF ENVIRONMENTAL
REVIEW AND ASSESSMENT

Michelle Thompson
Kimball Hill Homes
10535 East Stockton Boulevard, Suite K
Elk Grove, California 95624-9757

Dear Ms. Thompson:

We are responding to your consultant's request for an approved jurisdictional determination for the Kimball - Gerber Creek Assemblage site. This approximately 77-acre site is located north of Gerber Road, and west of Elk Grove-Florin Road, on Elder Creek in Section 1, Township 7 North, Range 5 East, MDB&M, Latitude 38° 29′ 8.82″, Longitude 121° 22′ 27.1″, Sacramento County, California.

Based on available information and a site inspection by Dave Leput of our Sacramento Office on March 30, 2006, we concur with the estimate of waters of the United States, as depicted on the revised **February 2007, Jursidictional Delineation Map, Kimball - Gerber Creek Assemblage** drawing prepared by **Gibson and Skordal, LLC**. Approximately **2.24** acres of waters of the United States, including wetlands, are present within the survey area. These waters are regulated under Section 404 of the Clean Water Act, in accordance with 33 CFR part 328.3(a) (5) and (7), since they are adjacent or tributary to Elder Creek.

The 0.5422 acres of waters identified as **SW12 - SW21** on the above drawing are intrastate isolated waters with no apparent interstate or foreign commerce connection. As such, these waters are not currently regulated by the Corps of Engineers. This disclaimer of jurisdiction is only for Section 404 of the Federal Clean Water Act. Other Federal, State, and local laws may apply to your activities. In particular, you may need authorization from the California State Water Resources Control Board and/or the U.S. Fish and Wildlife Service.

This verification is valid for five years from the date of this letter, unless new information warrants revision of the determination before the expiration date. This letter contains an approved jurisdictional determination for your subject site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination

you must submit a completed RFA form to the South Pacific Division Office at the following address: Doug Pomeroy, Administrative Appeal Review Officer, Army Corps of Engineers, South Pacific Division, CESPD-PDS-O, 333 Market Street, Room 923, San Francisco, California 94105-2195, Telephone: 415-977-8035 FAX: 415-977-8129.

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within 60 days of the NAP. Should you decide to submit an RFA form, it must be received at the above address by May 15, 2007. It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this letter.

You should provide a copy of this letter and notice to all other affected parties, including any individual who has an identifiable and substantial legal interest in the property.

This determination has been conducted to identify the limits of Corps of Engineers' Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

Please refer to identification number 200400655 in any correspondence concerning this project. If you have any questions, please contact Andrea Jones at our Sacramento Office, 1325 J Street, Room 1480, Sacramento, California 95814-2922, email *Andrea.J.Jones@usace.army.mil*, or telephone 916-557-7745. You may also use our website: *www.spk.usace.army.mil/regulatory.html*.

Sincerely,

ORIGINAL SIGNED

Kevin Roukey
Chief, Central California/Nevada
Section

Enclosure

REVISED JURISDICTIONAL DELINEATION AND SPECIAL STATUS SPECIES EVALUATION

KIMBALL-GERBER CREEK ASSEMBLAGE

RECEIVED
JUL 16 2008
DEPARTMENT OF ENVIRONMENTAL REVIEW AND ASSESSMENT

SACRAMENTO COUNTY, CALIFORNIA

RECEIVED
JUL 1[illegible] 2008
PLANNING DEPT.
County of Sacramento

AUGUST 2004
REVISED: JUNE 2007

REVISED

04 0187

Prepared For:

KIMBALL HILL HOMES
9355 East Stockton Blvd., Suite 100
Elk Grove, California 95624

Prepared By:

GIBSON & SKORDAL, LLC
Wetland Consultants
2277 Fair Oaks Blvd., Suite 105
Sacramento, California 95825

INTRODUCTION

The purpose of this report is to present the results of a special status species evaluation and a revised jurisdictional delineation conducted for the Kimball-Gerber Creek Assemblage Property.

LOCATION

The study area includes a ± 77-acre parcel located south of Florin Road, north of Gerber Road, west of Elk Grove-Florin Road, and east of Gardner Avenue in the Florin-Vineyard Community Plan development area. It lies in Section 1, Township 7 North, Range 5 East of Sacramento County, California (Latitude 38° 29' North, Longitude 121° 22' West). Figure 1 is a vicinity map.

METHODOLOGY

Field studies were conducted on July 24, 2004, for the purpose of delineating existing waters and wetlands in the study area and evaluating special status species and their habitats. The site was reviewed by Mr. Dave Leput of the Sacramento District Office of the U.S. Army Corps of Engineers on March 30, 2006. His suggested revisions were incorporated accordingly into this report and the attached jurisdictional delineation map, which was subsequently reviewed and verified by the Corps on March 16, 2007, (Corps Action ID 200400655).

Jurisdictional Delineation

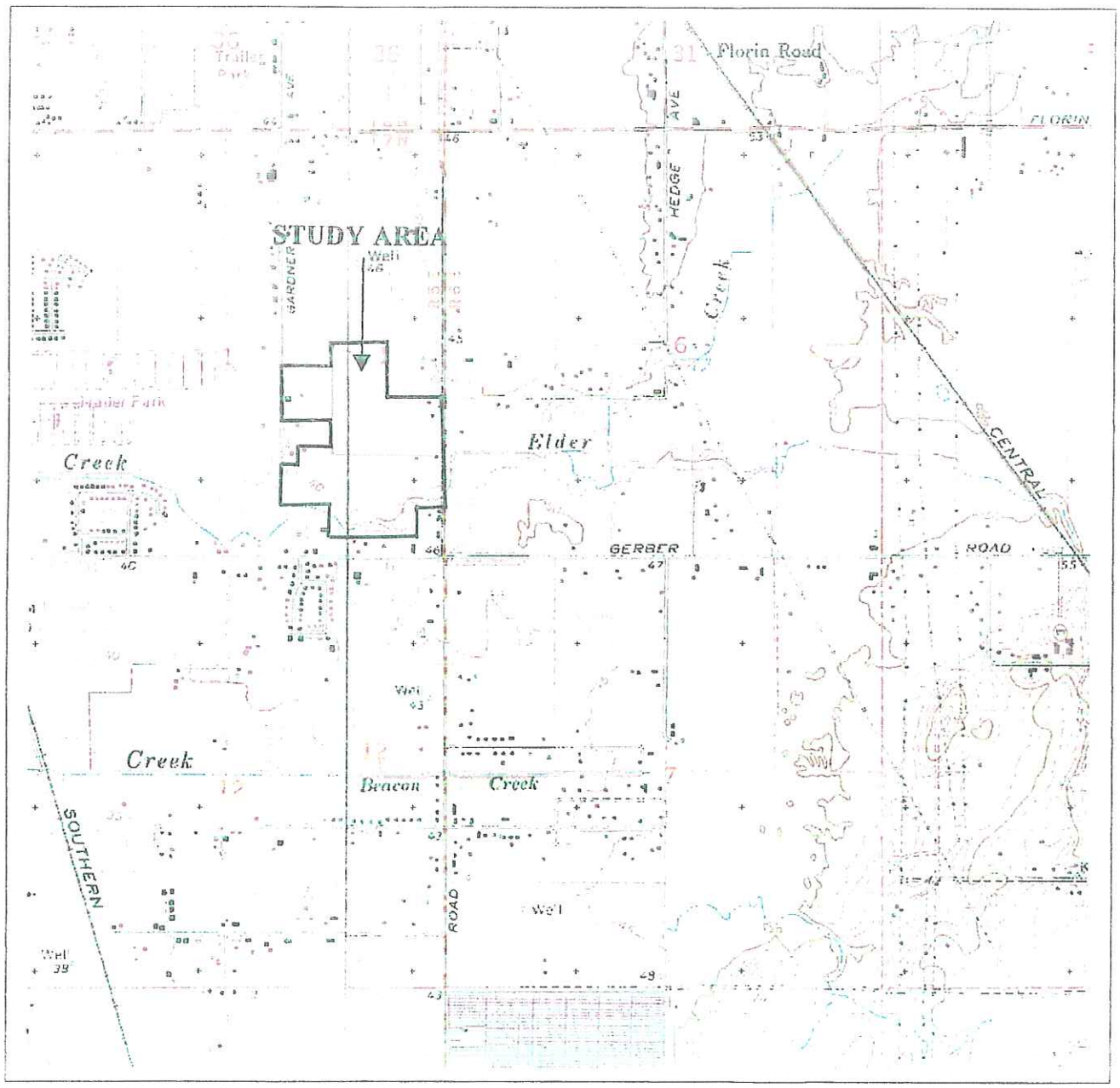
The boundaries of potential waters and wetlands, data points, and other site features were surveyed in the field by Gibson & Skordal, LLC utilizing a Trimble GPS data logger with sub-meter accuracy. The delineation map was prepared by layering the GPS field data over aerial photography flown in May of 2002 by the United States Geological Survey (USGS).

The **"Corps of Engineers Wetlands Delineation Manual"**[1] was used as the standard of determining whether specific areas are wetlands potentially subject to regulation under Section 404 of the Clean Water Act. Corps of Engineers' regulations (33 CFR 328) was used to determine the presence of waters of the United States other than wetlands. The **"National List**

[1] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station. Vicksburg, Miss.

FIGURE 1

VICINITY MAP



↑
N
(Scale: 1 Inch = 2000 Feet)

Source: Elk Grove & Florin 7.5 Minute USGS Topographic Quadrangles

of Plant Species That Occur in Wetlands: California (Region 0)"[2] was used to determine the wetland indicator status of plants observed in the study area. The **"Soil Survey of Sacramento County, California"**[3] was used to evaluate soil mapping in the study area.

Detailed data on vegetation, soils, and hydrology characteristics was taken in the field. Data forms documenting the basis for determining which areas are wetland or upland are provided in Appendix A.

Special Status Species Evaluation

The special status species evaluation includes those species identified as having relative scarcity and/or declining populations by the United States Fish & Wildlife Service (FWS) or California Department of Fish & Game (CDFG). Special status species include those formally listed as threatened or endangered, those proposed for formal listing, candidates for Federal listing, and those considered to be Species of Concern by FWS or Species of Special Concern by CDFG. In addition to these, we also included those species considered to be "special animals" or "fully protected" by the CDFG and those plant species considered to be rare, threatened or endangered in California by the California Native Plant Society (CNPS).

In our evaluation, we considered those special status species documented by the California Natural Diversity Database (CNDDB) as occurring in the vicinity of the study area. A record search of the CNDDB was conducted for the Elk Grove, Florin, Carmichael, and Sloughhouse 7.5 Minute USGS quadrangles to identify all documented sightings of special status species in the vicinity of the study area. In addition to these species, we included other special status species that may have some potential for occurring in the study area based on historical range data and/or the presence of suitable habitat.

GENERAL SITE CONDITIONS AND HABITATS

The study area is generally bounded by a mix of ranchettes, irrigated pasture, and/or existing roads. The central and northern portions of the study area support level to nearly level terrain that has been historically ditched, drained, and irrigated for farming and livestock grazing. The southern portion of the study area is characterized by gently undulating terrain that drains

[2] Reed, P.B. 1988. National List of Plant Species That Occur In Wetlands: California (Region 0). Biological Report 88(26.10). May 1988. National Ecology Research Center, National Wetlands Inventory, U.S. Fish & Wildlife Service, St. Petersburg, Florida.

[3] USDA, Soil Conservation Service. 1993. Soil Survey of Sacramento County, California.

towards the lower terrace adjacent to Elder Creek. Elder Creek extends from east to west across the southern boundary of the site. There are a number of existing home-sites with associated barns and sheds including two home sites situated along the eastern boundary adjacent Elk Grove-Florin Road, and an additional home-site in the northwest corner adjacent to Gardner Avenue.

A majority of the study area supports annual grassland/pasture characterized by wild oats (*Avena sp.*), soft chess (*Bromus mollis*), rip-gut brome (*Bromus diandrus*), rat-tail fescue (*Vulpia myuros*), hare barley (*Hordeum leporinum*), and filaree (*Erodium spp.*). Other common species include Mediterranean barley (*Hordeum hystrix*), hairy hawkbit (*Leontondon leysseri*), perennial rye (*Lolium perenne*), little quaking grass (*Briza minor*), and curly dock (*Rumex crispus*). Scattered trees include California walnut (*Juglans californica*), blue gum (*Eucalyptus sp.*), valley oak (*Quercus lobata*), olive (*Olea europaea*), mulberry (*Morus alba*), fruit trees, and a variety of ornamentals.

Soils in the study area are mapped as San Joaquin silt loam, leveled, 0 to 1 percent slopes, and San Joaquin silt loam, 0 to 3 percent slopes. San Joaquin soils are moderately deep, moderately well-drained soils that occur on low terrace features. Although they are not listed as hydric, they do have hydric inclusions in depressions and drainageways. Figure 2 provides a soils map for the site.

EXISTING WETLANDS

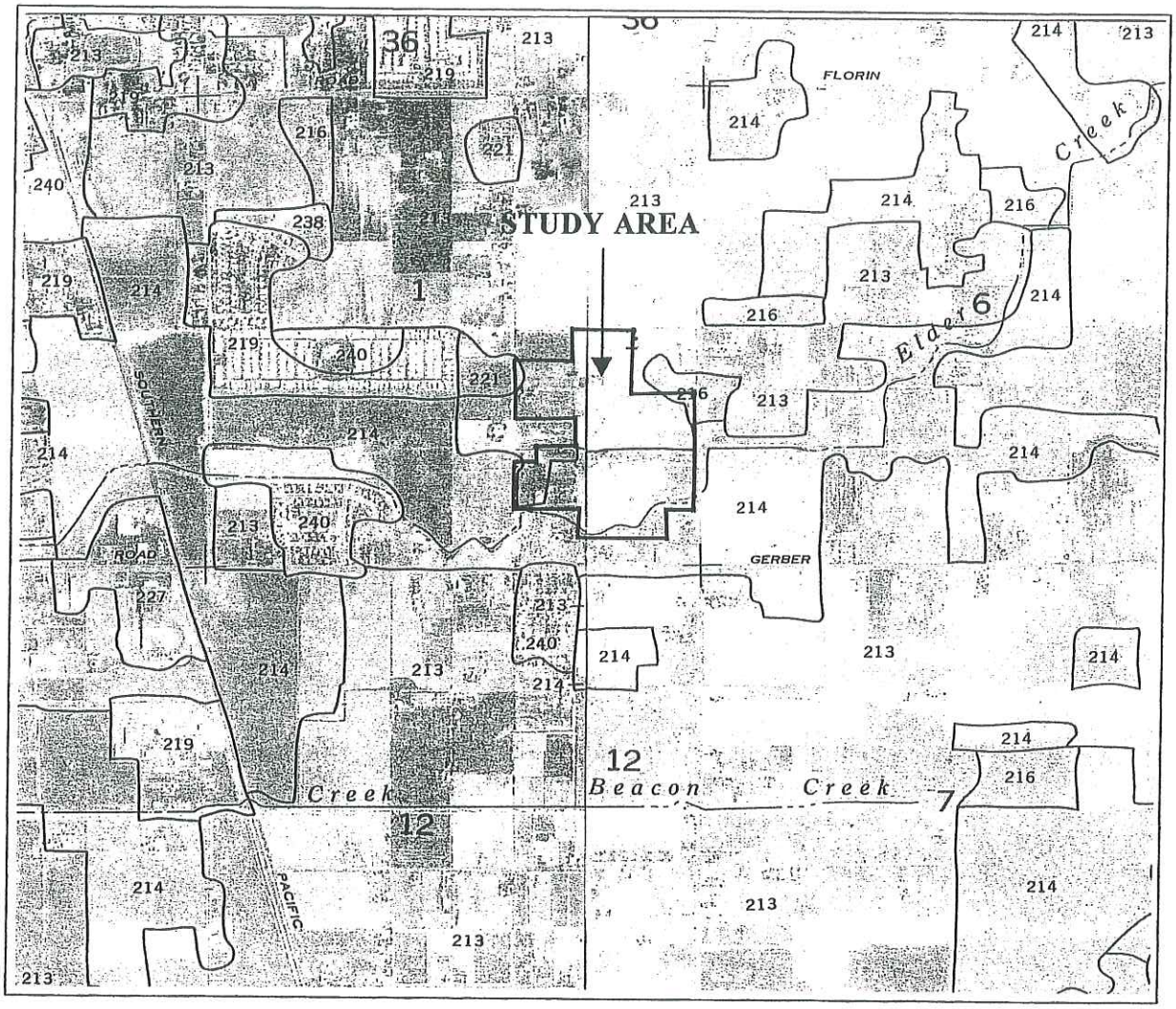
We surveyed 2.2660 acres of jurisdictional water features and 0.5422 acre of non-jurisdictional seasonal wetlands in the study area. Table 1 lists the acreages and jurisdictional status of water features by type and reference number. Appendix B provides a delineation map showing the location of water features, data points, and the study area boundary. Appendix C provides a list of plant species observed in the study area including their status as wetland indicators.

Vernal Pools

We identified eight vernal pools (VP1-VP8) in the study area that range from 310-sq. ft. to 28,138-sq. ft. in area. The vernal pools are concentrated in the lower terrace adjacent to Elder Creek near the southern boundary of the property. They generally occur in shallow to medium depth depressions that experience ponding and saturation that persist for long duration following periods of heavy precipitation in the winter and early spring.

FIGURE 2

SOILS MAP



Soil Unit	Soil Name	Soil Classification	Drainage Class
213	San Joaquin silt loam, leveled, 0-1% slopes	Abruptic Durixeralfs	moderately well drained
214	San Joaquin silt loam, 0-3% slopes	Abruptic Durixeralfs	moderately well drained

Source: USDA, Soil Conservation Service. 1993. Soil Survey of Sacramento County, California

Table 1: Study Area Acreage Totals by Feature Type

Jurisdictional Features

Ditches

Ref. No.	Ave. Width	Length	Area (ft^2)	Area (ac)
D1	3	326	978	0.0225
D2	2	473	946	0.0217
D3	2	1,104	2,208	0.0507
			Area (ft^2)	Area (ac)
		Total:	4,132	0.0949

Seasonal Wetlands

Ref. No.	Area (ft^2)	Area (ac)
SW1	8,501	0.1952
SW2	2,960	0.0680
SW3	551	0.0126
SW4	147	0.0034
SW5	199	0.0046
SW6	585	0.0134
SW7	462	0.0106
SW8	263	0.0060
SW9	476	0.0109
SW10	266	0.0061
SW11	791	0.0182
	Area (ft^2)	Area (ac)
Total:	15,201	0.3490

Vernal Pools

Ref. No.	Area (ft^2)	Area (ac)
VP1	4,074	0.0935
VP2	322	0.0074
VP3	3,998	0.0918
VP4	770	0.0177
VP5	16,361	0.3756
VP6	310	0.0071
VP7	28,138	0.6460
VP8	158	0.0036
	Area (ft^2)	Area (ac)
Total:	54,131	1.2427

Elder Creek

Ref. No.	Area (ft^2)	Area (ac)
N/A	25,242	0.5795
	Area (ft^2)	Area (ac)
Total:	25,242	0.5795

Jurisdictional Feature Grand Total

	Area (ft^2)	Area (ac)
Total:	98,706	2.2660

Table 1: Study Area Acreage Totals by Feature Type

Non-Jurisdictional Features

Seasonal Wetlands

Ref. No.	Area (ft^2)	Area (ac)
SW12	6,780	0.1556
SW13	2,233	0.0513
SW14	229	0.0053
SW15	105	0.0024
SW16	7,954	0.1826
SW17	190	0.0044
SW18	231	0.0053
SW19	763	0.0175
SW20	2,466	0.0566
SW21	2,668	0.0612
	Area (ft^2)	Area (ac)
Total:	**23,619**	**0.5422**

Non-Jurisdictional Feature Grand Total

	Area (ft^2)	Area (ac)
Total:	**23,619**	**0.5422**

Wetland hydrology field indicators observed in the vernal pools include location within a defined depression overlying tight or restrictive soils, oxidized root channels on live roots, and algae matting. Typical soils in the vernal pools were observed to be brown (10YR 4/3) fine sandy loam and silt loam with mottles at a depth of 1 to 8 inches. Hydric soils were generally assumed present in the vernal pools based on strong indicators of an aquic moisture regime (i.e. long-term ponding).

The deeper vernal pools support a wetland plant community characterized by creeping spikerush (*Eleocharis macrostachya*), smooth goldfields (*Lasthenia glaberrima*), and Carter's buttercup (*Ranunculus alveolatus*). By contrast, the shallow to medium depth vernal pools are more typically characterized by coyote thistle (*Eryngium vaseyi*), purple hairgrass (*Deschampsia danthonioides*), Fremont's goldfields (*Lasthenia fremontii*), slender popcorn flower (*Plagiobothrys stipitatus*), and Mediterranean barley. Other common associates observed in the vernal pools include common tarweed (*Hemizonia pungens*), annual rabbit-foot grass (*Polypogon monspeliensis*), perennial rye, and curly dock.

The adjacent upland is marked by a gentle to distinct rise in landscape position, a lack of wetland hydrology and hydric soil indicators, and the emergence of an upland grassland plant community typically dominated by non-hydrophytes.

Seasonal Wetlands

Twenty-one seasonal wetlands totaling 0.8912 acre were surveyed within the study area; eleven seasonal wetlands totaling 0.3490 acre were classified as jurisdictional by the Corps.

Seasonal wetlands were differentiated from vernal pools in the field by the presence of a seasonal wetland plant community typically lacking one or more dominant species considered to be endemic to or strongly associated with vernal pool habitats. SW1 is generally dominated by perennial rye, Mediterranean barley, and Bermuda grass (*Cynodon dactylon*) with other common associates including slender popcorn flower, coyote thistle, common tarweed, annual rabbit-foot grass, dense flower spike-primrose (*Boisduvalia densiflora*), and rough cocklebur (*Xanthium strumarium*). SW2 supports a facultative plant community dominated by a dense mat of Mediterranean barley with other common associates including perennial rye, curly dock, Bermuda grass, and prostrate knotweed (*Polygonum aviculare*).

Elder Creek

We identified a total of 0.5795 acre of Elder Creek channel within the study area. Elder Creek sustains perennial flow conditions that are augmented by summer irrigation and urban run-off. Sparse vegetation within the creek channel includes tall flatsedge (*Cyperus eragrostis*), dallis grass (*Paspalum dilatatum*), knotgrass (*Paspalum distichum*), smartweed (*Polygonum sp.*), floating primrose (*Ludwigia peploides*), willow herb (*Epilobium sp.*), and annual rabbit-foot grass. Scattered valley oak, California walnut, and arroyo willow (*Salix lasiolepis*) occur along the side banks and top of bank of the creek channel. Scattered dense patches of Himalayan blackberry (*Rubus procerus*) also occur along the sides of the creek bank above the ordinary high water mark for the channel.

Ditches

Three ditches totaling 0.0949 acre were surveyed within the study area. All three were considered jurisdictional by the Corps.

Jurisdictional Status

The Corps has determined that 2.2660 acres of water features within the study area are jurisdictional and subject to regulation under Section 404 of the Federal Clean Water Act. These features include 0.0949 acre of ditches (D1 through D3), 0.3490 acre of seasonal wetlands (SW1 through SW11), 1.2427 acre of vernal pools (VP1 through VP8), and 0.5795 acre of Elder Creek.

SPECIAL STATUS SPECIES

Table 2 provides a list of special status species that were evaluated including their listing status, habitat associations, and whether potential habitats occur in the study area. Of the twenty-four special status species evaluated in Table 2, ten species including the bank swallow, Bogg's Lake hedge-hyssop, California tiger salamander, giant garter snake, Sacramento orcutt grass, slender orcutt grass, Swainson's hawk, valley elderberry longhorn beetle, vernal pool fairy shrimp, and vernal pool tadpole shrimp are Federal and/or State listed threatened and/or endangered species. The following is a detailed summary of special status species and their habitats as they relate to the study area.

Swainson's Hawk and Other Raptors

Swainson's hawk (*Buteo swainsoni*) is a raptor species currently listed as threatened in California by the CDFG. They typically nest in tall cottonwoods, valley oaks, or willows associated with riparian corridors with adjacent grassland, pasture, and/or cropland with a high density of rodents. The Central Valley population typically breeds and nests in late spring through early summer before migrating to Central America and South America for the fall and winter seasons.

Based on CNDDB sighting records, active Swainson's hawk nests have been documented within a 3-mile radius of the study area including several older nests that were located along the east side of Highway 99 between Calvine Road and Sheldon Road, and a number of nests within Deer Creek and the Cosumnes River corridor to the south. Given the high probability of current Swainson's hawk nesting activity within a 10-mile radius of the study area, the grassland/pasture habitat at the site is considered to be potential foraging habitat for Swainson's hawk.

Additionally, there is suitable foraging and nesting habitat present in the study area for a variety of other raptors including white-tailed kite, northern harrier, red-tailed hawk, sharp-shinned hawk, and Cooper's hawk. The larger California walnuts, valley oaks, and eucalyptus trees provide suitable nesting habitat for most of these raptors. Although we observed a number of previously utilized raptor nests in the study area, we were unable to evaluate current nesting activity given the late timing of field surveys.

Burrowing owl (*Athene cunicularia*) is a ground nesting raptor species afforded protection by CDFG as a species of special concern due to potentially declining populations in the Central Valley of California. They typically inhabit open grassland habitats where they nest in abandoned ground squirrel burrows and other nesting cavities associated with raised mounds,

TABLE 2

EVALUATION OF SPECIAL STATUS SPECIES HABITATS

	State Status	Federal Status	CNPS Listing	Habitat Association	Potential Habitat In Study Area
Birds					
Accipiter cooperi (Cooper's hawk)	Species of Special Concern	None		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes -suitable foraging & nesting habitat
Accipiter striatus (sharp-shinned hawk)	Species of Special Concern	None		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes -suitable foraging & nesting habitat
Agelaius tricolor (tricolored blackbird)	Species of Special Concern	Species of Concern		Colonial nester in cattails, bullrush, or blackberries associated with marsh habitats.	Yes -suitable nesting habitat along Elder Creek
Athene cunicularia (burrowing owl)	Species of Special Concern	Species of Concern		Nests in abandoned ground squirrel burrows associated with open grassland habitats.	Yes -suitable foraging & nesting habitat
Buteo swainsoni (Swainson's hawk)	Threatened	None		Nests in tall cottonwoods, valley oaks or willows. Forages in fields, cropland, irrigated pature, and grassland near large riparian corridors.	Yes -suitable foraging & nesting habitat
Circus cyaneus (northern harrier)	Species of Special Concern	None		Forages in open grasslands, nests on ground in shrubby vegetation.	Yes -foraging only
Elanus leucurus (white-tailed kite)	Fully Protected	None		Nests in riparian corridors along streams and rivers, and forages in nearby grasslands and fields.	Yes -suitable foraging & nesting habitat
Riparia riparia (bank swallow)	Threatened	Species of Concern		Colonial nester in vertical cliffs and banks associated with riparian zones along streams, rivers, and lakes.	No
Amphibians & Reptiles					
Ambystoma trigrinum californiense (California tiger salamander)	Species of Special Concern	Threatened		Breeds in ponds or other deeply ponded wetlands, and uses gopher holes and ground squirrel burrows in adjacent grasslands for upland refugia/foraging.	Yes -marginal habitat in deeper VP's
Clemmys marmorata marmorata (northwestern pond turtle)	Species of Special Concern	Species of Concern		Ponds, rivers, streams, wetlands, and irrigation ditches with associated marsh habitat.	Yes -potential habitat in Elder Creek
Scaphiopus hammondii (western spadefoot)	Species of Special Concern	Species of Concern		Breeds in vernal pools, seasonal wetlands and associated swales. Forages and hibernates in adjacent grasslands.	Yes
Thamnophis gigas (giant garter snake)	Threatened	Threatened		Rivers, canals, irrigation ditches, rice fields, and other aquatic habitats with slow moving water and heavy emergent vegetation.	Yes - marginal habitat in creek, but not highly suitable for GGS.

TABLE 2

(Continued)

	State Status	Federal Status	CNPS Listing	Habitat Association	Potential Habitat In Study Area
Invertebrates					
Branchinecta lynchi (vernal pool fairy shrimp)	None	Threatened		Vernal pools and other seasonally ponded wetlands.	Yes - potential habitat in VP's & SW's
Branchinecta mesovallensis (midvalley fairy shrimp)	None	None		Vernal pools and other seasonally ponded wetlands.	Yes - potential habitat in VP's & SW's
Desmocerus californicus dimorphus (valley elderberry longhorn beetle)	None	Threatened		Dependent upon elderberry plant (Sambucus mexicana) as primary host species	No
Lepidurus packardi (vernal pool tadpole shrimp)	None	Endangered		Vernal pools and other deeply ponded seasonal wetlands.	Yes -marginal habitat in VP's
Linderiella occidentalis (California linderiella)	None	None		Vernal pools and other seasonally ponded wetlands.	Yes - potential habitat in VP's & SW's
Plants					
Downingia pusilla (dwarf downingia)	None	None	CNPS-2	Vernal pools	Yes -suitable habitat in VP's
Gratiola heterosepala (Bogg's Lake hedge-hyssop)	Endangered	None	CNPS-1B	Vernal pools and margins of lakes/ponds	Yes -suitable habitat in VP's
Juncus leiospermus var. ahartii (Ahart's dwarf rush)	None	Species of Concern	CNPS-1B	Vernal pools	Yes -suitable habitat in VP's
Legenere limosa (legenere)	None	Species of Concern	CNPS-1B	Vernal pools	Yes -suitable habitat in VP's
Orcuttia tenuis (slender orcutt grass)	Endangered	Threatened	CNPS-1B	Vernal pools	Yes-marginal habitat in VP's, but not highly suitable for species
Orcuttia viscida (Sacramento orcutt grass)	Endangered	Threatened	CNPS-1B	Vernal pools	Yes-marginal habitat in VP's, but not highly suitable for species
Sagittaria sanfordii (Sanford's arrowhead)	None	Species of Concern	CNPS-1B	Deep aquatic habitats associated with canals, drainages, and ditches.	Yes -but no plants were found in field surveys.

levees, or soft berm features. The grassland/pasture habitat in the study area provides suitable foraging habitat for burrowing owls, and we did observe a few ground squirrel burrows that would provide potential breeding habitat. However, we did not observe any burrowing owls or evidence of burrowing owl nesting activity in the study area

Tricolored Blackbird

Tricolored blackbirds (*Agelaius tricolor*) are afforded protection by CDFG as a species of special concern due to declining populations in the region. They are colonial nesters preferring to nest in dense stands of cattails and/or bullrush, but they also commonly nest in blackberry thickets associated with drainages, ditches, and canals. There have been a number of documented sightings of tricolored blackbird nesting colonies in the Florin and Elk Grove quadrangles, but the locations have been excluded from CNDDB records for protection issues.

The Himalayan blackberry thickets adjacent to Elder Creek may provide suitable nesting habitat for tricolored blackbirds. However, surveys were conducted too late in the summer to adequately evaluate potential tricolored nesting activity at the site.

California Tiger Salamander

The California tiger salamander (*Ambystoma trigrinum californiense*) is a federally threatened species and a California Species of Special Concern that typically breeds in seasonal or permanent ponds. California tiger salamander (CTS) may also breed in deeper ponded vernal pools, seasonal wetlands and/or other seasonal pools within swales or channels. They typically spend a majority of their life cycle living below ground in ground squirrel burrows or pocket gopher burrows in grasslands situated adjacent to suitable breeding sites.

The deeper vernal pool and seasonal wetland habitat in the study area may provide marginally suitable breeding habitat for CTS. However, there are no existing ponds or other highly suitable breeding habitats located in or immediately adjacent to the study area. Given this and given the absence of documented CTS sightings in or near the study area, the potential for CTS to occur at this site appears to be low.

Giant Garter Snake

Giant garter snake (GGS) is designated as a Federal threatened and State threatened species afforded special protection by FWS and CDFG. GGS is generally associated with larger canals,

irrigation ditches, and other semi-permanent to permanent aquatic sites with slow moving water and an abundance of emergent vegetation.

Elder Creek does support marginally suitable habitat that may provide some limited potential for GGS use. Although GGS has been documented within Elk Grove Creek and lower Morrison Creek situated to the west of Highway 99, there have not been any documented GGS sightings along the east side of Highway 99 including the reach of Elder Creek in the study area. Given this, the potential for GGS to occur in the study area is low.

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (*Desmocerus californicus*) is a Federal threatened species that is dependent upon the elderberry plant (*Sambucus sp.*) as a primary host species. Elderberry shrubs are a common component of riparian areas throughout the Sacramento Valley region, and they have been documented as occurring at numerous locations in the vicinity of the study area.

Given the absence of elderberry shrubs in the study area, there is no potential for valley elderberry longhorn beetle to occur at the site.

Vernal Pool Branchiopods

Federally listed vernal pool branchiopods including the threatened vernal pool fairy shrimp *(Branchinecta lynchi*) and the endangered vernal pool tadpole shrimp (*Lepidurus packardi*) have been documented as occurring in Elk Grove and Florin USGS quadrangles. Other non-listed branchiopods known to occur in the region include California linderiella (*Linderiella occidentalis*) and midvalley fairy shrimp (*Branchinecta mesovallensis*).

The branchiopod species listed above are generally restricted to vernal pools and/or other seasonally ponded wetlands that sustain inundation during the winter before drying up in the late spring. All of the vernal pools and seasonal wetlands in the study area are considered as potential habitat for special status branchiopods including the vernal pool fairy shrimp, mid-valley fairy shrimp, and California linderiella. In our opinion, only the deeper vernal pools support suitable ponding regimes typically associated with tadpole shrimp populations. At this time, protocol surveys to determine presence or absence of federally listed branchiopods have not been conducted for the study area.

Special Status Plants

Special status plant species identified on the CNDDB as occurring in the vicinity of the study area, or may potentially occur in the area, include Ahart's dwarf rush (*Juncus leiospermus ahartii*) dwarf downingia (*Downinia pusilla*), Bogg's Lake hedge-hyssop (*Gratiola heterosepala*), legenere (*Legenere limosa*), Sacramento orcutt grass (*Orcuttia viscida*), slender orcutt grass (*Orcuttia tenuis*), and Sanford's arrowhead (*Sagittaria sanfordii*).

Ahart's dwarf rush, dwarf downingia, legenere, Bogg's Lake hedge-hyssop, Sacramento orcutt grass, and slender orcutt grass are all strongly associated with vernal pools habitats. Bogg's Lake hedge-hyssop can also occur around the perimeter of lakes and ponds. Conversely, Sanford's arrowhead generally occurs in deep aquatic habitats associated with drainages, canals, and larger ditches that sustain inundation and/or slow moving water into early summer.

The vernal pools in the study area provide potential habitat for Ahart's dwarf rush, Bogg's Lake hedge-hyssop, dwarf downingia, and legenere. However, they do not provide highly suitable habitat for Sacramento orcutt grass or slender orcutt grass, and there is little if any potential for these plant species to occur at the site. Although Elder Creek does provide somewhat marginal habitat for Sanford's arrowhead, we did not observe this species during our field surveys.

SUMMARY OF SPECIAL STATUS SPECIES HABITAT ASSESSMENT

In regards to special status species and their habitats, a number of special status raptors including Swainson's hawk, sharp-shinned hawk, Cooper's hawk, white-tailed kite, northern harrier, and burrowing owl would have a reasonable potential for occurring in the study area based on the presence of potential foraging and/or nesting habitat. In the event that future development of the site occurs during the raptor nesting season, we recommend that a raptor nesting survey be completed within two weeks of the start of project construction.

The vernal pools and seasonal wetlands in the study area provide potential habitat for special status branchiopods including vernal pool fairy shrimp, mid-valley fairy shrimp, and California linderiella. At this time, protocol branchiopod surveys have not been conducted for this site. The vernal pools also provide potential habitat for special status plants including Ahart's dwarf rush, Bogg's Lake hedge-hyssop, dwarf downingia, and legenere.

Although there may be marginal habitat present for federally listed species including California tiger salamander, giant garter snake, Sacramento orcutt grass, and slender orcutt grass, the

potential for these species to occur in the study area is low given the low suitability of the existing habitat and the absence of documented sightings in study area vicinity.

APPENDIX A

DATA FORMS

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Kimball-Gerber Ck. Assemblage Applicant/Owner: Kimball Hill Homes Investigator(s): D. Skordal, J. Gibson	Date: 7-24-04 City/County: Sacramento County State: California
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Facultative grassland Transect ID: Data Point ID: 1

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Lolium perenne (D)		FAC	9.		
2. Hordeum hystrix (D)		FAC	10.		
3. Bromus Mollis		FACU-	11.		
4. Rumex crispus		FACW	12.		
5. Convolvulus arvensis		UPL	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100% FAC Dominated

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Slight depression lacking algae matting, oxidized rhizospheres and/or other indicators of wetland hydrology!

SOILS

Map Unit Name (Series and Phase): (213)- San Joaquin silt loam, leveled, 0-1 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-8	10 YR 3/3	None	—	fine sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? FAC	(Yes)	No	Is this Data Point Within a Wetland? Yes (No)
Wetland Hydrology Present?	Yes	(No)	
Hydric Soils Present?	Yes	(No)	

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Kimball-Gerber Ck. Assemblage	Date: 7-24-04
Applicant/Owner: Kimball Hill Homes	City/County: Sacramento County
Investigator(s): D. Skordal, J. Gibson	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Facultative grassland
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID:
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: 2

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Lolium perenne (D)		FAC	9.		
2. Hordeum hystrix (D)		FAC	10.		
3. Chenopodium album		FAC	11.		
4. Bromus Mollis		FACU-	12.		
5. Rumex crispus		FACW-	13.		
6. Bromus diandrus		UPL	14.		
7. Vulpia myuros		FACU	15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100% FAC Dominated

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Very slight depression lacking indicators of long-term saturation or ponding!

Map Unit Name (Series and Phase): (213)- San Joaquin silt loam, leveled, 0-1 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-8	10YR 3/4	(None)		fine sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	FAC	(Yes)	No
Wetland Hydrology Present?		Yes	No
Hydric Soils Present?		Yes	No

Is this Data Point Within a Wetland? Yes (No)

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Kimball-Gerber Ck. Assemblage	Date: 7-24-04
Applicant/Owner: Kimball Hill Homes	City/County: Sacramento County
Investigator(s): D. Skordal, J. Gibson	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Facultative grassland
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID:
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: 3

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Hordeum hystrix (D)		FAC	9.		
2. Lolium perenne		FAC	10.		
3. Chenopodium album		FAC	11.		
4. Rumex crispus		FACW	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100% FAC Dominated

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Slight depression lacking algae matting or oxidized rhizospheres on live roots!

Map Unit Name (Series and Phase): (213)- San Joaquin silt loam, leveled, 0-1 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-8	10YR 4/3	yes/faint		fine sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? FAC	(Yes)	No	Is this Data Point Within a Wetland? Yes (No)
Wetland Hydrology Present?	Yes	(No)	
Hydric Soils Present?	Yes	(No)	

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Kimball-Gerber Ck. Assemblage	Date: 7-24-04
Applicant/Owner: Kimball Hill Homes	City/County: Sacramento County
Investigator(s): D. Skordal, J. Gibson	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Vernal pool
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: A
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: A

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Polypogon monspeliensis (D)		FACW+	9. Trichostema lanceolatum		UPL
2. Lolium perenne (D)		FAC	10.		
3. Hordeum hystrix		FAC	11.		
4. Eleocharis Macrostachya		OBL	12.		
5. Cynodon dactylon		FAC	13.		
6. Rumex crispus		FACW	14.		
7. Plagiobothrys stipitatus		OBL	15.		
8. Eryngium vaseyi		FACW	16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ✓ Sediment Deposits/Organic Detritus/Algae
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ✓ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ✓ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Defined basin w/ algae Matting in low spots & oxidized root channels on live roots!

Map Unit Name (Series and Phase): (214) - San Joaquin silt loam, 0-3 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-10	10YR 4/3	Yes		fine sandy silt/loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ✓ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: Hydric soils assumed based on indicators of aquic moisture regime!

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes) No	Is this Data Point Within a Wetland?	(Yes) No
Wetland Hydrology Present?	(Yes) No		
Hydric Soils Present?	(Yes) No		

Remarks: Vernal pool

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Kimball-Gerber Ck. Assemblage	Date: 7-24-04
Applicant/Owner: Kimball Hill Homes	City/County: Sacramento County
Investigator(s): D. Skordal, J. Gibson	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Adjacent upland-grassland
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: A
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: B

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus mollis (D)		FACU-	9.		
2. Bromus diandrus (D)		UPL	10.		
3. Vicia villosa (D)		UPL	11.		
4. Rumex crispus		FACW-	12.		
5. Cynodon dactylon		FAC	13.		
6. Vulpia myuros		FACU	14.		
7. Briza minor		FACW-	15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). None

Remarks: Annual Grassland Habitat

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Located on slope ± 12" above elev. of adjacent VP; lacks indicators of wetland hydrology!

Map Unit Name (Series and Phase): (214) - San Joaquin silt loam, 0-3 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-10	10YR 3/4	None		silt loam

Hydric Soil Indicators:

___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed or Low-Chroma Colors
___ Concretion in upper 3 inches
___ High Organic Content in Surface Layer in Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (No)
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? Yes (No)

Is this Data Point Within a Wetland? Yes (No)

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Kimball-Gerber Ck. Assemblage Applicant/Owner: Kimball Hill Homes Investigator(s): D. Skordal, J. Gibson	Date: 7-24-04 City/County: Sacramento County State: California
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Vernal pool (deep) Transect ID: 5 Data Point ID: A

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Eleocharis macrostachya (D)		OBL	9.		
2. Lasthenia glaberrima		OBL	10.		
3. Eryngium vaseyi		FACW	11.		
4. Ranunculus alveolatus		OBL	12.		
5. Plagiobothrys stipitatus		OBL	13.		
6. Rumex crispus		FACW-	14.		
7. Lolium perenne		FAC	15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks): ___ Streams, Lake, or Tide Gauge ___ Aerial Photographs ___ Other ___ No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: ___ Inundated ___ Saturated in Upper 12 inches ✓ Water Marks ___ Drift Lines ✓ Sediment Deposits/Organic Detritus/Algae ___ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ✓ Oxidized Root Channels in Upper 12 inches ___ Water-Stained Leaves ___ Local Soil Survey Data ✓ FAC-Neutral Test ___ Other (Explain in Remarks)
Field Observations: Depths of Surface Water: _____(in.) Depth to Free Water in Pit: _____(in.) Depth to Saturated Soil: _____(in.)	

Remarks: Deep, defined depression w/ algae matting and oxidized root channels on live roots!

Map Unit Name (Series and Phase): (214) - San Joaquin silt loam, 0-3 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-10	10YR 3/3	yes		fine sandy silt loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ✓ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: Hydric soils assumed based on strong indicators of aquic moisture regime!

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is this Data Point Within a Wetland? (Yes) No
Wetland Hydrology Present?	(Yes)	No	
Hydric Soils Present?	(Yes)	No	

Remarks: Vernal pool

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Kimball-Gerber Ck. Assemblage	Date: 7-24-04
Applicant/Owner: Kimball Hill Homes	City/County: Sacramento County
Investigator(s): D. Skordal, J. Gibson	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Adjacent upland - grassland
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 5
Is the area a potential Problem Area? (If needed, explain on reverse.) Yes (No)	Data Point ID: B

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus diandrus (D)		UPL	9.		
2. Bromus Mollis (D)		FACU-	10.		
3. Erodium sp.		UPL	11.		
4. Lolium perenne		FAC	12.		
5. Eremocarpus setigens		UPL	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). None

Remarks: Annual Grassland Habitat

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: On slope ± 12"-16" above adjacent VP; lacks indicators of wetland hydrology!

Map Unit Name (Series and Phase): (214) - San Joaquin silt loam, 0-3 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-10	10YR 3/4	None	—	fine sandy loam

Hydric Soil Indicators:

___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed or Low-Chroma Colors
___ Concretion in upper 3 inches
___ High Organic Content in Surface Layer in Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	(No)	Is this Data Point Within a Wetland?	Yes	(No)
Wetland Hydrology Present?	Yes	(No)			
Hydric Soils Present?	Yes	(No)			

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Kimball-Gerber Ck. Assemblage Applicant/Owner: Kimball Hill Homes Investigator(s): D. Skordal, J. Gibson	Date: 7-24-04 City/County: Sacramento County State: California
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Vernal pool (medium depth) Transect ID: 6 Data Point ID: A

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Lasthenia fremontii (D)		OBL	9.		
2. Eryngium vaseyi (D)		FACW	10.		
3. Deschampsia danthonioides (D)		FACW	11.		
4. Hordeum hystrix (D)		FAC	12.		
5. Glyceria stipitata		OBL	13.		
6. Ranunculus alveolatus		OBL	14.		
7. Lolium perenne		FAC	15.		
8. Hemizonia pungens		FAC	16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks): ___ Streams, Lake, or Tide Gauge ___ Aerial Photographs ___ Other ___ No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: ___ Inundated ___ Saturated in Upper 12 inches ___ Water Marks ___ Drift Lines ✓ Sediment Deposits/Organic Detritus/Algae ___ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ✓ Oxidized Root Channels in Upper 12 inches ___ Water-Stained Leaves ___ Local Soil Survey Data ✓ FAC-Neutral Test ___ Other (Explain in Remarks)
Field Observations: Depths of Surface Water: _____(in.) Depth to Free Water in Pit: _____(in.) Depth to Saturated Soil: _____(in.)	

Remarks: Defined depression w/algae matting and oxidized root channels on live roots!

Map Unit Name (Series and Phase): (214) - San Joaquin silt loam, 0-3 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-10	10YR 4/3	Yes/faint		fine sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ✓ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: Hydric soils assumed based on strong indicators of aquic moisture regime

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is this Data Point Within a Wetland?	(Yes)	No
Wetland Hydrology Present?	(Yes)	No			
Hydric Soils Present?	(Yes)	No			

Remarks: Vernal pool

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Kimball-Gerber Ck. Assemblage Applicant/Owner: Kimball Hill Homes Investigator(s): D. Skordal, J. Gibson	Date: 7-24-04 City/County: Sacramento County State: California
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Adjacent upland - grassland Transect ID: 6 Data Point ID: B

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus mollis (D)		UPL	9.		
2. Bromus diandrus (D)		UPL	10.		
3. Erodium sp.		UPL	11.		
4. Vulpia myuros		FACU-	12.		
5. Juncus bufonius		FACW	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). None

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks): ___ Streams, Lake, or Tide Gauge ___ Aerial Photographs ___ Other ___ No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: ___ Inundated ___ Saturated in Upper 12 inches ___ Water Marks ___ Drift Lines ___ Sediment Deposits/Organic Detritus ___ Drainage Patterns in Wetlands
Field Observations: Depths of Surface Water: _____(in.) Depth to Free Water in Pit: _____(in.) Depth to Saturated Soil: _____(in.)	Secondary Indicators (2 or more required): ___ Oxidized Root Channels in Upper 12 inches ___ Water-Stained Leaves ___ Local Soil Survey Data ___ FAC-Neutral Test ___ Other (Explain in Remarks)

Remarks: On slope ± 8"-12" above adjacent VP; area lacks wetland hydrology!

Map Unit Name (Series and Phase): (214) - San Joaquin silt loam, 0-3 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-8	10YR 4/3	yes / faint	—	fine sandy loam

Hydric Soil Indicators:

___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed or Low-Chroma Colors
___ Concretion in upper 3 inches
___ High Organic Content in Surface Layer in Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (No)
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? Yes (No)

Is this Data Point Within a Wetland? Yes (No)

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Kimball-Gerber Ck. Assemblage	Date: 7-24-04
Applicant/Owner: Kimball Hill Homes	City/County: Sacramento County
Investigator(s): D. Skordal, J. Gibson	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Facultative grassland
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID:
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: 7

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Lolium perenne (D)		FAC	9.		
2. Hordeum hystrix (D)		FAC	10.		
3. Rumex crispus		FACW	11.		
4. Bromus Mollis		FACU	12.		
5. Convolvulus arvensis		UPL	13.		
6. Eremocarpus setigerus		UPL	14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100% FAC Dominated

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Slight depression lacking algae matting, oxidized root channels and/or other indicators of long-term saturation or ponding!

Map Unit Name (Series and Phase): (214) - San Joaquin silt loam, 0-3 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-10	10YR 3/2 (4/3)	None		fine sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? FAC	(Yes)	No	Is this Data Point Within a Wetland? Yes (No)
Wetland Hydrology Present?	Yes	(No)	
Hydric Soils Present?	Yes	(No)	

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Kimball-Gerber Ck. Assemblage	Date: 7-24-04
Applicant/Owner: Kimball Hill Homes	City/County: Sacramento County
Investigator(s): D. Skordal, J. Gibson	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Seasonal Wetland (Facultative)
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 8
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: A

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Hordeum hystrix (D)		FAC	9.		
2. Lolium perenne		FAC	10.		
3. Cynodon dactylon		FAC	11.		
4. Rumex crispus		FACW	12.		
5. Polygonum aviculare		FAC	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100% FAC

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ✓ Sediment Deposits/Organic Detritus/Algae
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ✓ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ✓ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: shallow, defined depression w/ algae matting and oxidized root channels on live roots!

Map Unit Name (Series and Phase): (213)- San Joaquin silt loam, leveled, 0-1 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-10	10YR 4/3	yes		sandy silt loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ✓ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: Hydric soils assumed based on strong indicators of aquic Moisture regime!

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes) No	Is this Data Point Within a Wetland?	(Yes) No
Wetland Hydrology Present?	(Yes) No		
Hydric Soils Present?	(Yes) No		

Remarks: Seasonal wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Kimball-Gerber Ck. Assemblage	Date: 7-24-04
Applicant/Owner: Kimball Hill Homes	City/County: Sacramento County
Investigator(s): D. Skordal, J. Gibson	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Adjacent upland-grassland
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 8
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: B

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus Mollis (D)		FACU-	9.		
2. Bromus diandrus (D)		UPL	10.		
3. Vulpia myuros		FACU	11.		
4. Hordeum hystrix		FAC	12.		
5. Lolium perenne		FAC	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Nearly level to gently undulating terrain / lacking indicators of longterm saturation or ponding!

Map Unit Name (Series and Phase): (213)- San Joaquin silt loam, leveled, 0-1 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-10	10YR 4/3	None		fine sandy loam

Hydric Soil Indicators:

___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed or Low-Chroma Colors
___ Concretion in upper 3 inches
___ High Organic Content in Surface Layer in Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (No)
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? Yes (No)

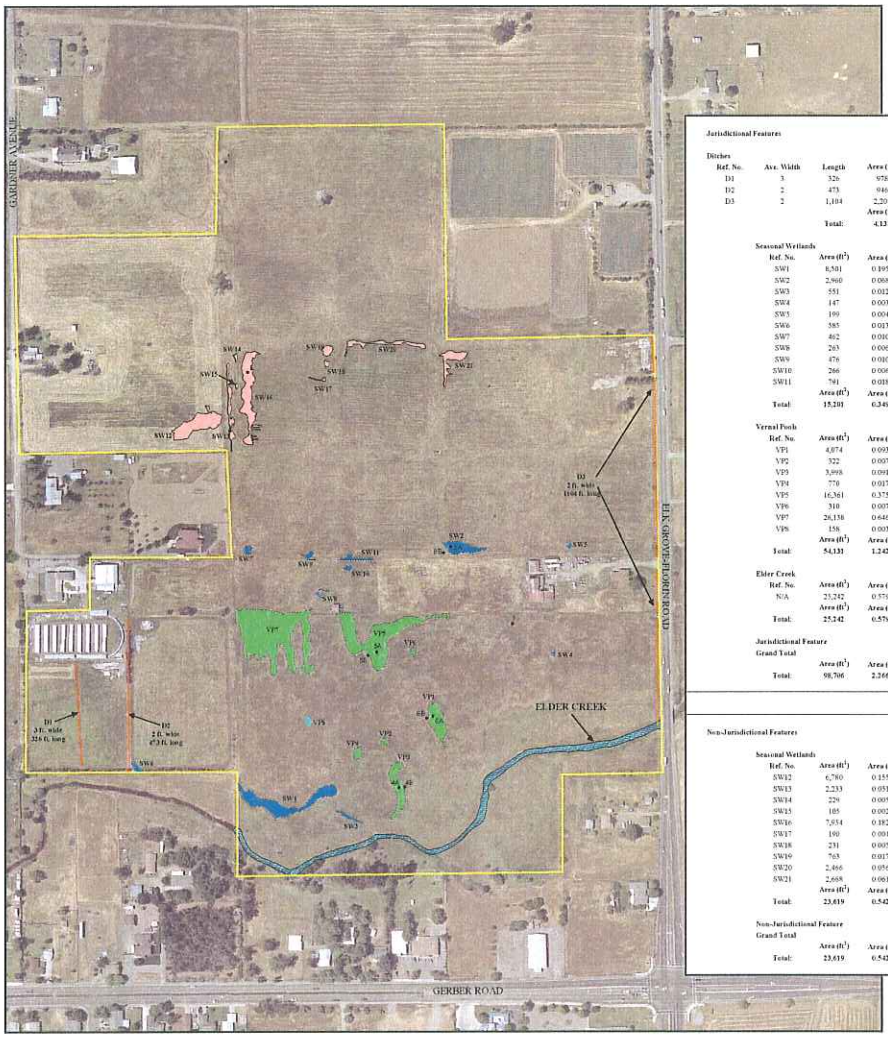
Is this Data Point Within a Wetland? Yes (No)

Remarks: Non-wetland

APPENDIX B

DELINEATION MAP

REVISED JURISDICTIONAL DELINEATION MAP
KIMBALL-GERBER CREEK ASSEMBLAGE
(Sacramento County, California)



Jurisdictional Features

Ditches

Ref. No.	Ave. Width	Length	Area (ft²)	Area (ac)
D1	3	326	978	0.0225
D2	2	473	946	0.0217
D3	2	1,104	2,208	0.0507
			Area (ft²)	Area (ac)
		Total:	4,132	0.0949

Seasonal Wetlands

Ref. No.	Area (ft²)	Area (ac)
SW1	8,501	0.1952
SW2	2,960	0.0680
SW3	551	0.0126
SW4	147	0.0034
SW5	199	0.0046
SW6	585	0.0134
SW7	462	0.0106
SW8	263	0.0060
SW9	476	0.0109
SW10	266	0.0061
SW11	791	0.0182
	Area (ft²)	Area (ac)
Total:	15,201	0.3490

Vernal Pools

Ref. No.	Area (ft²)	Area (ac)
VP1	4,074	0.0935
VP2	322	0.0074
VP3	3,998	0.0918
VP4	770	0.0177
VP5	16,361	0.3756
VP6	310	0.0071
VP7	28,138	0.6460
VP8	158	0.0036
	Area (ft²)	Area (ac)
Total:	54,131	1.2427

Elder Creek

Ref. No.	Area (ft²)	Area (ac)
N/A	25,242	0.5795
	Area (ft²)	Area (ac)
Total:	25,242	0.5795

Jurisdictional Feature Grand Total

	Area (ft²)	Area (ac)
Total:	98,706	2.3660

Non-Jurisdictional Features

Seasonal Wetlands

Ref. No.	Area (ft²)	Area (ac)
SW12	6,780	0.1556
SW13	2,233	0.0513
SW14	229	0.0053
SW15	105	0.0024
SW16	7,934	0.1826
SW17	190	0.0044
SW18	231	0.0053
SW19	763	0.0175
SW20	2,466	0.0566
SW21	2,668	0.0612
	Area (ft²)	Area (ac)
Total:	23,619	0.5422

Non-Jurisdictional Feature Grand Total

	Area (ft²)	Area (ac)
Total:	23,619	0.5422

- Data Points
- Vernal Pools
- Seasonal Wetlands
- Elder Creek
- Isolated Waters
- Drainage Ditch
- Study Area (77 acres)

0 100 200 400 Feet

GIBSON AND SKORDAL, LLC
WETLANDS CONSULTANTS
2277 Fair Oaks Blvd, Suite 105
Sacramento, CA 95825
(916) 569-1830

Prepared: July 2004
Revised: February 2007
Second Revision: April 2007
Third Revision: June 2007
Base Map: Aerial Photography Flown in May 2002

APPENDIX C

PLANT LIST

LIST OF PLANTS OBSERVED ON THE KIMBALL-GERBER CREEK ASSEMBLAGE PROPERTY AND THEIR STATUS AS WETLAND INDICATOR SPECIES

Scientific Name	Common Name	Status [1]&[2]
Agrostis avenacea	hairy flower bentgrass	FACW*
Aira caryophyllea	silver hairgrass	UPL
Amsinckia intermedia	fiddleneck	UPL
Asclepias fascicularis	slender milkweed	FAC
Asclepias speciosa	showy milkweed	FAC
Avena barbata	slender wild oats	UPL
Avena fatua	wild oats	UPL
Baccharis pilularis ssp. consanguinea	coyote brush	UPL
Boisduvalia densiflora	dense flower spike-primrose	OBL
Brassica sp.	mustard	NI
Briza minor	little quaking grass	FACW-
Brodiaea sp.	brodiaea	---
Bromus diandrus (B. rigidus)	rip-gut grass	UPL
Bromus mollis	soft chess	FACU-
Centaurea solstitialis	yellow star-thistle	UPL
Chenopodium album	lamb's quarters	FAC
Cichorium intybus	chickory	UPL
Cirsium sp.	thistle	---
Convolvulus arvensis	bindweed	UPL
Conyza canadensis	Canada horseweed	FAC
Cynodon dactylon	Bermuda grass	FAC
Cyperus eragrostis	tall flatsedge	FACW
Deschampsia danthonioides	purple hairgrass	FACW
Downingia sp.	downingia	OBL
Echinochloa crusgalli	barnyard grass	FACW
Eleocharis macrostachya	creeping spikerush	OBL
Epilobium sp.	willow herb	FAC-FACW
Eremocarpus setigerus	doveweed	UPL
Erodium botrys	filaree	UPL
Erodium cicutarium	cut-leaf filaree	UPL
Eryngium vaseyi	coyote thistle	FACW
Eucalyptus sp.	gum	---
Festuca arundinacea	tall fescue	FAC-
Ficus carica	fig	UPL

[1] Reed, P.B. 1988. National List of Plant Species That Occur in Wetlands: California (Region 0). Biological Report 88(26.10) May 1988. National Ecology Research Center, National Wetland Inventory, U.S. Fish and Wildlife Service, St. Petersburg, Fl.

[2] OBL = obligate; FACW = facultative wetland; FAC = facultative; FACU = facultative upland; UPL = upland; and NI = no indicator.

Scientific Name	Common Name	Status
Foeniculum vulgare	sweet fennel	FACU
Geranium dissectum	cut-leaf geranium	UPL
Hemizonia fitchii	Fitch's spikeweed	UPL
Hemizonia pungens	common tarweed	FAC
Holocarpha virgata	tarweed	UPL
Hordeum hystrix (*H. geniculatum*)	Mediterranean barley	FAC
Hordeum leporinum	barley	NI
Hypochaeris glabra	smooth cats tongue	UPL
Juglans californica (J. nigra)	California walnut	UPL
Juncus bufonius	toad rush	FACW+
Lactuca serriola	prickly lettuce	FAC
Lasthenia fremontii	Fremont's goldfields	OBL
Lasthenia glaberrima	smooth goldfields	OBL
Leontodon leysseri	hairy hawkbit	FACU
Lepidium latifolium	broad-leaf peppergrass	FACW
Leptochloa fascicularis	bearded sprangle-top	OBL
Lippia nodiflora	common frog-fruit	FACW
Lolium perenne (*L. multiflorum*)	perennial ryegrass	FAC
Lotus corniculatus	bird's foot trefoil	FAC
Lotus purshianus	Spanish clover	FAC
Ludwigia peploides	floating primrose	OBL
Lythrum hyssopifolia	loosestrife	FACW
Marrubium vulgare	common horehound	FAC
Medicago polymorpha	bur clover	UPL
Morus alba	mulberry	---
Olea europaea	olive	UPL
Paspalum dilatatum	dallis grass	FAC
Paspalum distichum	knot grass	OBL
Phalaris sp.	canary grass	---
Plagiobothrys stipitatus *var. micranthus*	slender popcorn flower	OBL
Plantago lanceolata	English plantain	FAC-
Platanus racemosa	California sycamore	FACW
Poa annua	annual bluegrass	FACW-
Polygonum aviculare	postrate knotweed	FAC
Polygonum sp.	smartweed	OBL
Polypogon monspeliensis	annual rabbit-foot grass	FACW+
Populus fremontii	Fremont cottonwood	FACW
Prunus sp.	fruit trees	UPL
Psilocarphus brevissimus	wooly marbles	OBL
Quercus lobata	valley oak	FAC

Scientific Name	Common Name	Status
Ranunculus alveolatus (*R. bonariensis var. trisepalus*)	Carter's buttercup	OBL
Raphanus sativus	wild radish	UPL
Rubus procerus	Himalayan blackberry	FAC
Rumex acetosella	sheep sorrel	FAC-
Rumex conglomeratus	clustered dock	FACW
Rumex crispus	curly dock	FACW-
Salix lasiolepis	arroyo willow	FACW
Salix sp.	willow	---
Silybum marianum	milk thistle	UPL
Sonchus arvensis	field sow thistle	FACU
Sorghum halepense	Johnson grass	FACU
Spergularia rubra	purple sand spurry	FAC-
Taeniatherum caput-medusae	medusa-head	UPL
Trichostema lanceolatum	vinegar weed	UPL
Trifolium hirtum	rose clover	UPL
Trifolium sp.	clover	---
Trifolium variegatum	white-tip clover	FACW-
Veronica peregrina	purslane speedwell	OBL
Vicia villosa	winter vetch	---
Vitis californica	wild grape	UPL
Vulpia myuros	rat-tail fescue	FACU
Xanthium strumarium	rough cocklebur	FAC+

Appendix C

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Prediction Worksheet

Project Information:

Job Number: 04-0204
Project Name: FHWA Model
Roadway Name: Gerber Road East to Bradshaw Road

Traffic Data:

Year:	Future
Average Daily Traffic Volume:	16,800
Percent Daytime Traffic:	80
Percent Nighttime Traffic:	20
Percent Medium Trucks (2 axle):	2
Percent Heavy Trucks (3+ axle):	2
Assumed Vehicle Speed (mph):	45
Intervening Ground Type (hard/soft):	**Soft**

Traffic Noise Levels:

				----------L_{dn}, dB----------			
Location:	**Description**	**Distance**	**Offset (dB)**	**Autos**	**Medium Trucks**	**Heavy Trucks**	**Total**
1	Nearest Backyard	100	0	64	56	60	66
2	Nearest Backyard	100	0	64	56	60	66
3	Nearest Backyard	100	0	64	56	60	66
4	Nearest Backyard	100	0	64	56	60	66
5	Nearest Backyard	100	0	64	56	60	66
6	Nearest Backyard	100	0	64	56	60	66
7	Nearest Backyard	100	0	64	56	60	66

Traffic Noise Contours (No Calibration Offset):

L_{dn} Contour, dB	**Distance from Centerline, (ft)**
75	26
70	57
65	122
60	263

Notes:

Page: 1

12/19/2008 2:07:03 PM

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name:

Project Name: 04-0204 Florin Bradshaw

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2009 TOTALS (lbs/day unmitigated)	10.94	62.77	33.68	0.01	237.06	3.84	240.90	49.51	3.54	53.05	5,835.77
2010 TOTALS (lbs/day unmitigated)	676.86	83.70	94.38	0.07	237.31	5.17	242.48	49.60	4.75	54.35	13,369.42

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	209.92	243.45	2,823.36	2.24	359.11	69.42	223,778.25

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	209.92	243.45	2,823.36	2.24	359.11	69.42	223,778.25

JURISDICTIONAL DELINEATION

BRADSHAW/FLORIN PROPERTY

SACRAMENTO COUNTY, CALIFORNIA

OCTOBER 2002
Revised February 2003

RECEIVED
JUN 26 2007
DEPARTMENT OF ENVIRONMENTAL REVIEW AND ASSESSMENT

Prepared For:

TAYLOR PROPERTIES
1425 River Park Drive, Suite 201
Sacramento, California 95815

Prepared By:

GIBSON & SKORDAL, LLC
Wetland Consultants
2277 Fair Oaks Blvd., Suite 395
Sacramento, California 95825

OBJECTIVE

The purpose of this study was to delineate all waters of the United States, including wetlands, existing in the study area that is subject to the provisions of Section 404 of the Clean Water Act.

LOCATION

The study area is an approximately 40-acre parcel located immediately north of Florin Road and immediately east of Bradshaw Road in Sacramento County, California. It lies in Section 33, Township 8 North, Range 6 East (Latitude 38° 29' North, Longitude 121°19' West). Figure 1 is a vicinity map.

METHODS AND MATERIALS

Field studies were conducted on May 11 and September 29, 2002, for the purpose of delineating all waters of the United States including wetlands in the study area. The **"Corps of Engineers Wetlands Delineation Manual"**[1] was used as the standard for determining whether specific areas are wetlands subject to the Clean Water Act. Corps of Engineers' regulations (33 CFR 328) were used to determine the presence of waters of the United States (waters), other than wetlands. The **"National List of Plant Species That Occur In Wetlands: California (Region O)"**[2] was used to determine the status of observed plants as wetland indicator species. The **"Soil Survey of Sacramento County, California"**[3] was used to evaluate mapped soils.

The boundaries of all wetlands were flagged in the field by Gibson and Skordal, LLC and subsequently surveyed by MacKay & Somps Land Surveying. A 1" = 100' scale aerial photograph flown on April 4, 2000, was used to field review the property. A 1" = 100' topographic map was subsequently used to obtain additional data point locations. Data sheets which document the basis for determining which areas are upland or wetland were completed for representative locations and are provided in Appendix A.

On January 27, 2003, Mr. Justin Cutler, Sacramento District Corps of Engineers, field verified our wetland delineation. During the verification, two small wetland areas totaling 0.02 acre were added to our delineation. These wetlands are described in this report and identified on our delineation map.

---

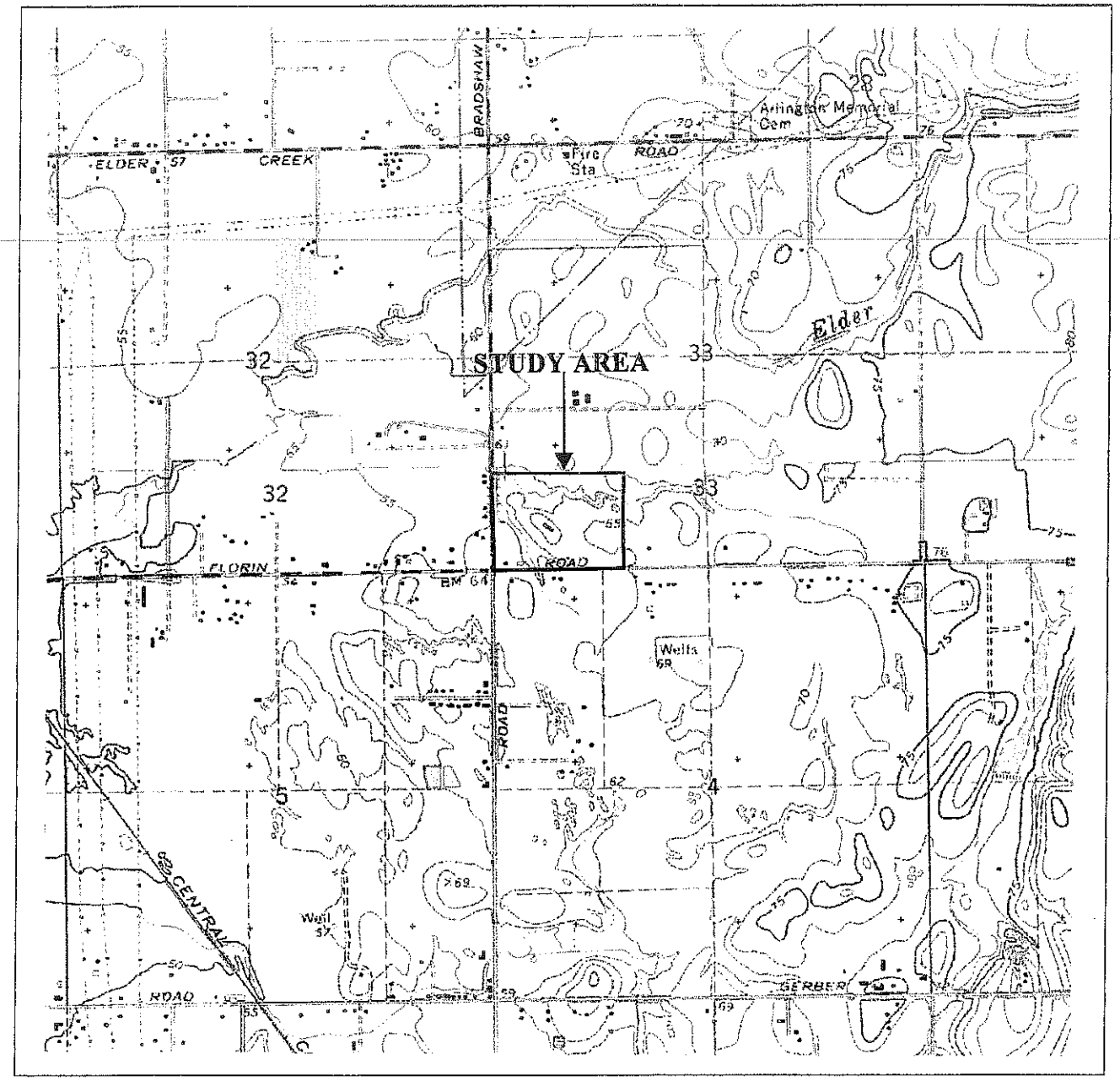
[1] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss.

[2] Reed, P.B. 1988. National List of Plant Species That Occur In Wetlands: California (Region O). Biological Report 88 (26.10) May 1988. National Ecology Research Center, National Wetlands Inventory, U.S. Fish and Wildlife Service, St. Petersburg, Florida.

[3] USDA, Soil Conservation Service. 1991. Soil Survey for Sacramento County, California.

FIGURE 1

VICINITY MAP



↑
N
(Scale: 1 Inch = 2000 Feet)

Source: Elk Grove & Carmichael 7.5 Minute USGS Topographic Quadrangles

GENERAL SITE CONDITIONS

The study area is an undeveloped parcel that consists of slightly undulating to level terrain. It is bordered by Florin Road to the south, Bradshaw Road to the west, a commercial nursery to the north, and undeveloped pasture to the east. A commercial nursery occupied this site in the past. A pump house, steam house, and water tank that were used as part of the nursery, remain on the site. House and outbuilding pads are located in the southwest corner of the property.

Gravel beds used for nursery stock are located in the southern and eastern portions of the study area. Some of these gravel beds form slight depressions, however, the gravel base allows for drainage. Additional data points were taken in September after a detailed topographic map was provided to us showing shallow depressional areas in the gravel beds and other locations on the property. These areas were not obvious during our initial field survey. As indicated by data sheets 6-11, these areas are not wetlands.

The primary habitat in the study area is non-native annual grassland dominated by rip gut brome (*Bromus diandrus*), wild oats (*Avena fatua*), soft chess (*Bromus mollis*) and tarweed (*Holocarpha virgata*). Other common species include medusa head (*Taeniatherum caput-medusae*), filaree (*Erodium botrys)*, hairy hawkbit (*Leontodon leysseri*), perennial rye grass (*Lolium perenne*), prickly lettuce (*Lactuca serriola*), and Mediterranean barley (*Hordeum hystrix*). There is a number of large eucalyptus (*Eucalyptus sp.)* in the southwest corner of the property. There are also scattered cottonwoods (*Populus fremontii*), willows (*Salix* spp.), and ornamental trees and shrubs associated with the abandoned nursery.

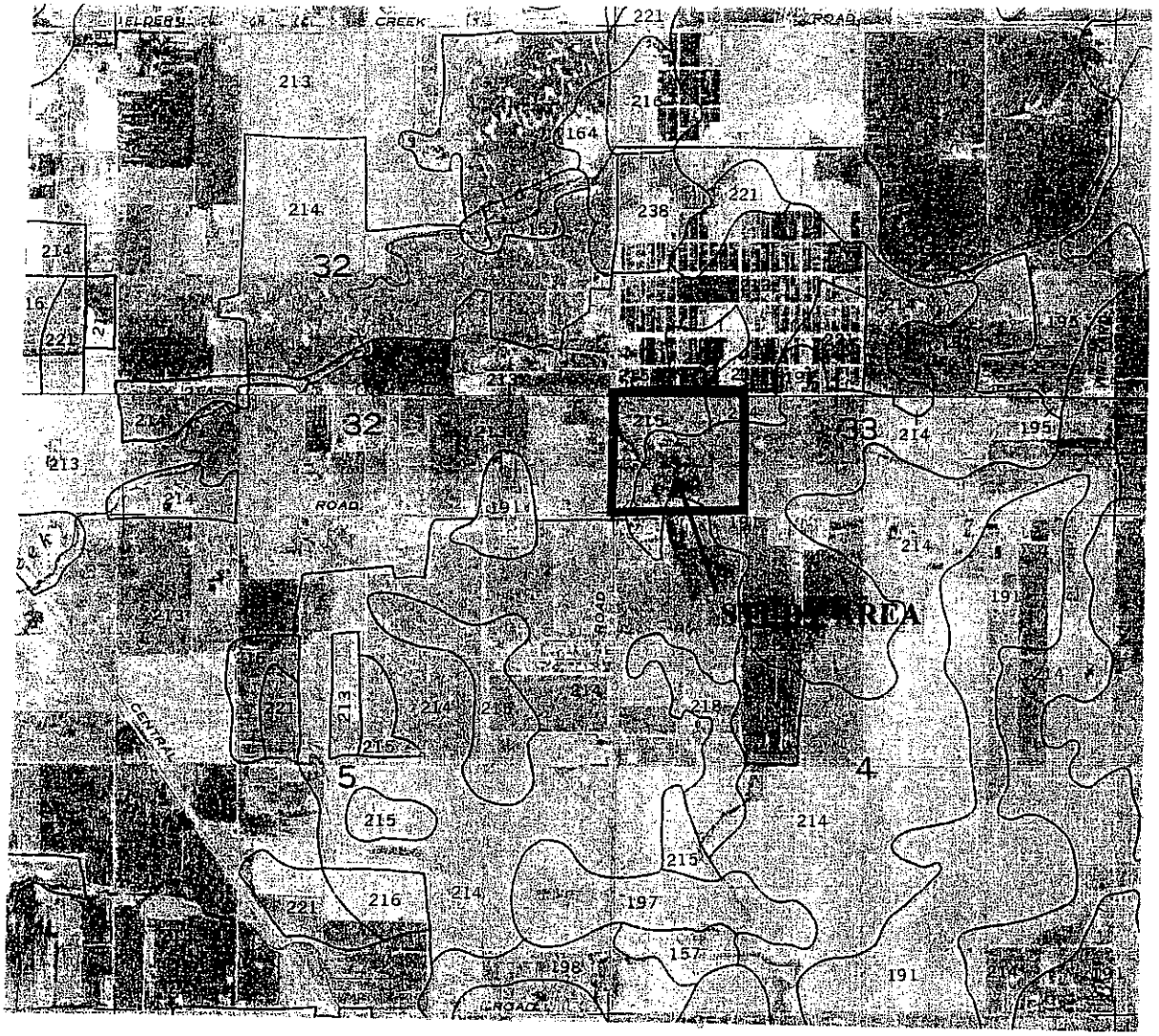
The landscape in the study area generally slopes to the northwest. Soils in the study area are primarily mapped as Red Bluff loam, 0 to 2 percent slopes. This soil unit is described as very deep, well drained soil on intermediate terraces. Although it is not listed as a hydric soil, it does have hydric inclusions in depressions and drainages. Other mapped soils include San Joaquin silt loam, 0 – 2 percent slopes, and San Joaquin silt loam, 3 – 8 percent slopes. These soils are described as moderately deep, moderately well drained soils on low terraces and sideslopes of low terraces, respectively. Neither soil is listed as hydric, but may have hydric inclusions in depressions and drainages. Figure 2 is a soils map showing the location of the study area.

FINDINGS

We identified a total of approximately 0.80 acre of wetlands in the study area comprised of straightened wetland swale drainages and a seasonal wetland depression (SW1). Appendix B provides a partial list of plant species observed in the study area including their status as wetland indicators, and Appendix C provides a delineation map showing the location and size of jurisdictional wetlands.

FIGURE 2

SOILS MAP



Soil Unit	Soil Name	Classification	Drainage Class
191	Red Bluff loam, 0-2 percent slopes	Ultic Palexeralfs	Well drained
214	San Joaquin silt loam, 0-3 percent slopes	Abruptic Durixeralfs	Moderately well drained
215	San Joaquin silt loam, 3-8 percent slopes	Abruptic Durixeralfs	Moderately well drained

Source: USDA, Soil Conservation Service. 1991. Soil Survey of Sacramento County, California.

There are two channelized drainage swales bisecting the property. One flows through the center of the property from east to west, and the other flows from south to north into the other swale. Both of these swales were historically straightened to accommodate nursery operations in the early 1980's. The eastern half of the east-west swale is dominated by perennial rye grass. Associates include soft chess and curly dock (*Rumex crispus*). The south–north swale and the east–west swale below their confluence is dominated by broad–leaf water plantain (*Alisma plantago-aquatica*), rabbit-foot grass (*Polypogon monspeliensis*), and umbrella sedge (*Cyperus eragrostis*). This drainage system receives irrigation runoff from the south and was wet during our field review in September. There is also a small channelized wetland swale (WS1) that drains into the channelized drainage that bisects the property. This area (0.01 acre) was added during the Corps' field verification.

Seasonal Wetland 1 (SW1) is a small, shallow depressional area in the central portion of the project. It is approximately 0.01 acre in size and is dominated by Mediterranean barley. This area was added during the Corp's field verification.

There is a surface drainage system that connects the swales in the study area to Elder Creek, approximately ½ mile downstream. Therefore, it is our opinion that the swales are not isolated.

CONCLUSION

We identified a total of 0.80 acre of waters in the study area consisting of straightened wetland swales and seasonal wetland depression that may be subject to regulation by the Corps of Engineers under Section 404 of the Clean Water Act.

APPENDIX A

DATA SHEETS

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Bradshaw/Florin Applicant/Owner: Taylor Properties Investigator(s): Gibson	Date: 9/11/02 City/County: Sacramento Co. State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: drainage swale Transect ID: 1 Data Point ID: A

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Lolium perenne (D)	Herb	FAC	9.		
2. Rumex crispus (A)	herb	FACW-	10.		
3. Bromus mollis (A)	herb	FACU	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 66%

Remarks: Wetland plant community

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- X Sediment Deposits/Organic Detritus
- X Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Wetland hydrology indicators present

Map Unit Name
(Series and Phase): Red Bluff Loam, 0-2% slopes

Drainage Class: Well drained

Field Observations
Confirm Mapped Type? Yes (No)

Taxonomy (Subgroup): Ultic Palexeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
~~[illegible]~~				
8"	7.5YR4/4			gravelly loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- X Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: Hydric Soils present

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is this Data Point Within a Wetland?	(Yes)	No
Wetland Hydrology Present?	(Yes)	No			
Hydric Soils Present?	(Yes)	No			

Remarks: Wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Bradshaw / Florin Applicant/Owner: Taylor Properties Investigator(s): Gibson	Date: 5/11/02 City/County: Sacramento Co. State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: upland Transect ID: 1 Data Point ID: 13

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus mollis (D)	herb	FACU	9.		
2. Lolium perenne (A)	"	FAC	10.		
3. Taeniatherum caput-medusae (A)	"	UPL	11.		
4. Avena barbata (A)	"	UPL	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0

Remarks: Upland plant community

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: No wetland hydrology observed

Map Unit Name (Series and Phase): Red Bluff loam, 0-2% slope

Drainage Class: well drained

Field Observations Confirm Mapped Type? Yes (No)

Taxonomy (Subgroup): Ultic Palexeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
8"	10YR 4/4			gravelly loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: No hydric soil indicators observed

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	(No)	Is this Data Point Within a Wetland? Yes (No)
Wetland Hydrology Present?	Yes	(No)	
Hydric Soils Present?	Yes	(No)	

Remarks: NON-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Bradshaw / Florin	Date: 5/1/02
Applicant/Owner: Taylor Properties	City/County: Sacramento Co.
Investigator(s): Gibson	State: CA
Do Normal Circumstances exist on the site? (Yes) No	Community ID: drainage swale
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 2
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: B

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Alisma plantago-aquatica (D)	herb	OBL	9.		
2. Polypogon monspeliensis (D)		FACW	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100

Remarks: wetland plant community

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ✓ Sediment Deposits/Organic Detritus
- ✓ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Wetland hydrology present

Map Unit Name (Series and Phase): Rd Bluffton, 0-2% Slope

Drainage Class: well drained

Field Observations Confirm Mapped Type? Yes (No)

Taxonomy (Subgroup):

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1/2"	7.5YR 4/4		~~gravelly loam~~	gravelly loam
3/4"	Hardpan			

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ✓ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is this Data Point Within a Wetland?	(Yes)	No
Wetland Hydrology Present?	(Yes)	No			
Hydric Soils Present?	(Yes)	No			

Remarks: Wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Bradshaw/Florin Applicant/Owner: Taylor Properties Investigator(s): Gibson	Date: 5/11/02 City/County: Sacramento Co. State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Upland Transect ID: 2 Data Point ID: B

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus mollis (D)	herb	FACU	9.		
2. Bromus diandrus	"	UPL	10.		
3. Lactuca serriola	"	FACU	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0

Remarks: Upland plant community

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: No wetland hydrology indicators observed

Map Unit Name (Series and Phase): Red Bluff loam, 0-2% Slopes

Drainage Class: Well drained

Field Observations Confirm Mapped Type? Yes (No)

Taxonomy (Subgroup): Ultic palexeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
8"	7.5YR4/4			gravelly loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: No hydric soil indicators observed

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	(No)
Wetland Hydrology Present?	Yes	(No)
Hydric Soils Present?	Yes	(No)

Is this Data Point Within a Wetland? Yes (No)

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Bradshaw / Florin	Date: 5/28/02
Applicant/Owner: Taylor Properties	City/County: Sacramento Co.
Investigator(s): Gibson	State: CA
Do Normal Circumstances exist on the site? (Yes) No	Community ID:
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID:
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: 3

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus mollis (D)	herb	FACU	9.		
2. Leontodon hyseri (D)	"	FACU	10.		
3. Avena barbata (A)	"	UPL	11.		
4. Hordeum hystrix (A)	"	FAC	12.		
5. Lolium perenne (A)	"	FAC	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0

Remarks: Upland plant community

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: No wetland hydrology present

Map Unit Name (Series and Phase): San Joaquin silt loam, 3-8% slopes

Drainage Class: moderately well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
8"	7.5YR 4/4			gravelly loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

No wetland hydrology present

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	No
Wetland Hydrology Present?	Yes	No
Hydric Soils Present?	Yes	No

Is this Data Point Within a Wetland? Yes No

Remarks:

Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Bradshaw / Florin Applicant/Owner: Taylor Properties Investigator(s): Gibson	Date: 5/28/02 City/County: Sacramento Co. State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Transect ID: Data Point ID: 4

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus mollis (D)	herb	FACU	9.		
2. Erodium botrys (D)	"	UPL	10.		
3. Leontodon taraxacum	"	FACU	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0

Remarks: Upland plant community

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: No wetland hydrology observed

Map Unit Name (Series and Phase): San Joaquin silt loam, 3 to 9% Slopes

Drainage Class: Moderately well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1"	7.5YR 4/4			gravelly loam
>1"	hardpan			

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: Area has been scraped

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	No
Wetland Hydrology Present?	Yes	No
Hydric Soils Present?	Yes	No

Is this Data Point Within a Wetland? Yes No

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Bradshaw / Florin Applicant/Owner: Taylor Properties Investigator(s): Gibson	Date: 5/11/02 City/County: Sacramento Co. State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Transect ID: Data Point ID:

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Lolium perenne (D)	herb	FAC	9.		
2. Hordeum hystrix (D)	"	FAC	10.		
3. Bromus mollis (D)	"	FACU	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 66%

Remarks: Marginal wetland plant community

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: No. wetland hydrology observed

Map Unit Name (Series and Phase): San Joaquin silt loam, 3-9% slopes

Drainage Class: Moderately well drained

Field Observations Confirm Mapped Type? Yes (No)

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
6"	7.5YR 4/6			gravelly loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: No hydric soil indicators observed

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is this Data Point Within a Wetland? Yes (No)
Wetland Hydrology Present?	Yes	(No)	
Hydric Soils Present?	Yes	(No)	

Remarks:

Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Bradshaw / Florin Applicant/Owner: Taylor Properties Investigator(s): Gibson	Date: 9/29/02 City/County: Sacramento Co. State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Upland Transect ID: Data Point ID: 6

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus mollis (D)	herb	FACU	9.		
2. Taeniatherum caput-medusae (D)	"	UPL	10.		
3. Lactuca serriola (A)	"	FAC	11.		
4. Centaurea solstitialis (A)	"	UPL	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0

Remarks: Upland plant community

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: No wetland hydrology observed

Map Unit Name (Series and Phase): Red Bluff Loam, 0-2% slopes

Drainage Class: well drained

Field Observations Confirm Mapped Type? Yes (No)

Taxonomy (Subgroup): Ultic Palexeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
~~0-5 YR 4/4~~				
4"	7.5YR4/4			sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: No hydric soil indicators observed

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	(No)
Wetland Hydrology Present?	Yes	(No)
Hydric Soils Present?	Yes	(No)

Is this Data Point Within a Wetland? Yes (No)

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Bradshaw / Florin	Date: 9/29/02
Applicant/Owner: Taylor Properties	City/County: Sacramento Co.
Investigator(s): Gibson	State: CA
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Upland
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID:
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: 7

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Holocarpha virgata (D)	herb	UPL	9.		
2. Bromus mollis (D)	herb	FACU	10.		
3. Lolium perenne (A)	"	FAC	11.		
4. Vulpia myuros	"	FACU	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0

Remarks: Upland plant community

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: No wetland hydrology observed

Map Unit Name (Series and Phase): Red Bluff loam, 0-2% slopes

Drainage Class: Well drained

Field Observations Confirm Mapped Type? Yes (No)

Taxonomy (Subgroup): Ultic Palexeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
4"	5YR 4/4			Sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: No hydric soil indicators observed

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	(No)
Wetland Hydrology Present?	Yes	(No)
Hydric Soils Present?	Yes	(No)

Is this Data Point Within a Wetland? Yes (No)

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Bradshaw/Florin Applicant/Owner: Taylor Properties Investigator(s): Gibson	Date: 9/29/02 City/County: Sacramento Co. State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Upland Transect ID: Data Point ID: 8

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus mollis (D)	herb	FACU	9.		
2. Centaurea solstitialis (A)	"	UPL	10.		
3. Bromus rigidus (A)	"	UPL	11.		
4. Avena barbata (A)	"	Upl	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0

Remarks: Upland plant community

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: No Wetland hydrology indicators observed

Map Unit Name (Series and Phase): Red Bluff loam, 0-2% slopes

Drainage Class: well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Ultic Palexeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
Gravel nursery bed				

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: Data point located in shallow depression where nursery stock was placed. Gravel was placed for drainage

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	No
Wetland Hydrology Present?	Yes	No
Hydric Soils Present?	Yes	No

Is this Data Point Within a Wetland? Yes No

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Bradshaw / Florin	Date: 9/29/02
Applicant/Owner: Taylor Properties	City/County: Sacramento Co.
Investigator(s): Gibson	State: CA
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Upland
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID:
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: 9

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Hordeum hystrix (D)	Herb	FAC	9.		
2. Bromus diandrus (D)	"	FACU	10.		
3. Centaurea solstitialis	"	UPL	11.		
4. Lolium perenne	"	FAC	12.		
5. Avena barbata	"	UPL	13.		
6. Hordeum leporinum	"	UPL	14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 50%

Remarks: Transitional community. Fac neutral test toward upland

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: No wetland hydrology observed

Map Unit Name (Series and Phase): Red Bluff loam, 0-2% slopes

Drainage Class: well drained

Field Observations Confirm Mapped Type? Yes (No)

Taxonomy (Subgroup): Ultic Palexeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
8"	Gravel Nursery		bed	

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: Gravel utilized for drainage

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	(No)	Is this Data Point Within a Wetland? Yes (No)
Wetland Hydrology Present?	Yes	(No)	
Hydric Soils Present?	Yes	(No)	

Remarks:

Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Bradshaw / Florin Applicant/Owner: Taylor Properties Investigator(s): Gibson	Date: 9/29/02 City/County: Sacramento Co. State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Transect ID: Data Point ID: 10

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus mollis (D)	herb	FACU	9.		
2. Hordeum leporinum (D)	"	UPL	10.		
3. Avena barbata (A)	"	UPL	11.		
4. Lolium perenne (A)	"	FAC	12.		
5. Bromus hordeaceus (A)	"	UPL	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0

Remarks: upland plant community

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: No wetland hydrology observed

Map Unit Name (Series and Phase): Red Bluff loam, 0-2% slope

Drainage Class: Well drained

Taxonomy (Subgroup): Ultic Palexeralfs

Field Observations Confirm Mapped Type? Yes (No)

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
Gravel bed				

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: gravel placed for drainage of nursery stock

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes (No)	Is this Data Point Within a Wetland? Yes (No)
Wetland Hydrology Present?	Yes (No)	
Hydric Soils Present?	Yes (No)	

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Bradshaw/Florin Applicant/Owner: Taylor Properties Investigator(s): Gibson	Date: 9/29/02 City/County: Sacramento Co. State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Transect ID: Data Point ID: 11

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Avena barbata (D)	herb	UPL	9.		
2. Bromus rigidus (D)	herb	UPL	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0

Remarks: Upland plant community

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: No wetland hydrology observed

Map Unit Name (Series and Phase): Red Bluff loam, 0-2% slopes

Drainage Class: well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup):

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
4"	10YR 3/3			loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: shallow depression in in and fill area. Fill approximately 3'-4' high.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	(No)
Wetland Hydrology Present?	Yes	(No)
Hydric Soils Present?	Yes	(No)

Is this Data Point Within a Wetland? Yes (No)

Remarks: Non-wetland

APPENDIX B

PLANT SPECIES LIST

PARTIAL LIST OF PLANTS OBSERVED ON THE BRADSHAW/FLORIN PROPERTY AND THEIR STATUS AS WETLAND INDICATOR SPECIES

Scientific Name	Common Name	Status [1]&[2]
Alisma plantago-aquatica	broad-leaf water plantain	OBL
Avena barbata	slender wild oat	UPL
Bromus diandrus (*B. rigidus*)	rip-gut grass	UPL
Bromus mollis	soft chess	FACU-
Centaurea solstitialis	yellow star-thistle	UPL
Cyperus eragrostis	tall flatsedge	FACW
Erodium botrys	filaree	UPL
Eucalyptus sp.	gum	---
Geranium dissectum	cut-leaf geranium	UPL
Glyceria declinata	manna grass	OBL
Holocarpha virgata	tarweed	UPL
Hordeum hystrix (*H. geniculatum*)	Mediterranean barley	FAC
Hordeum leporinum	barley	NI
Lactuca serriola	prickly lettuce	FAC
Leontodon leysseri	hairy hawkbit	FACU
Lolium perenne (*L. multiflorum*)	perennial ryegrass	FAC*
Populus fremontii	Fremont cottonwood	FACW
Rumex crispus	curly dock	FACW-
Salix sp.	willow	---
Taeniatherum caput-medusae	medusa-head	UPL
Vulpia myuros	rat-tail fescue	FACU

[1] Reed, P.B. 1988. National List of Plant Species That Occur in Wetlands: California (Region 0). Biological Report 88(26.10) May 1988. National Ecology Research Center, National Wetland Inventory, U.S. Fish and Wildlife Service, St. Petersburg, Fl.

[2] OBL = obligate; FACW = facultative wetland; FAC = facultative; FACU = facultative upland; UPL = upland; and NI = no indicator.

BradshawFlorinPropPlt

7720-S

SPECIAL STATUS SPECIES EVALUATION

BRADSHAW-FLORIN PROPERTY

RECEIVED
SEP 29 2004
DEPARTMENT OF PLANNING
REVIEW AND ASSESSMENT

GIBSON & SKORDAL, LLC
Wetland Consultants
2277 Fair Oaks Blvd., Suite 395
Sacramento, California 95825

SPECIAL STATUS SPECIES EVALUATION

BRADSHAW-FLORIN PROPERTY

SACRAMENTO COUNTY, CALIFORNIA

SEPTEMBER 2004

Prepared For:

TAYLOR/VILLAGE SACRAMENTO INVESTMENTS LP
1425 River Park Drive #201
Sacramento, California 95815

Prepared By:

GIBSON & SKORDAL, LLC
Wetland Consultants
2277 Fair Oaks Blvd., Suite 395
Sacramento, California 95825

INTRODUCTION

The purpose of this report is to present the results of a special status species evaluation conducted for the Bradshaw-Florin Property.

LOCATION

The study area is a ± 40-acre parcel located immediately northeast of the intersection of Florin Road and Bradshaw Road in the Florin-Vineyard Community Plan development area. It lies in the southwest ¼ of Section 33, Township 8 North, and Range 6 East of Sacramento County, California (Latitude 38° 29' North, Longitude 121° 19' West). Figure 1 is a vicinity map.

METHODOLOGY

Field studies were conducted on September 5, 2004 for the purpose of identifying and evaluating potential special status species and their habitats in the study area.

This special status species evaluation includes those species identified as having relative scarcity and/or declining populations by the United States Fish & Wildlife Service (USFWS) or California Department of Fish & Game (CDFG). Special status species include those formally listed as threatened or endangered, those proposed for formal listing, candidates for Federal listing, and those considered to be Species of Concern by USFWS or Species of Special Concern by CDFG. In addition to these, we also included those species considered to be "special animals" or "fully protected" by the CDFG and those plant species considered to be rare, threatened or endangered in California by the California Native Plant Society (CNPS).

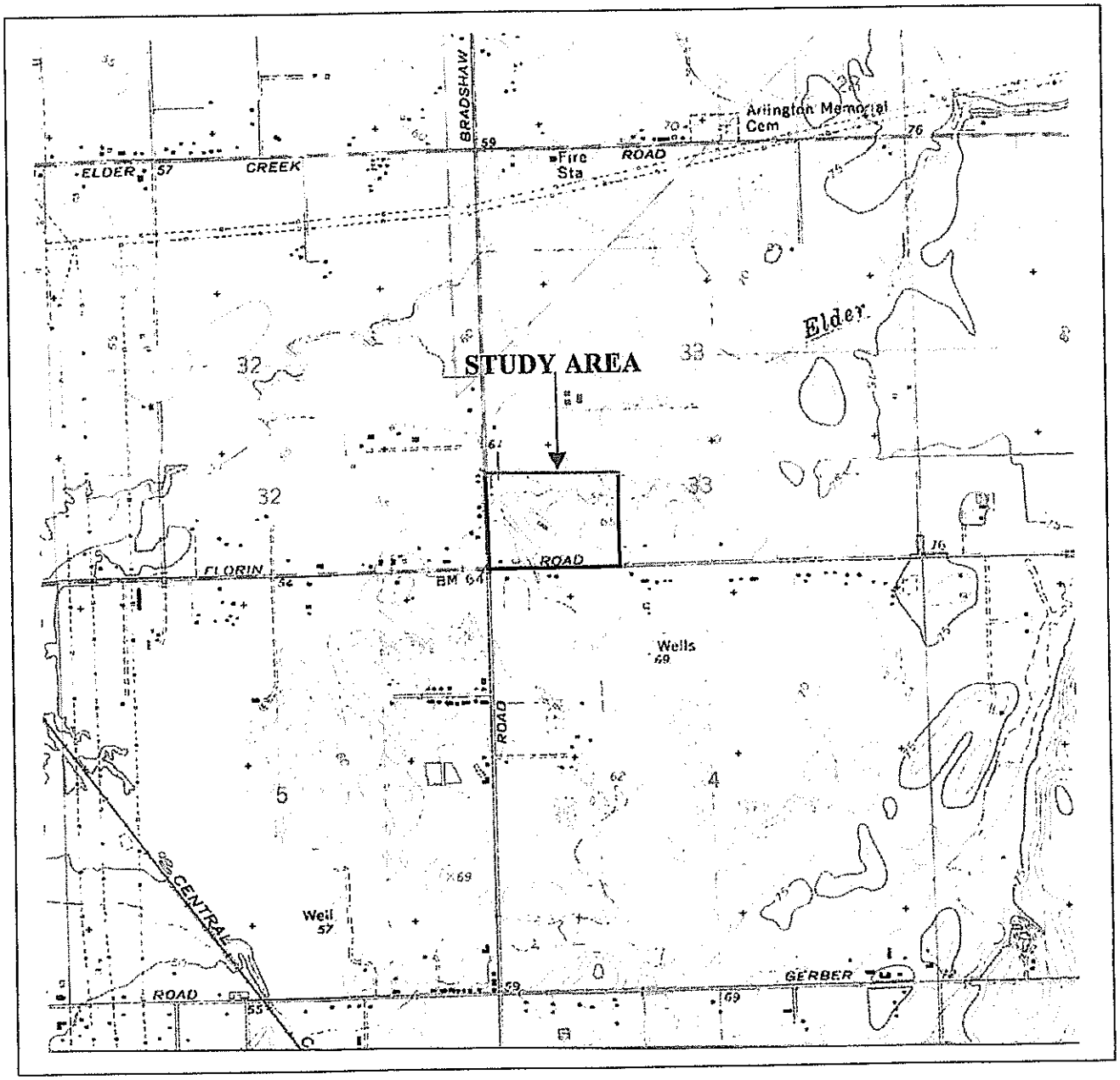
In our evaluation, we considered those special status species documented by the California Natural Diversity Database (CNDDB) as occurring in the vicinity of the study area. A record search of the CNDDB was conducted for the Elk Grove, Florin, Carmichael, and Sloughhouse 7.5 Minute USGS quadrangles to identify all documented sightings of special status species in the vicinity of the study area. In addition to these species, we included other special status species that may have some potential for occurring in the study area based on historical range data and/or the presence of suitable habitat.

GENERAL SITE CONDITIONS AND HABITATS

The study area is an undeveloped parcel bordered by Florin Road to the south, Bradshaw Road to the west, a commercial nursery to the north, and open grassland/pasture to the east. Historically,

FIGURE 1

VICINITY MAP



↑
N
(Scale: 1 Inch = 2000 Feet)

Source: Elk Grove & Carmichael 7.5 Minute USGS Topographic Quadrangles

the site once supported a commercial nursery operation. Remnants of the old nursery including a pump house, steam house, water tank, building pads and house foundations are still evident at the site.

Topography in the study area consists of level to nearly level terrain that is drained by a series of ditches and/or channelized drainages/swales that bisect the site. Soils are mapped as Red Bluff loam (0-2 % slopes) and San Joaquin silt loam (0-8 % slopes). Red Bluff loam is a very deep, well drained soil mapped on intermediate terraces, and San Joaquin silt loams are moderately deep, moderately well drained soils typically found on low terrace features.

A majority of the study area supports annual grassland habitat dominated by non-native species including wild oats (*Avena spp.*), rip-gut brome *(Bromus diandrus*), hare barley (*Hordeum leporinum*), and rat-tail fescue (*Vulpia myuros*). Other common grassland associates observed in the study area include Mediterranean barley (*Hordeum hystrix*), hairy hawkbit (*Leontondon leysseri*), perennial rye (*Lolium perenne*), clover (*Trifolium sp*), medusa head (*Taeniatherum caput-medusae*), filaree (*Erodium sp.*), and tarweed (*Holocarpha virgata*).

Sparse trees include a grove of eucalyptus trees in the southwest corner and few scattered Fremont cottonwood (*Populus fremontii*), arroyo willow (*Salix lasiolepis*), sandbar willow (*Salix hindsiana*), red willow (*Salix laevigata*), fig (*Ficus carica*), and California walnut (*Juglans californica*) associated with the abandoned nursery. Sparse shrubs include coyote brush (*Baccharis pilularis*) and Himalayan blackberry (*Rubus procerus*).

EXISTING WATERS AND WETLANDS

A jurisdictional delineation for the property was initially prepared by Gibson & Skordal, LLC in October 2002, and revised in February 2003, and later verified by the Corps of Engineers in a letter dated February 27, 2003. Based on the verified delineation, there are a total of 0.8 acre of existing waters and wetlands in the study area including 0.78 acre of channelized drainages, 0.01 acre of wet swale, and 0.01 acre of seasonal wetlands.

The deeper reaches of the drainages/swales are seasonally augmented by irrigation. These deeper zones are typically dominated by bearded sprangle-top (*Leptochloa fascicularis*), broad-leaf water plantain (*Alisma plantago-aquatica*), tall flatsdege (*Cyperus eragrostis*), barnyard grass (*Echinochloa crusgalli*), and annual rabbit-foot grass (*Polypogon monspeliensis*). Other common species in these reaches of the drainages/swales include mannagrass (*Glyceria sp.*), creeping spikerush (*Eleocharis macrostachya*), common yellow monkey flower (*Mimulus guttatus*), dallis grass (*Paspalum dilatatum*), and perennial rye. The dryer reaches of the

drainages/swales support a facultative plant community typically represented by perennial rye, Mediterranean barley, soft chess, and curly dock.

SW1 is a small depressional area that was added to the wetland delineation at the request of the Corps of Engineers as part of the verification process. At that time, the SW1 was dominated by Mediterranean barley. However, current conditions indicate that this area does not support wetland hydrology (i.e. long-term ponding or saturation) nor does it support a wetland plant community.

SPECIAL STATUS SPECIES

Table 1 provides a list of special status species that were evaluated including their listing status, habitat associations, and whether potential habitats occur in the study area. Of the twenty-four special status species evaluated in Table 1, ten species including the bank swallow, Bogg's Lake hedge-hyssop, California tiger salamander, giant garter snake, Sacramento orcutt grass, slender orcutt grass, Swainson's hawk, valley elderberry longhorn beetle, vernal pool fairy shrimp, and vernal pool tadpole shrimp are Federal and/or State listed threatened and/or endangered species. The following is a detailed summary of special status species and their habitats as they relate to the study area.

Swainson's Hawk and Other Raptors

Swainson's hawk (*Buteo swainsoni*) is a raptor species currently listed as threatened in California by the CDFG. They typically nest in tall cottonwoods, valley oaks, or willows associated with riparian corridors with adjacent grassland, pasture, and/or cropland with a high density of rodents. The Central Valley population typically breeds and nests in late spring through early summer before migrating to Central America and South America for the fall and winter seasons.

Swainson's hawk nests have been documented within a 5-mile radius, or closer, of the study area based on historical CNDDB records. Given the reasonable probability that the study area occurs within a 10-mile radius of an active Swainson's hawk nest, the annual grassland habitat at the site is considered to be potential foraging habitat for Swainson's hawk. The grassland habitat also provides suitable foraging habitat for a variety of other raptors including white-tailed kite, northern harrier, red-tailed hawk, sharp-shinned hawk, and Cooper's hawk. The larger trees in the study area provide potential nesting habitat for all of these raptors except for northern harrier. However, we did not observe any potential raptor nests during our recent field surveys.

TABLE 1

EVALUATION OF SPECIAL STATUS SPECIES HABITATS

	State Status	Federal Status	CNPS Listing	Habitat Association	Potential Habitat In Study Area
Birds					
Accipiter cooperi (Cooper's hawk)	Species of Special Concern	None		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes -suitable foraging & marginal nesting habitat
Accipiter striatus (sharp-shinned hawk)	Species of Special Concern	None		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes -suitable foraging & marginal nesting habitat
Agelaius tricolor (tricolored blackbird)	Species of Special Concern	Species of Concern		Colonial nester in cattails, bullrush, or blackberries associated with marsh habitats.	Yes -marginal habitat present
Athene cunicularia (burrowing owl)	Species of Special Concern	Species of Concern		Nests in abandoned ground squirrel burrows associated with open grassland habitats.	Yes -marginal habitat exists, but not indication of current nesting at site
Buteo swainsoni (Swainson's hawk)	Threatened	None		Nests in tall cottonwoods, valley oaks or willows. Forages in fields, cropland, irrigated pature, and grassland near large riparian corridors.	Yes -suitable foraging & marginal nesting habitat
Circus cyaneus (northern harrier)	Species of Special Concern	None		Forages in open grasslands, nests on ground in shrubby vegetation.	Yes - foraging only
Elanus leucurus (white-tailed kite)	Fully Protected	None		Nests in riparian corridors along streams and rivers, and forages in nearby grasslands and fields.	Yes -potential foraging & nesting habitat present
Riparia riparia (bank swallow)	Threatened	Species of Concern		Colonial nester in vertical cliffs and banks associated with riparian zones along streams, rivers, and lakes.	No
Amphibians & Reptiles					
Ambystoma trigrinum californiense (California tiger salamander)	Species of Special Concern	Threatened		Breeds in ponds or other deeply ponded wetlands, and uses gopher holes and ground squirrel burrows in adjacent grasslands for upland refugia/foraging.	No
Clemmys marmorata marmorata (northwestern pond turtle)	Species of Special Concern	Species of Concern		Ponds, rivers, streams, wetlands, and irrigation ditches with associated marsh habitat.	Yes -seasonal habitat in channels/ditches during irrigation season
Scaphiopus hammondii (western spadefoot)	Species of Special Concern	Species of Concern		Breeds in vernal pools, seasonal wetlands and associated swales. Forages and hibernates in adjacent grasslands.	No
Thamnophis gigas (giant garter snake)	Threatened	Threatened		Rivers, canals, irrigation ditches, rice fields, and other aquatic habitats with slow moving water and heavy emergent vegetation.	Yes -seasonal habitat in channels/ditches during irrigation season

TABLE 1

(Continued)

	State Status	Federal Status	CNPS Listing	Habitat Association	Potential Habitat In Study Area
Invertebrates					
Branchinecta lynchi (vernal pool fairy shrimp)	None	Threatened		Vernal pools and other seasonally ponded wetlands.	No
Branchinecta mesovallensis (midvalley fairy shrimp)	None	None		Vernal pools and other seasonally ponded wetlands.	No
Desmocerus californicus dimorphus (valley elderberry longhorn beetle)	None	Threatened		Dependent upon elderberry plant (Sambucus mexicana) as primary host species	No
Lepidurus packardi (vernal pool tadpole shrimp)	None	Endangered		Vernal pools and other deeply ponded seasonal wetlands.	No
Linderiella occidentalis (California linderiella)	None	None		Vernal pools and other seasonally ponded wetlands.	No
Plants					
Downingia pusilla (dwarf downingia)	None	None	CNPS-2	Vernal pools	No
Gratiola heterosepala (Bogg's Lake hedge-hyssop)	Endangered	None	CNPS-1B	Vernal pools and margins of lakes/ponds	No
Juncus leiospermus var. ahartii (Ahart's dwarf rush)	None	Species of Concern	CNPS-1B	Vernal pools	No
Legenere limosa (legenere)	None	Species of Concern	CNPS-1B	Vernal pools	No
Orcuttia tenuis (slender orcutt grass)	Endangered	Threatened	CNPS-1B	Vernal pools	No
Orcuttia viscida (Sacramento orcutt grass)	Endangered	Threatened	CNPS-1B	Vernal pools	No
Sagittaria sanfordii (Sanford's arrowhead)	None	Species of Concern	CNPS-1B	Deep aquatic habitats associated with canals, drainages, and ditches.	Yes -but species was not found in field surveys

Burrowing owl (*Athene cunicularia*) is a ground nesting raptor species afforded protection by CDFG as a species of special concern due to potentially declining populations in the Central Valley of California. They typically inhabit open grassland habitats where they nest in abandoned ground squirrel burrows and other nesting cavities associated with raised mounds, levees, or soft berm features. Although there is marginal nesting and foraging habitat available for burrowing owls, we did not observe any potential nesting burrows or any indication of current burrowing owl activity at the site.

Tricolored Blackbird

Tricolored blackbirds (*Agelaius tricolor*) are afforded protection by CDFG as a species of special concern due to declining populations in the region. They are colonial nesters preferring to nest in dense stands of cattails and/or bullrush, but they also commonly nest in blackberry thickets associated with drainages, ditches, and canals. There have been a number of documented sightings of tricolored blackbird nesting colonies in the Florin and Elk Grove quadrangles, but the locations have been excluded from CNDDB records for protection issues.

Portions of the drainages/swales support cattails and/or other emergent wetland vegetation that provide marginally suitable nesting habitat for tricolored blackbirds during the irrigation season when these areas support irrigation flows.

California Tiger Salamander

The California tiger salamander (*Ambystoma trigrinum californiense*) is a Federally threatened species and a California Species of Special Concern that typically breeds in seasonal or permanent ponds. California tiger salamander (CTS) may also breed in deeper ponded vernal pools, seasonal wetlands and/or other seasonal pools within swales or channels. They typically spend a majority of their life cycle living below ground in ground squirrel burrows or pocket gopher burrows in grasslands situated adjacent to suitable breeding sites.

The absence of potential breeding habitat in the study area, including ponds or deeply ponded vernal pools or seasonal wetlands, would eliminate any reasonable potential for CTS to occur at the site.

Giant Garter Snake

Giant garter snake (GGS) is designated as a Federal threatened and State threatened species afforded special protection by FWS and CDFG. GGS is generally associated with larger canals,

irrigation ditches, and other semi-permanent to permanent aquatic sites with slow moving water and an abundance of emergent vegetation. Although GGS has been documented within Elk Grove Creek and lower Morrison Creek situated to the west of Highway 99, there have not been any documented GGS sightings along the east side of Highway 99 including the area surrounding the study area.

The deeper portions of the channelized drainages/swales in the study area may provide marginal habitat for GGS during the peak irrigation season in the late spring and early summer. However, the absence of documented GGS sightings in or near the study area vicinity would indicate a low potential for GGS to occur at the site.

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (*Desmocerus californicus*) is a Federal threatened species that is dependent upon the elderberry plant (*Sambucus sp.*) as a primary host species. Elderberry shrubs are a common component of riparian areas throughout the Sacramento Valley region, and they have been documented as occurring at numerous locations in the vicinity of the study area.

Based on the absence of elderberry shrubs in the study area, there is no potential for valley elderberry longhorn beetle to occur at the site.

Vernal Pool Branchiopods

Federally listed vernal pool branchiopods including the threatened vernal pool fairy shrimp (*Branchinecta lynchi*) and the endangered vernal pool tadpole shrimp (*Lepidurus packardi*) have been documented as occurring in Elk Grove and Florin USGS quadrangles. Other non-listed branchiopods known to occur in the region include California linderiella (*Linderiella occidentalis*) and midvalley fairy shrimp (*Branchinecta mesovallensis*).

The branchiopod species listed above are generally restricted to vernal pools and/or other seasonally ponded wetlands that sustain inundation during the winter before drying up in the late spring. Given the absence of suitable or potential habitat, there is little if any potential for special status branchiopods to occur in the study area.

Special Status Plants

Special status plant species identified on the CNDDB as occurring in the vicinity of the study area, or may potentially occur in the area, include Ahart's dwarf rush (*Juncus leiospermus*

ahartii) dwarf downingia (*Downinia pusilla*), Bogg's Lake hedge-hyssop (*Gratiola heterosepala*), legenere (*Legenere limosa*), Sacramento orcutt grass (*Orcuttia viscida*), slender orcutt grass (*Orcuttia tenuis*), and Sanford's arrowhead (*Sagittaria sanfordii*).

Ahart's dwarf rush, dwarf downingia, legenere, Bogg's Lake hedge-hyssop, Sacramento orcutt grass, and slender orcutt grass are all strongly associated with vernal pools habitats. Bogg's Lake hedge-hyssop can also occur around the perimeter of lakes and ponds. The seasonal wetland (SW1) in the study area lacks a suitable ponding regime and vernal pool plant composition typically associated with the occurrence of Ahart's dwarf rush, dwarf downingia, legenere, Bogg's Lake hedge-hyssop, Sacramento orcutt grass, and slender orcutt grass. Given the absence of vernal pools in the study area, there is little if any potential for these plant species to occur at the site.

The deeper portions of the drainages/swales in the study area provide suitable habitat for Sanford's arrowhead. However, we did not observe Sanford's arrowhead present in the drainages/swales or anywhere else in the study area during our recent past field surveys. The drainages/swales do support a dense population of broad-leaf water plantain (*Alisma plantago-aquatica*), a similar species to Sanford's arrowhead in both habit and appearance.

SUMMARY

A number of special status raptors including Swainson's hawk, sharp-shinned hawk, Cooper's hawk, white-tailed kite, and northern harrier would have a reasonable potential for occurring in the study area based on the presence of suitable foraging and/or nesting habitat. In addition, the study area provides marginal foraging and nesting habitat for burrowing owls. In the event that future development of the site occurs during the raptor nesting season, we recommend that a raptor nesting survey be completed within two weeks of the start of project construction.

Portions of the drainages/swales may provide marginally suitable habitat for special status species including the giant garter snake, northwestern pond turtle, and Sanford's arrowhead. Based on our field surveys, Sanford's arrowhead does not presently occur at the site. A number of special status species including the Federal or State listed bank swallow, Bogg's Lake hedge-hyssop, California tiger salamander, Sacramento orcutt grass, slender orcutt grass, valley elderberry longhorn beetle, vernal pool fairy shrimp, and vernal pool tadpole shrimp would have little if any potential for occurring in the study area based on the absence of suitable habitat at the site.

APPENDIX A

PLANT LIST

LIST OF PLANTS OBSERVED ON THE BRADSHAW-FLORIN PROPERTY AND THEIR STATUS AS WETLAND INDICATOR SPECIES

Scientific Name	Common Name	Status [1&2]
Aira caryophyllea	silver hairgrass	UPL
Alisma plantago-aquatica	broad-leaf water plantain	OBL
Amsinckia intermedia	fiddleneck	UPL
Asclepias fascicularis	slender milkweed	FAC
Avena fatua	wild oats	UPL
Avena barbata	slender oats	UPL
Baccharis pilularis	coyote brush	UPL
Brassica sp.	mustard	NI
Briza minor	little quaking grass	FACW-
Brodiaea sp.	brodiaea	---
Bromus diandrus (*B. rigidus*)	rip-gut grass	UPL
Bromus mollis	soft chess	FACU-
Centaurea solstitialis	yellow star-thistle	UPL
Cichorium intybus	chicory	UPL
Cirsium sp.	thistle	---
Conyza canadensis	Canada horseweed	FAC
Cynodon dactylon	Bermuda grass	FAC
Cyperus eragrostis	tall flatsedge	FACW
Echinochloa crusgalli	barnyard grass	FACW
Eleocharis macrostachya	creeping spikerush	OBL
Eremocarpus setigerus	doveweed	UPL
Erodium sp.	filaree	UPL
Eryngium vaseyi	coyote thistle	FACW
Eucalyptus sp.	gum	---
Ficus carica	fig	UPL
Geranium dissectum	cut-leaf geranium	UPL
Glyceria sp.	mannagrass	OBL
Helianthus annuus	common sunflower	FAC-
Hemizonia fitchii	Fitch's spikeweed	UPL
Hemizonia pungens	common tarweed	FAC
Holocarpha virgata	tarweed	UPL
Hordeum hystrix (*H. geniculatum*)	Mediterranean barley	FAC
Hordeum leporinum	hare barley	UPL
Hypochaeris glabra	smooth cats tongue	UPL

[1] Reed, P.B. 1988. National List of Plant Species That Occur in Wetlands: California (Region 0). Biological Report 88(26.10) May 1988. National Ecology Research Center, National Wetland Inventory, U.S. Fish and Wildlife Service, St. Petersburg, Fl.

[2] OBL = obligate; FACW = facultative wetland; FAC = facultative; FACU = facultative upland; UPL = upland; and NI = no indicator.

Scientific Name	Common Name	Status
Juglans californica	california walnut	UPL
Juncus bufonius	toad rush	FACW+
Lactuca serriola	prickly lettuce	FAC
Leptochloa fascicularis	bearded sprangle-top	OBL
Leontodon leysseri	hairy hawkbit	FACU
Lolium perenne (*L. multiflorum*)	perennial ryegrass	FAC*
Lotus purshianus	Spanish clover	FAC
Lythrum hyssopifolia	loosestrife	FACW
Malus sylvestris	apple	UPL
Malva sp.	mallow	---
Mimulus guttatus	common yellow monkey flower	OBL
Olea europaea	olive	UPL
Paspalum dilatatum	dallis grass	FAC
Plantago lanceolata	English plantain	FAC-
Plantanus racemosa	California sycamore	FACW
Poa annua	annual bluegrass	FACW-
Polygonum aviculare	knotweed	FAC
Polypogon monspeliensis	annual rabbit-foot grass	FACW+
Populus fremontii	Fremont cottonwood	FACW
Ranunculus alveolatus	Carter's buttercup	OBL
Raphanus sativus	wild radish	UPL
Rubus procerus	Himalayan blackberry	FAC
Rumex conglomeratus	clustered dock	FACW
Rumex crispus	curly dock	FACW-
Salix hindsiana	sandbar willow	FACW
Salix laevigata	red willow	FACW-OBL
Salix lasiolepis	arroyo willow	FACW
Silybum marianum	milk thistle	UPL
Taeniatherum caput-medusae	medusa-head	UPL
Trifolium hirtum	rose clover	UPL
Trifolium sp.	clover	---
Typha angustifolia	narrow-leaf cattail	OBL
Veronica peregrina	purslane speedwell	OBL
Vicia villosa	winter vetch	---
Vulpia myuros	rat-tail fescue	FACU

7720-50
REPORTS

SIERRA NEVADA ARBORISTS

TAYLOR PROPERTIES

Florin Bradshaw NE
Florin Vineyard Community Plan Area
(County of Sacramento, California)

***INITIAL* ARBORIST REPORT**
AND
INVENTORY SUMMARY

Submitted by:

Edwin E. Stirtz, Consulting Arborist
ISA Certified Arborist WE-0510A
Member, American Society of Consulting Arborists
SIERRA NEVADA ARBORISTS

RECEIVED
SEP 22 2004
DEPARTMENT OF LAND USE PLANNING
REVIEW AND ASSESSMENT

August 24, 2004

503 Anthony Court ◆ Roseville, CA 95678 ◆ 916-784-7940 ◆ 916-784-1901 Fax

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COPYRIGHT STATEMENT

This consultant's report, dated August 24, 2004, is for the exclusive and confidential use of Taylor Properties concerning development of its Florin Bradshaw NE project located in the Florin Vineyard Community Plan area (County of Sacramento), 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

August 24, 2004

Mr. Kim Whitney
TAYLOR PROPERITES
1792 Tribute Road, Suite 270
Sacramento, California 95815-4508

Re: ***Initial Arborist Report and Inventory Summary:***
Florin Bradshaw NE Project (Florin Vineyard Community Plan Area)

Dear Mr. Whitney:

On August 20, 2004, Sierra Nevada Arborists visited Taylor Properties' Florin Bradshaw NE project site located within the Florin Vineyard Community Plan area in the County of Sacramento, California. The purpose of this site visit was to conduct a field inspection to identify, inventory and evaluate all trees within the project boundaries which measure 4 inches and greater in diameter at breast height ("DBH"), specifically including the identification of any native oaks, California Sycamore, Northern California Black Walnut, Oregon Ash, Goodding's Black Willow, California Box Elder and White Alder, and any other significant trees which measure 19 inches DBH and larger. The trees which met the defined criteria were identified in the field with a round, metal-stamped number tag beginning with Tree No. 1 which was affixed to the tree's trunk. For your reference, the numbers utilized in this report correspond to the tree tag affixed to the tree in the field, and those numbers were rough-plotted on the aerial "Consultant's Worksheet" which was provided for reference by and returned to Bruce Walters of MacKay & Somps Engineering.

SUMMARY

As you will see, 75 trees totaling 1,023 aggregate diameter inches have been documented within this report. Our site visit found that the vast majority of these trees are ***non-native species*** which are not protected by the County of Sacramento Tree Preservation and Protection Ordinance; however, these trees have been memorialized within this report due to their size (i.e., all trees which measure 4"+ DBH) to accurately document the trees' species, diameter and dripline measurements for mapping purposes. For ease of reference, the ***non-ordinance*** trees have been highlighted in blue within the Inventory Summary.

Our site visit found 16 trees totaling 428 aggregate diameter inches which may be protected by Ordinance either due to their species and/or size. Composition of these 16 trees include 1 California Black Walnut *(Juglans hindsii)* totaling 5 aggregate diameter inches, and 15 non-native species which measure 19"+DBH totaling 423 aggregate diameter inches.

Recommended Removals

At this time no trees have been recommended for removal from the project site due to noted structural defects. It should be noted, however, that several trees within the project boundaries possess structural defects and/or characteristics which warrant further evaluation and/or annual monitoring to assess the trees' ongoing structural integrity. For reference, these trees have been separately highlighted in yellow within the accompanying Inventory Summary. At this juncture these trees have not been recommended for removal since development plans have not yet been finalized. We draw your attention to these trees, however, and note that ***precaution should be taken if development and/or pedestrian activity will occur within the fall zone of these trees.*** If retained, these trees should be monitored on an annual basis by an ISA Certified Arborist to assess the trees' ongoing structural integrity and potential for hazard in a developed environment.

Construction Impact Assessment

Please note that while this is a detailed review of the trees within the current project boundaries specific tree impacts cannot be definitively assessed until development plans have been finalized. As you know, trees are living organisms whose condition may change at any time. Therefore, a complete assessment of construction impacts and specific mitigation recommendations cannot be made until those development plans have been refined and finalized. At that time an ISA Certified Arborist should review the improvement plans to provide an analysis of construction impacts, including identification of trees which may require removal for home construction and other contemplated development activities. This will be particularly important if home construction and/or pedestrian activities will fall within or near the fall zone of a tree which has been noted as having structural defects and/or questionable long-term longevity. The review should also include an assessment of impacts which will be sustained by those trees which will be preserved within the project boundaries, along with associated mitigation recommendations. In the meantime, this report provides recommendations for pre-construction maintenance, as well as General Preservation Recommendations which should be utilized as a guideline for the protection of trees which may be preserved within the development area.

GENERAL COMMENTS AND ARBORIST'S DISCLAIMER

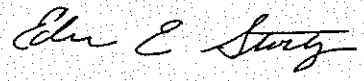
As you know, a tree permit and/or authorization to develop should be obtained from the County of Sacramento approving contemplated development activities, including the removal of protected trees, within the project area. All terms and conditions of the tree permit are the sole and exclusive responsibility of the developer. It should also be noted that prior to final inspection the County *may* require written verification from an ISA Certified Arborist certifying the approved removal activities and/or implementation of the mitigation measures outlined for the preserved trees on the site. Sierra Nevada Arborists cannot provide written Certification of Compliance unless we have been provided with a copy of the approved site development plans and applicable permits, and are on site to monitor and observe regulated activities during the course of construction. Therefore, it will be necessary for the developer to notify Sierra Nevada

Arborists well in advance (48-hours prior notice) of any regulated activities which are scheduled to occur on site so that those activities can be properly monitored and documented for compliance certification.

Lastly, at this juncture we believe implementation of the general recommendations outlined within this report will attempt to afford the trees the best possibility for survival. However, these recommendations and their implementation should not be viewed as a guarantee or warranty against the trees' ultimate demise and/or failure in the future, and are being provided solely for the purpose of obtaining development authorization from the County of Sacramento. Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of the trees and ***attempt to reduce the risk of living near trees***. Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Since trees are living organisms, conditions are often hidden within the tree and below ground, and their condition may change at any time. Arborists cannot guarantee that a tree will be healthy and/or safe under all circumstances, or for a specific period of time. Likewise remedial treatments cannot be guaranteed. Trees can be managed but they cannot be controlled. To develop and live near trees is to accept some degree of risk and the only way to eliminate all risk associated with trees is to eliminate all of the trees. ***An entity who develops land and/or builds homes with a tree in the vicinity should be aware of this Arborists' Disclaimer and be further advised that the developer and their future homeowners assume the risk that a tree could at any time suffer a branch and/or limb failure, blow over in a storm and/or fail for no apparent reason which may cause bodily injury or property damage.*** Sierra Nevada Arborists cannot predict acts of nature, including without limitation storms of sufficient strength which can take down even a healthy tree. The information contained within this report is believed to be true to the best of the author's knowledge and experience as of the date it was prepared; however, certain conditions may exist which only a comprehensive, scientific, investigation might reveal which should be performed by other consulting professionals. Neither this author nor Sierra Nevada Arborists has assumed any responsibility for liability associated with the preserved trees on or adjacent to the Florin Bradshaw NE project site, their future demise and/or any damage which may result therefrom.

Thank you for allowing Sierra Nevada Arborists to assist you with this review and analysis. 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
Member, American Society of Consulting Arborists

EES:ks
Enclosures
cc: Mr. Bruce Walters, MacKay & Somps (w/enclosures)

TAYLOR PROPERTIES
Florin Bradshaw NE
County of Sacramento, California
INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (Inches)	TOTAL DBH (Inches)	DLR (feet)	CONDITIONAL ASSESSMENT						REMOVALS (Inches)	NOTABLE CHARACTERISTICS	MAINTENANCE RECOMMENDATIONS
						RT CR	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1	Pacific Willow	*(Salix lasiandra)*	1,1,1,3	5	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
2	Pacific Willow	*(Salix lasiandra)*	2,3,3	8	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
3	Fruitless Mulberry	*(Morus alba)*	1,2,2,3,3	11	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
4	Fruitless Mulberry	*(Morus alba)*	2,3,4	9	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
5	Fruitless Mulberry	*(Morus alba)*	2,2,2	6	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
6	Fruitless Mulberry	*(Morus alba)*		4	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
7	Fremont Cottonwood	*(Populus fremontii)*	2,2,3	7	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
8	Fremont Cottonwood	*(Populus fremontii)*	2,4	6	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
9	Pacific Willow	*(Salix lasiandra)*	2,2,3	7	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
10	Fremont Cottonwood	*(Populus fremontii)*		8	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
11	Fremont Cottonwood	*(Populus fremontii)*		8	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
12	Pacific Willow	*(Salix lasiandra)*	3,3,3,4,5	18	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
13	Fremont Cottonwood	*(Populus fremontii)*	9,9	18	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
14	Fremont Cottonwood	*(Populus fremontii)*		8	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
15	Pacific Willow	*(Salix lasiandra)*	3,3,3,4,4	17	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
16	Fremont Cottonwood	*(Populus fremontii)*	3,3,4	10	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
17	Fremont Cottonwood	*(Populus fremontii)*	4,4	8	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
18	Fremont Cottonwood	*(Populus fremontii)*	5,5	10	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
19	Fremont Cottonwood	*(Populus fremontii)*	3,4,9	16	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
20	Pacific Willow	*(Salix lasiandra)*	1,2,3	6	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
21	Pacific Willow	*(Salix lasiandra)*		6	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
22	Fremont Cottonwood	*(Populus fremontii)*		5	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
23	Pacific Willow	*(Salix lasiandra)*	2,3,5	10	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
24	Pacific Willow	*(Salix lasiandra)*	2,2,2,3	9	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
25	Fremont Cottonwood	*(Populus fremontii)*		8	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
26	Fremont Cottonwood	*(Populus fremontii)*	4,6,7	17	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
27	Pacific Willow	*(Salix lasiandra)*	3,5	8	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
28	Beefwood Tree	*(Casuarina sp.)*		14	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
29	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	6,6	12	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
30	American Elm	*(Ulmus americana)*	2,2,3,3,4	14	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
31	London Plane	*(Platanus acerfolia)*		15	24	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
32	Modesto Ash	*(Fraxinus velutina)*		21	27	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing trunk wound 5' to 10' above grade, east side; moderate interior decay and hollowing; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist; longevity questionable***
33	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	7,10	17	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
34	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	5,9	14	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
35	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	4,11	15	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
36	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	7,10,11	28	17	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Weak primary crotches	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
37	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	3,5,6	14	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
38	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	7,7,7	21	13	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Weak primary crotches	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
39	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	5,6,11	22	20	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
40	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	3,3,3,5	14	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
41	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	5,6,11	22	16	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		6-inch stem weakly attached	Clean out crown; consider removal of 6-inch stem
42	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		5	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
43	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	5,8,9	22	14	Fair	Fair	Poor to fair	Poor to fair	Fair	Poor to fair		Above average amount of deadwood; somewhat sparse foliage	Clean out crown; recommend subsurface liquid fertilization
44	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	2,2,3,3	10	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
45	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	3,4,5,6,12	30	17	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Weak primary crotches	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
46	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	3,6,7	16	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								

TAYLOR PROPERTIES
Florin Bradshaw NE
County of Sacramento, California
INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						REMOVALS (inches)	NOTABLE CHARACTERISTICS	MAINTENANCE RECOMMENDATIONS
						RT CR	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
47	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	5,5,6,6,7,8,8	45	18	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Weak primary crotches	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
48	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	6,7,10,11, 12,15	61	25	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Weak primary crotches	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
49	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	4,4,5,8	21	13	Fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair		Weak primary crotches; above average amount of deadwood; somewhat sparse foliage	Clean out crown; recommend subsurface liquid fertilization injection; ***recommend annual inspection by an ISA Certified Arborist***
50	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	7,8,9	24	16	Fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair		Weak primary crotches; above average amount of deadwood; somewhat sparse foliage	Clean out crown; recommend subsurface liquid fertilization injection; ***recommend annual inspection by an ISA Certified Arborist***
51	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	12,16	28	24	Fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair		Weak primary crotches; above average amount of deadwood; somewhat sparse foliage	Clean out crown; recommend subsurface liquid fertilization injection; ***recommend annual inspection by an ISA Certified Arborist***
52	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	4,6	10	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
53	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		5	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
54	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	5,6,7,7	25	15	Fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair		Weak primary crotches; above average amount of deadwood; somewhat sparse foliage	Clean out crown; recommend subsurface liquid fertilization injection; ***recommend annual inspection by an ISA Certified Arborist***
55	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		4	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
56	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		10	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
57	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	3,3	6	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
58	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	3,7	10	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
59	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		11	20	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
60	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	6,6	12	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
61	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		4	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
62	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		8	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
63	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	6,6	12	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
64	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		5	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
65	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	4,4,4	12	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
66	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	4,5	9	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
67	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		4	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
68	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	6,7,8	21	17	Fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair		Callusing trunk wound, west side, 6' to 7' above grade with minor to moderate interior decay and hollowing; above average amount of deadwood; somewhat sparse foliage	Clean out crown; recommend subsurface liquid fertilization injection; ***recommend annual inspection by an ISA Certified Arborist***
69	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		8	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
70	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	6,8	14	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
71	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	3,7	10	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
72	Fremont Cottonwood	*(Populus fremontii)*	5,6,6,7,8	32	21	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Weak primary crotches	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
73	Fremont Cottonwood	*(Populus fremontii)*	9,9	18	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
74	California Black Walnut	*(Juglans hindsii)*	2,3	5	11	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
75	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		10	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								

TOTAL INVENTORIED TREES = 75 Trees (1023 aggregate diameter inches)
TOTAL RECOMMENDED TREE REMOVALS = 0 Trees
PRECAUTIONARY TREES HIGHLIGHTED FOR REFERENCE

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.

STREET AND UTILITY MITIGATIVE MEASURES

Generally, impacts from street construction alone are less of an impact than those occurring with dry and wet utility construction. Often it is very difficult or impossible to effectively preserve a tree with more than 30% of its critical root zone area falling within the PUE/street.

Dry Utilities.

Since dry utilities are typically located behind the curb and gutter and/or sidewalks, where applicable, they fall within the closest proximity to trees preserved outside of the roadway. The dry utilities tend to be shallow, within the top 5 feet of the soil profile. Unfortunately, in this region that is also typically where tree roots are found. Where possible, dry utilities should be routed on the opposite side of the street from tree locations. This would require more street crossings than normally planned; however, impacts to trees would be greatly lessened. In some circumstances, hand digging the utilities through critical root zone areas may be an option. Since the dry utility profile is usually 3-4 in depth and includes multiple conduits or plumbing due to the various utilities, boring beneath the critical root zone area is not usually effective.

Wet Utilities.

The greatest conflicts with wet utilities typically arise from deep sanitary sewers or storm drains. Soil conditions and safety concerns often require than trench openings at ground level be quite large. Therefore, the storm and sewer locations must be carefully considered. In some circumstances where a particularly valuable tree may be impacted by wet utilities boring may be an option. Since water main construction tends to be more shallow than storm drains or sewers, and flow lines are not as critical, boring can often be most effective in preserving tree roots.

Streets/Hardscape.

Should the street construction sections be 18" or less, the percentage of encroachment into the critical root zone area may be able to exceed 20%. If this is possible, determinations cannot be made until an accurate evaluation of the root system profiles on the site has been completed. It is impossible to preserve roots within the street section profile. Further, the construction of the street alters the gaseous exchange and oxygen to the tree's root system. In some circumstances aeration systems may mitigate a small portion of these impacts.

Hardscape (concrete slabs, walkways, etc.) should be minimized within the critical root zone area. Grade cuts in excess of 12" should be avoided. In some circumstances aeration systems may be required to reduce root system stress.

CONCLUSION

In an effort to minimize tree removals in the early phases of a project a category for potential tree removals should be established. This category would include those trees which are located in areas that would expose them to moderate or significant encroachments and/or construction impacts. As construction occurs and construction staking is installed, assessment of impacts are much more accurate than those based simply on plan review. At that time, determinations by the Project Arborist and Agency Representatives may result in preservation of trees which may have previously appeared as requiring removal on the plans.

DEFINITIONS AND RATINGS

Within this report you will find the following information defined as follows:

Tree Number:	Corresponds to aluminum tag attached to the tree.
Species Identification:	Scientific and common species name.
Diameter ("DBH"):	This is the trunk diameter as measured at breast height (industry standard 4.5 feet above ground level).
Dripline radius ("DLR"):	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.

Structure and Vigor Ratings:

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.

Encroachment Ratings:

MINOR - No anticipated long-term negative effects

MODERATE – Potential long-term negative effects

SIGNIFICANT – Probable long-term negative effects

Maintenance Recommendations:

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.

SUBSURFACE LIQUID FERTILIZATION INJECTION/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.

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Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name:

Project Name: Portico 2

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2008 TOTALS (lbs/day unmitigated)	8.42	57.60	33.14	0.01	189.63	3.65	193.28	39.60	3.36	42.97	4,897.25
2009 TOTALS (lbs/day unmitigated)	120.72	54.45	31.87	0.01	189.63	3.46	193.08	39.60	3.18	42.79	4,897.48

REVISED JURISDICTIONAL DELINEATION AND SPECIAL STATUS SPECIES EVALUATION

PORTICO PLACE PROPERTY

SACRAMENTO COUNTY, CALIFORNIA

RECEIVED
JUL 23 2007
DEPARTMENT OF ENVIRONMENTAL REVIEW AND ASSESSMENT

AUGUST 2004
REVISED JULY 2006

Prepared For:

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INTRODUCTION

The purpose of this report is to present the results of a jurisdictional delineation and special status species evaluation conducted for the Portico Place Property.

LOCATION

The study area includes a ± 9.5-acre parcel located south of Gerber Road, north of Rogers Road, and immediately west of Bradshaw Road in the Florin-Vineyard Community Plan development area. It lies in the southeast ¼ of Section 8, Township 7 North, Range 6 East of Sacramento County, California (Latitude 38° 28' 25" North, Longitude 121° 20' 08" West). Figure 1 is a vicinity map.

METHODOLOGY

Field studies were conducted on August 5, 2004 for the purpose of delineating existing waters and wetlands in the study area and evaluating special status species and their habitats.

Jurisdictional Delineation

The boundaries of wetlands, data points, and other site features were surveyed in the field by Gibson & Skordal, LLC utilizing a Trimble GPS data logger with sub-meter accuracy. The delineation map was prepared by layering the GPS field data over aerial photography flown in May of 2002 by the United States Geological Survey (USGS). Mr. Dave Leput field verified our delineation on April 14, 2006. All requested changes were incorporated into this report.

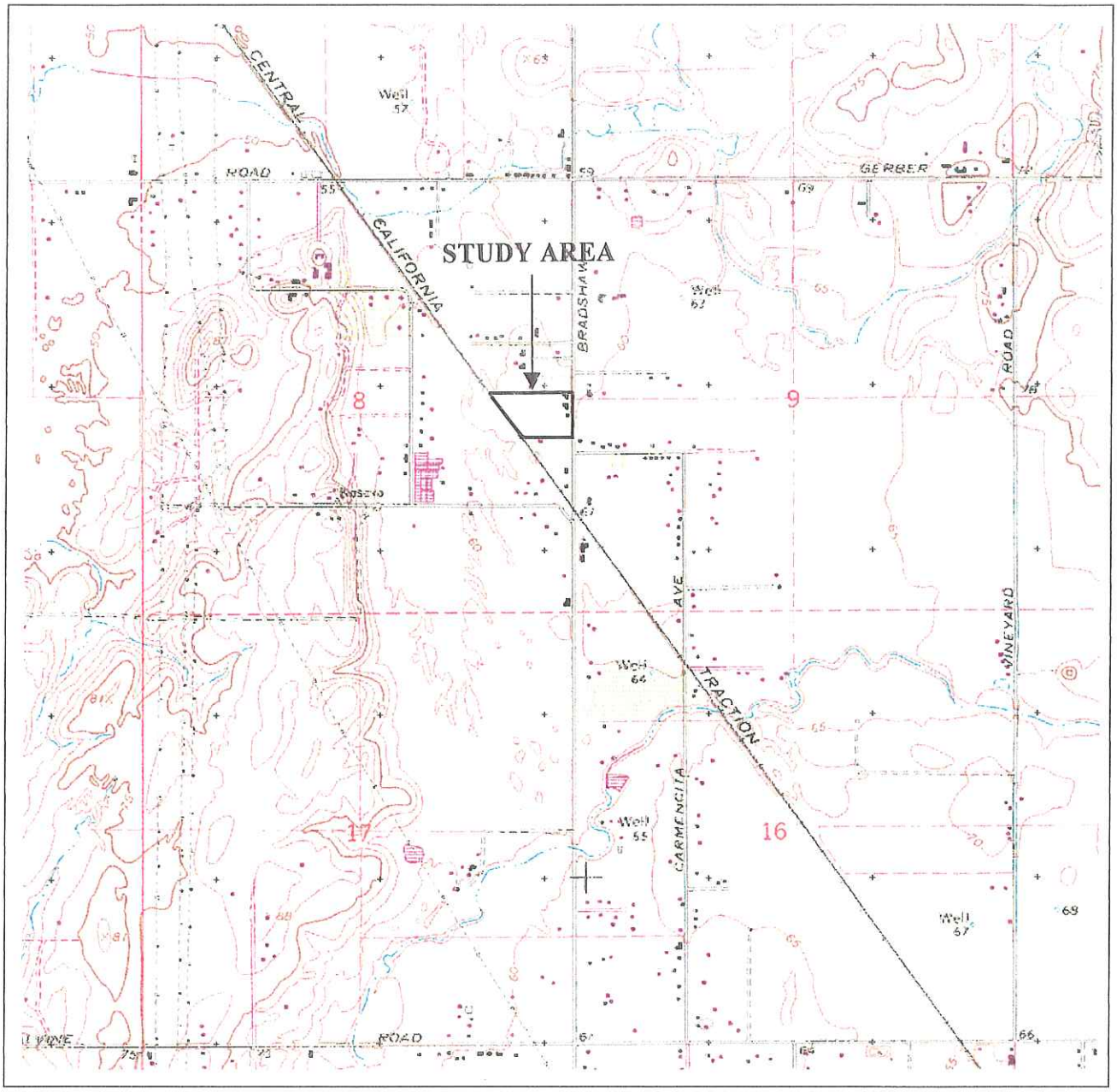
The **"Corps of Engineers Wetlands Delineation Manual"**[1] was used as the standard of determining whether specific areas are wetlands potentially subject to regulation under Section 404 of the Clean Water Act. Corps of Engineers' regulations (33 CFR 328) was used to determine the presence of waters of the United States other than wetlands. The **"National List of Plant Species That Occur in Wetlands: California (Region 0)"**[2] was used to determine the

[1] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station. Vicksburg, Miss.

[2] Reed, P.B. 1988. National List of Plant Species That Occur In Wetlands: California (Region 0). Biological Report 88(26.10). May 1988. National Ecology Research Center, National Wetlands Inventory, U.S. Fish & Wildlife Service, St. Petersburg, Florida.

FIGURE 1

VICINITY MAP



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N
(Scale: 1 Inch = 2000 Feet)

Source: Elk Grove 7.5 Minute USGS Topographic Quadrangle

wetland indicator status of plants observed in the study area. The **"Soil Survey of Sacramento County, California"**[3] was used to evaluate soil mapping in the study area.

Detailed data on vegetation, soils, and hydrology characteristics was taken in the field. Data forms documenting the basis for determining which areas are wetland or upland are provided in Appendix A.

Special Status Species Evaluation

The special status species evaluation includes those species identified as having relative scarcity and/or declining populations by the United States Fish & Wildlife Service (FWS) or California Department of Fish & Game (CDFG). Special status species include those formally listed as threatened or endangered, those proposed for formal listing, candidates for Federal listing, and those considered to be Species of Concern by FWS or Species of Special Concern by CDFG. In addition to these, we also included those species considered to be "special animals" or "fully protected" by the CDFG and those plant species considered to be rare, threatened or endangered in California by the California Native Plant Society (CNPS).

In our evaluation, we considered those special status species documented by the California Natural Diversity Database (CNDDB) as occurring in the vicinity of the study area. A record search of the CNDDB was conducted for the Elk Grove, Florin, Carmichael, and Sloughhouse 7.5 Minute USGS quadrangles to identify all documented sightings of special status species in the vicinity of the study area. In addition to these species, we included other special status species that may have some potential for occurring in the study area based on historical range data and/or the presence of suitable habitat.

GENERAL SITE CONDITIONS AND HABITATS

The study area is bordered by Bradshaw Road to the east, railroad right of way to the west, and ranchettes and pasture/grassland to the north and south. The study area supports undulating to gently rolling terrain that has been historically irrigated for use as grazing pasture, but it is not currently irrigated or grazed. Several existing home sites with associated out-structures, barns, and sheds are located in the northeast corner of the study area adjacent to Bradshaw Road. A drainage ditch extends along the southern and western perimeter of the site.

[3] USDA, Soil Conservation Service. 1993. Soil Survey of Sacramento County, California.

A majority of the study area supports annual grassland habitat dominated by soft chess (*Bromus mollis*), tarweed (*Holocarpha virgata*), rat-tail fescue (*Vulpia myuros*), hare barley (*Hordeum leporinum*), rip-gut brome (*Bromus diandrus*), wild oats (*Avena sp.*), and filaree (*Erodium sp.*). Other common species include Mediterranean barley (*Hordeum hystrix*), hairy hawkbit (*Leontondon leysseri*), perennial rye (*Lolium perenne*), and little quaking grass (*Briza minor*). Scattered trees include California sycamore (*Plantanus racemosa*), California walnut (*Juglans californica*), blue gum (*Eucalyptus sp.*), mulberry (*Morus alba*), fig (*Ficus carica*), and a variety of other ornamentals.

Soils in the study area are mapped as San Joaquin silt loam, leveled, 0 to 1 percent slopes; San Joaquin silt loam, 0 to 3 percent slopes; and San Joaquin silt loam, 3 to 8 percent slopes. San Joaquin soils are moderately deep, moderately well-drained soils that generally occur on low terrace features, or on the side slopes of low terraces. Although they are not listed as hydric, they do have hydric inclusions in depressions and drainageways. Figure 2 provides a soils map for the site.

EXISTING WETLANDS

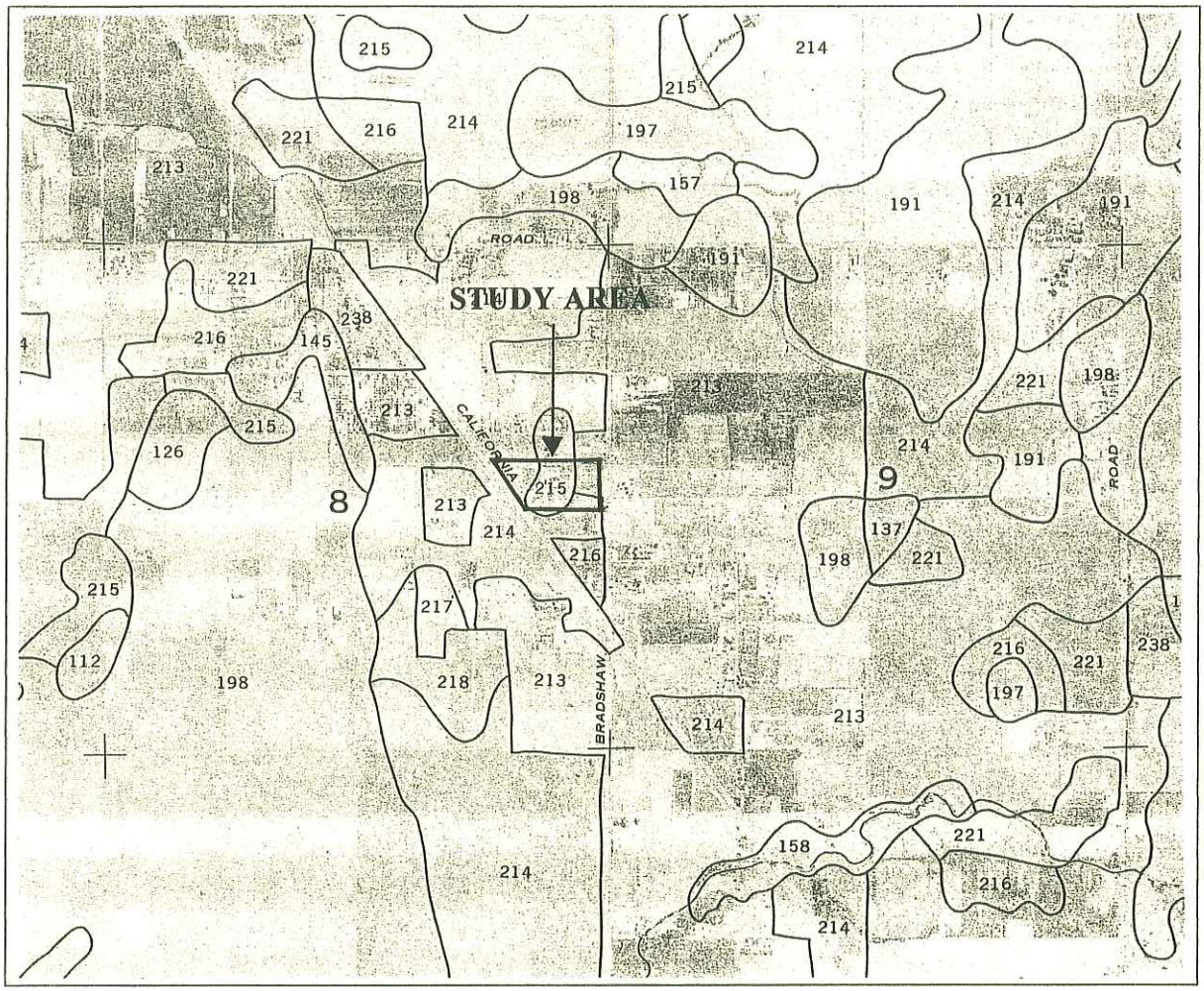
We identified a total of 0.495 acre of jurisdictional waters in the study area including 0.15 acre of vernal pools, 0.02 acre of seasonal wetland, 0.007 acre of wet swale, and 0.318 acre of drainage ditches. Table 1 provides the area of wetlands by type and reference number. Appendix B contains a delineation map showing the location of wetlands, ditches, data points, and study area boundary. Appendix C provides a list of plant species observed in the study area including their status as wetland indicators, and Appendix D contains a topographic map for the site.

Vernal Pools and Other Seasonal Wetlands

We identified six vernal pools (VP1-VP6) and one seasonal wetland (SW1) that range from 162-sq. ft. to 2,692-sq. ft. in area. The vernal pools and seasonal wetlands occur in shallow to medium depth depressions that experience ponding and saturation conditions that persist for a long duration following periods of heavy precipitation in the winter and early spring. Wetland hydrology field indicators observed include location within a defined depression overlying tight or restrictive soils, oxidized root channels on live roots, and algae matting in the deep portions of the wetlands. Hydric soils were assumed present in most of the wetlands based on strong indicators of an aquic moisture regime.

FIGURE 2

SOILS MAP



Soil Unit	Soil Name	Soil Classification	Drainage Class
213	San Joaquin silt loam, leveled, 0-1% slopes	Abruptic Durixeralfs	moderately well drained
214	San Joaquin silt loam, 0-3% slopes	Abruptic Durixeralfs	moderately well drained
215	San Joaquin silt loam, 3-8% slopes	Abruptic Durixeralfs	moderately well drained

Source: USDA, Soil Conservation Service. 1993. Soil Survey of Sacramento County, California

TABLE 1

AREAS OF EXISTING WETLANDS IDENTIFIED ON THE PORTICO PLACE PROPERTY

Vernal Pools:

Ref. #		Area (Sq.Ft.)
VP1		323
VP2		2,692
VP3		162
VP4		1,604
VP5		1,233
VP6		437
Total	=	6,451 Sq. Ft. or 0.15 Acre

Seasonal Wetland (SW1):	=	1,041 Sq. Ft. or 0.02 Acre
Wet Swale (WS1):	=	305 Sq. Ft. or 0.007 Acre
Ditches	=	13,860 Sq. Ft. or 0.318 Acre

Total Wetlands = 0.495 Acre

Vernal pools were differentiated from the seasonal wetland in the field by the presence of a wetland plant community dominated by one or more plant species typically considered endemic to or strongly associated with vernal pool plant communities. Typical vernal pool habitat in the study area is dominated by Mediterranean barley, purple hairgrass (*Deschampsia danthonioides*), and slender popcorn flower (*Plagiobothrys stipitatus*). Other common associates include perennial rye, annual rabbit-foot grass (*Polypogon monspeliensis*), goldfields (*Lasthenia sp.*), smooth goldfields (*Lasthenia glaberrima*), Carter's buttercup (*Ranunculus alveolatus*), and coyote thistle (*Eryngium vaseyi*).

The seasonal wetland (SW1) supports a facultative plant community dominated by perennial rye and Mediterranean barley. Other common associates include Lemmon's canary grass (*Phalaris lemmoni*), curly dock (*Rumex crispus*), Carter's buttercup, and toad rush (*Juncus bufonius*).

The upland community bordering the vernal pools and seasonal wetlands is marked by a gentle rise in landscape position lacking wetland hydrology and hydric soils, and the emergence of an annual grassland plant community typically dominated by non-hydrophytes.

Wet Swale

We also identified a 305-sq. ft. wet swale that occurs in a linear sloping depression that sustains long-term saturation conditions during and following periods of heavy precipitation in the winter. Unlike the existing vernal pools and seasonal wetland, the wet swale does not generally experience long-term ponding conditions in most years. WS1 supports a facultative plant community dominated by perennial rye and Mediterranean barley.

Jurisdictional Ditches

The southern drainage ditch and the drainage ditch along the western boundary adjacent to the railroad tracks are jurisdictional waters subject to regulation by the Corps of Engineers (Corps).

Jurisdictional Status

In our opinion, there is no direct jurisdictional connection between the on-site wetlands and other waters of the United States. However, it is reasonable to assume that most or all of the wetlands in the study area potentially spill and/or drain overland into the drainage ditch that extends along the southern boundary of the site. The southern drainage ditch connects into the eastern drainage

ditch that extends along the railroad right of way (i.e. railroad ditch). After field review by the Corps of Engineers, they determined that these ditches and all onsite wetlands are jurisdictional.

SPECIAL STATUS SPECIES

Table 2 provides a list of special status species that were evaluated including their listing status, habitat associations, and whether potential habitats occur in the study area. Of the twenty-four special status species evaluated in Table 2, ten species including the bank swallow, Bogg's Lake hedge-hyssop, California tiger salamander, giant garter snake, Sacramento orcutt grass, slender orcutt grass, Swainson's hawk, valley elderberry longhorn beetle, vernal pool fairy shrimp, and vernal pool tadpole shrimp are Federal and/or State listed threatened and/or endangered species. The following is a detailed summary of special status species and their habitats as they relate to the study area.

Swainson's Hawk and Other Raptors

Swainson's hawk (*Buteo swainsoni*) is a raptor species currently listed as threatened in California by the CDFG. They typically nest in tall cottonwoods, valley oaks, or willows associated with riparian corridors with adjacent grassland, pasture, and/or cropland with a high density of rodents. The Central Valley population typically breeds and nests in late spring through early summer before migrating to Central America and South America for the fall and winter seasons.

Based on CNDDB sighting records, active Swainson's hawk nests have been documented within a 3 ½ to 4-mile radius, or closer, of the study area including several older nests along the east side of Highway 99 between Calvine Road and Sheldon Road. Given this, the pasture and grassland habitat in the study area provides potential foraging habitat for Swainson's hawk. Additionally, there is suitable foraging habitat present for a variety of other raptors including white-tailed kite, northern harrier, red-tailed hawk, sharp-shinned hawk, and Cooper's hawk. The larger trees in the study area provide suitable nesting habitat for white tailed kites, but only marginal nesting potential for Swainson's hawk, sharp-shinned hawk, Cooper's hawk and red-tailed hawks.

Burrowing owl (*Athene cunicularia*) is a ground nesting raptor species afforded protection by CDFG as a species of special concern due to potentially declining populations in the Central Valley of California. They typically inhabit open grassland habitats where they nest in abandoned ground squirrel burrows and other nesting cavities associated with raised mounds, levees, or soft berm features. Although there is potential nesting and foraging habitat available for burrowing owls, we did not observe any potential nesting burrows or any indication of current burrowing owl activity at the site.

TABLE 2

EVALUATION OF SPECIAL STATUS SPECIES HABITATS

	State Status	Federal Status	CNPS Listing	Habitat Association	Potential Habitat In Study Area
Birds					
Accipiter cooperi (Cooper's hawk)	Species of Special Concern	None		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes -suitable foraging & marginal nesting habitat
Accipiter striatus (sharp-shinned hawk)	Species of Special Concern	None		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes -suitable foraging & marginal nesting habitat
Agelaius tricolor (tricolored blackbird)	Species of Special Concern	Species of Concern		Colonial nester in cattails, bullrush, or blackberries associated with marsh habitats.	No
Athene cunicularia (burrowing owl)	Species of Special Concern	Species of Concern		Nests in abandoned ground squirrel burrows associated with open grassland habitats.	Yes -habitat present, but no owls observed on site.
Buteo swainsoni (Swainson's hawk)	Threatened	None		Nests in tall cottonwoods, valley oaks or willows. Forages in fields, cropland, irrigated pature, and grassland near large riparian corridors.	Yes -suitable foraging & marginal nesting habitat
Circus cyaneus (northern harrier)	Species of Special Concern	None		Forages in open grasslands, nests on ground in shrubby vegetation.	Yes - foraging only
Elanus leucurus (white-tailed kite)	Fully Protected	None		Nests in riparian corridors along streams and rivers, and forages in nearby grasslands and fields.	Yes -suitable foraging & nesting habitat present
Riparia riparia (bank swallow)	Threatened	Species of Concern		Colonial nester in vertical cliffs and banks associated with riparian zones along streams, rivers, and lakes.	No
Amphibians & Reptiles					
Ambystoma trigrinum californiense (California tiger salamander)	Species of Special Concern	Threatened		Breeds in ponds or other deeply ponded wetlands, and uses gopher holes and ground squirrel burrows in adjacent grasslands for upland refugia/foraging.	No
Clemmys marmorata marmorata (northwestern pond turtle)	Species of Special Concern	Species of Concern		Ponds, rivers, streams, wetlands, and irrigation ditches with associated marsh habitat.	No
Scaphiopus hammondii (western spadefoot)	Species of Special Concern	Species of Concern		Breeds in vernal pools, seasonal wetlands and associated swales. Forages and hibernates in adjacent grasslands.	Yes
Thamnophis gigas (giant garter snake)	Threatened	Threatened		Rivers, canals, irrigation ditches, rice fields, and other aquatic habitats with slow moving water and heavy emergent vegetation.	No

TABLE 2

(Continued)

	State Status	Federal Status	CNPS Listing	Habitat Association	Potential Habitat In Study Area
Invertebrates					
Branchinecta lynchi (vernal pool fairy shrimp)	None	Threatened		Vernal pools and other seasonally ponded wetlands.	Yes -potential habitat in VP's & SW
Branchinecta mesovallensis (midvalley fairy shrimp)	None	None		Vernal pools and other seasonally ponded wetlands.	Yes -potential habitat in VP's & SW
Desmocerus californicus dimorphus (valley elderberry longhorn beetle)	None	Threatened		Dependent upon elderberry plant (Sambucus mexicana) as primary host species	No
Lepidurus packardi (vernal pool tadpole shrimp)	None	Endangered		Vernal pools and other deeply ponded seasonal wetlands.	Yes -marginal habitat in VP's
Linderiella occidentalis (California linderiella)	None	None		Vernal pools and other seasonally ponded wetlands.	Yes -potential habitat in VP's & SW
Plants					
Downingia pusilla (dwarf downingia)	None	None	CNPS-2	Vernal pools	Yes -suitable habitat in VP's
Gratiola heterosepala (Bogg's Lake hedge-hyssop)	Endangered	None	CNPS-1B	Vernal pools and margins of lakes/ponds	Yes -suitable habitat in VP's
Juncus leiospermus var. ahartii (Ahart's dwarf rush)	None	Species of Concern	CNPS-1B	Vernal pools	Yes -suitable habitat in VP's
Legenere limosa (legenere)	None	Species of Concern	CNPS-1B	Vernal pools	Yes -suitable habitat in VP's
Orcuttia tenuis (slender orcutt grass)	Endangered	Threatened	CNPS-1B	Vernal pools	Yes-marginal habitat in VP's, but not highly suitable for species
Orcuttia viscida (Sacramento orcutt grass)	Endangered	Threatened	CNPS-1B	Vernal pools	Yes-marginal habitat in VP's, but not highly suitable for species
Sagittaria sanfordii (Sanford's arrowhead)	None	Species of Concern	CNPS-1B	Deep aquatic habitats associated with canals, drainages, and ditches.	Yes -marginal habitat in ditch, but species was not found.

Tricolored Blackbird

Tricolored blackbirds (*Agelaius tricolor*) are afforded protection by CDFG as a species of special concern due to declining populations in the region. They are colonial nesters preferring to nest in dense stands of cattails and/or bullrush, but they also commonly nest in blackberry thickets associated with drainages, ditches, and canals. There have been a number of documented sightings of tricolored blackbird nesting colonies in the Florin and Elk Grove quadrangles, but the locations have been excluded from CNDDB records for protection issues.

The absence of suitable nesting habitat in the study area would eliminate any reasonable potential for tricolored blackbirds to nest at the site.

California Tiger Salamander

The California tiger salamander (*Ambystoma trigrinum californiense*) is a Federally threatened species and a California Species of Special Concern that typically breeds in seasonal or permanent ponds. California tiger salamander (CTS) may also breed in deeper ponded vernal pools, seasonal wetlands and/or other seasonal pools within swales or channels. They typically spend a majority of their life cycle living below ground in ground squirrel burrows or pocket gopher burrows in grasslands situated adjacent to suitable breeding sites.

The absence of potential breeding habitat in the study area and the lack of connectivity with potential CTS breeding sites would greatly restrict if not eliminate any potential for CTS to utilize the site.

Giant Garter Snake

Giant garter snake (GGS) is designated as a Federal threatened and State threatened species afforded special protection by FWS and CDFG. GGS is generally associated with larger canals, irrigation ditches, and other semi-permanent to permanent aquatic sites with slow moving water and an abundance of emergent vegetation.

GGS has been documented within Elk Grove Creek and lower Morrison Creek situated to the west of Highway 99. However, there have not been any documented GGS sightings along the east side of Highway 99 including the region surrounding the study area. Although portions of the drainage ditches along south and west perimeter of the study area do support seasonal

wetland vegetation, they typically lack suitable flow conditions and associated emergent marsh habitats generally linked to documented GGS habitat. It is unlikely that the ditches support flows or ponding conditions during the critical GGS breeding season in the late spring. Given this, CTS would have little if any potential for occurring in the study area.

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (*Desmocerus californicus*) is a Federal threatened species that is dependent upon the elderberry plant (*Sambucus sp.*) as a primary host species. Elderberry shrubs are a common component of riparian areas throughout the Sacramento Valley region, and they have been documented as occurring at numerous locations in the vicinity of the study area.

Given the absence of elderberry shrubs in the study area, there is no potential for valley elderberry longhorn beetle to occur at the site.

Vernal Pool Branchiopods

Federally listed vernal pool branchiopods including the threatened vernal pool fairy shrimp (*Branchinecta lynchi*) and the endangered vernal pool tadpole shrimp (*Lepidurus packardi*) have been documented as occurring in Elk Grove and Florin USGS quadrangles. Other non-listed branchiopods known to occur in the region include California linderiella (*Linderiella occidentalis*) and midvalley fairy shrimp (*Branchinecta mesovallensis*).

The branchiopod species listed above are generally restricted to vernal pools and/or other seasonally ponded wetlands that sustain inundation during the winter before drying up in the late spring. The vernal pools and the seasonal wetland in the study area provide potential habitat for special status branchiopods including the vernal pool fairy shrimp, mid-valley fairy shrimp, and California linderiella. However, they generally lack suitable ponding regimes and vernal pool plant associations typically associated with the establishment of vernal pool tadpole populations.

Special Status Plants

Special status plant species identified on the CNDDB as occurring in the vicinity of the study area, or may potentially occur in the area, include Ahart's dwarf rush (*Juncus leiospermus ahartii*) dwarf downingia (*Downinia pusilla*), Bogg's Lake hedge-hyssop (*Gratiola heterosepala*), legenere (*Legenere limosa*), Sacramento orcutt grass (*Orcuttia viscida*), slender orcutt grass (*Orcuttia tenuis*), and Sanford's arrowhead (*Sagittaria sanfordii*).

Ahart's dwarf rush, dwarf downingia, legenere, Bogg's Lake hedge-hyssop, Sacramento orcutt grass, and slender orcutt grass are all strongly associated with vernal pools habitats. Bogg's Lake hedge-hyssop can also occur around the perimeter of lakes and ponds. Conversely, Sanford's arrowhead generally occurs in deep aquatic habitats associated with drainages, canals, and larger ditches that sustain inundation and/or slow moving water into early summer.

The vernal pools and the seasonal wetland in the study area may provide potential habitat for Ahart's dwarf rush, Bogg's Lake hedge-hyssop, dwarf downingia, and legenere. However, they generally lack suitable ponding regimes and vernal pool plant associations typically associated with the establishment of Sacramento orcutt grass or slender orcutt grass populations. In addition, the drainage ditches in the study area do not support suitable long-term flows or ponding conditions typically associated with the establishment of Sanford's arrowhead populations. Moreover, we did not observe Sacramento orcutt grass, slender orcutt grass, or Sanford's arrowhead during our field surveys.

SUMMARY

We identified a total of 0.495 acre of wetlands in the study area including 0.15 acre of vernal pools, 0.02 acre of seasonal wetland, and 0.007 acre of wet swale, and 0.318 acre of drainage ditches.

In regards to special status species and their habitats, a number of special status raptors including Swainson's hawk, sharp-shinned hawk, Cooper's hawk, white-tailed kite, northern harrier, and burrowing owls would have a reasonable potential for occurring in the study area based on the presence of suitable foraging and/or nesting habitat. In the event that future development of the site occurs during the raptor nesting season, we recommend that a raptor nesting survey be completed within two weeks of the start of project construction.

The vernal pools and seasonal wetland in the study area provide potential habitat for special status branchiopods including vernal pool fairy shrimp, mid-valley fairy shrimp, and California linderiella. At this time, protocol branchiopod surveys have not been conducted for this site. The vernal pools may also provide potential habitat for special status plants including for Ahart's dwarf rush, Bogg's Lake hedge-hyssop, dwarf downingia, and legenere.

Other Federally listed special status species including the California tiger salamander, giant garter snake, valley elderberry longhorn beetle, Sacramento orcutt grass, and slender orcutt grass

would have little if any potential for occurring in the study area based on the absence of suitable habitat.

APPENDIX A

DATA FORMS

ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: Portico Place	Date: 8-5-04
Applicant/Owner: —	City/County: Sacramento Co.
Investigator(s): D. Skordal, J. Gibson	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Annual grassland - facultative
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID:
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: 1

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Hordeum hystrix (D)		FAC	9.		
2. Vulpia myuros		FACU	10.		
3. Bromus Mollis		FACU-	11.		
4. Bromus diandrus		UPL	12.		
5. Rumex crispus		FACW-	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100% FAC Dominated

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: flat area located upslope of adjacent swale, Area lacks indicators of long-term saturation or ponding!

Map Unit Name (Series and Phase): (214) San Joaquin silt loam, 0-3 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-6	7.5YR 3/4	yes		sandy silt loam / loam

Hydric Soil Indicators:

___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed or Low-Chroma Colors
___ Concretion in upper 3 inches
___ High Organic Content in Surface Layer in Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? FAC (Yes) No
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? Yes (No)

Is this Data Point Within a Wetland? Yes (No)

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Portico Place	Date: 8-5-04
Applicant/Owner: —	City/County: Sacramento Co.
Investigator(s): D. Skordal, J. Gibson	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Vernal Pool (vp2)
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 2
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: A

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Deschampsia danthonioides (D)		FACW	9.		
2. Hordeum hystrix (D)		FAC	10.		
3. Glaziobothys stipitatus (D)		OBL	11.		
4. Lolium perenne		FAC	12.		
5. Lasthenia glaberrima		OBL	13.		
6. Polypogon monspeliensis		FACW+	14.		
7. Ranunculus alveolatus		OBL	15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ✓ Sediment Deposits/Organic Detritus/Algae
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ✓ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ✓ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Defined depression w/ algae matting and oxidized root channel on live roots.

Map Unit Name (Series and Phase): (215)-San Joaquin silt loam, 3-8% slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixerolfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-8	10YR 4/3	yes		silt loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ✓ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: Hydric soils assumed based on strong indicators of aquic moisture regime.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is this Data Point Within a Wetland?	(Yes)	No
Wetland Hydrology Present?	(Yes)	No			
Hydric Soils Present?	(Yes)	No			

Remarks:

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Portico Place	Date: 8-5-04
Applicant/Owner: —	City/County: Sacramento Co.
Investigator(s): D. Skordal, J. Gibson	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Adjacent upland - grassland
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 2
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: B

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Lolium perenne (D)		FAC	9.		
2. Vulpia myuros (D)		FACU	10.		
3. Bromus Mollis (D)		FACU-	11.		
4. Holocarpha virgata		UPL	12.		
5. Hordeum hystrix		FAC	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 33 %

Remarks: Annual Grassland Habitat

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Located on slope ± 12" above elev. of adjacent VP. Area lacks indicators of wetland hydrology!

Map Unit Name (Series and Phase): (215)-San Joaquin silt loam, 3-8% slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-8	7.5YR 3/4	yes		sandy silt loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	No
Wetland Hydrology Present?	Yes	No
Hydric Soils Present?	Yes	No

Is this Data Point Within a Wetland? Yes No

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Portico Place	Date: 8-5-04
Applicant/Owner: —	City/County: Sacramento Co.
Investigator(s): D. Skordal, J. Gibson	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Seasonal Wetland (SW1)
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 3
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: A

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Hordeum hystrix (D)		FAC	9.		
2. Lolium perenne (D)		FAC	10.		
3. Phalaris lemmoni		FACW	11.		
4. Rumex crispus		FACW	12.		
5. Bromus mollis		FACU	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100% FAC

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ✓ Sediment Deposits/Organic Detritus/Algae
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ✓ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ✓ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Shallow depression w/ oxidized root channels on live roots, and algae matting in low spots.

Map Unit Name (Series and Phase): (213) - San Joaquin silt loam, leveled, 0-1% slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-8	7.5 YR 3/4	yes		sandy silt loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ✓ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: Hydric soils based on indicators of aquic moisture regime!

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is this Data Point Within a Wetland?	(Yes)	No
Wetland Hydrology Present?	(Yes)	No			
Hydric Soils Present?	(Yes)	No			

Remarks:

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Portico Place	Date: 8-5-04
Applicant/Owner: —	City/County: Sacramento Co.
Investigator(s): D. Skordal, J. Gibson	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Adjacent upland - grassland
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 3
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: B

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus mollis (D)		FACU	9.		
2. Hordeum hystrix (D)		FAC	10.		
3. Vulpia myuros (D)		FACU	11.		
4. Hordeum leporinum		UPL	12.		
5. Lolium perenne		FAC	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 33%

Remarks: Annual Grassland Habitat

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Located on sloping terrain ± 6" above adjacent SW. Area lacks indicators of wetland hydrology!

Map Unit Name (Series and Phase): (213) - San Joaquin silt loam, leveled, 0-1% slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-6	10YR 3/3	yes	—	sandy silt loam

Hydric Soil Indicators:

___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed or Low-Chroma Colors
___ Concretion in upper 3 inches
___ High Organic Content in Surface Layer in Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (No)
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? Yes (No)

Is this Data Point Within a Wetland? Yes (No)

Remarks: Non-wetland

APPENDIX B

DELINEATION MAP

APPENDIX C

PLANT LIST

LIST OF PLANTS OBSERVED ON THE PORTICO PLACE PROPERTY AND THEIR STATUS AS WETLAND INDICATOR SPECIES

Scientific Name	Common Name	Status [1]&[2]
Agrostis avenacea	hairy flower bentgrass	FACW*
Aira caryophyllea	silver hairgrass	UPL
Amsinckia intermedia	fiddleneck	UPL
Avena sp.	wild oats	UPL
Brassica sp.	mustard	NI
Briza minor	little quaking grass	FACW-
Brodiaea sp.	brodiaea	---
Bromus diandrus (*B. rigidus*)	rip-gut grass	UPL
Bromus mollis	soft chess	FACU-
Centaurea solstitialis	yellow star-thistle	UPL
Cichorium intybus	chickory	UPL
Cirsium sp.	thistle	---
Convolvulus arvensis	bindweed	UPL
Cynodon dactylon	Bermuda grass	FAC
Cyperus eragrostis	tall flatsedge	FACW
Deschampsia danthonioides	purple hairgrass	FACW
Echinochloa crusgalli	barnyard grass	FACW
Eremocarpus setigerus	doveweed	UPL
Erodium sp.	filaree	UPL
Eucalyptus sp.	gum	---
Geranium dissectum	cut-leaf geranium	UPL
Holocarpha virgata	tarweed	UPL
Hordeum hystrix (*H. geniculatum*)	Mediterranean barley	FAC
Hordeum leporinum	barley	NI
Hypochaeris glabra	smooth cats tongue	UPL
Juglans californica (J. nigra)	California walnut	UPL
Juncus bufonius	toad rush	FACW+
Lactuca serriola	prickly lettuce	FAC
Lasthenia sp.	goldfields	NI
Lasthenia glaberrima	smooth goldfields	OBL
Leontodon leysseri	hairy hawkbit	FACU
Lolium perenne (*L. multiflorum*)	perennial ryegrass	FAC*
Lotus purshianus	Spanish clover	FAC
Marrubium vulgare	common horehound	FAC

[1] Reed, P.B. 1988. National List of Plant Species That Occur in Wetlands: California (Region 0). Biological Report 88(26.10) May 1988. National Ecology Research Center, National Wetland Inventory, U.S. Fish and Wildlife Service, St. Petersburg, Fl.

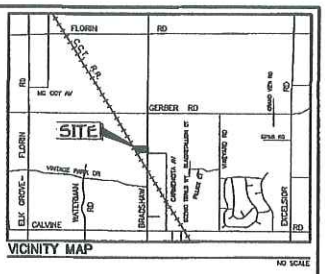
[2] OBL = obligate; FACW = facultative wetland; FAC = facultative; FACU = facultative upland; UPL = upland; and NI = no indicator.

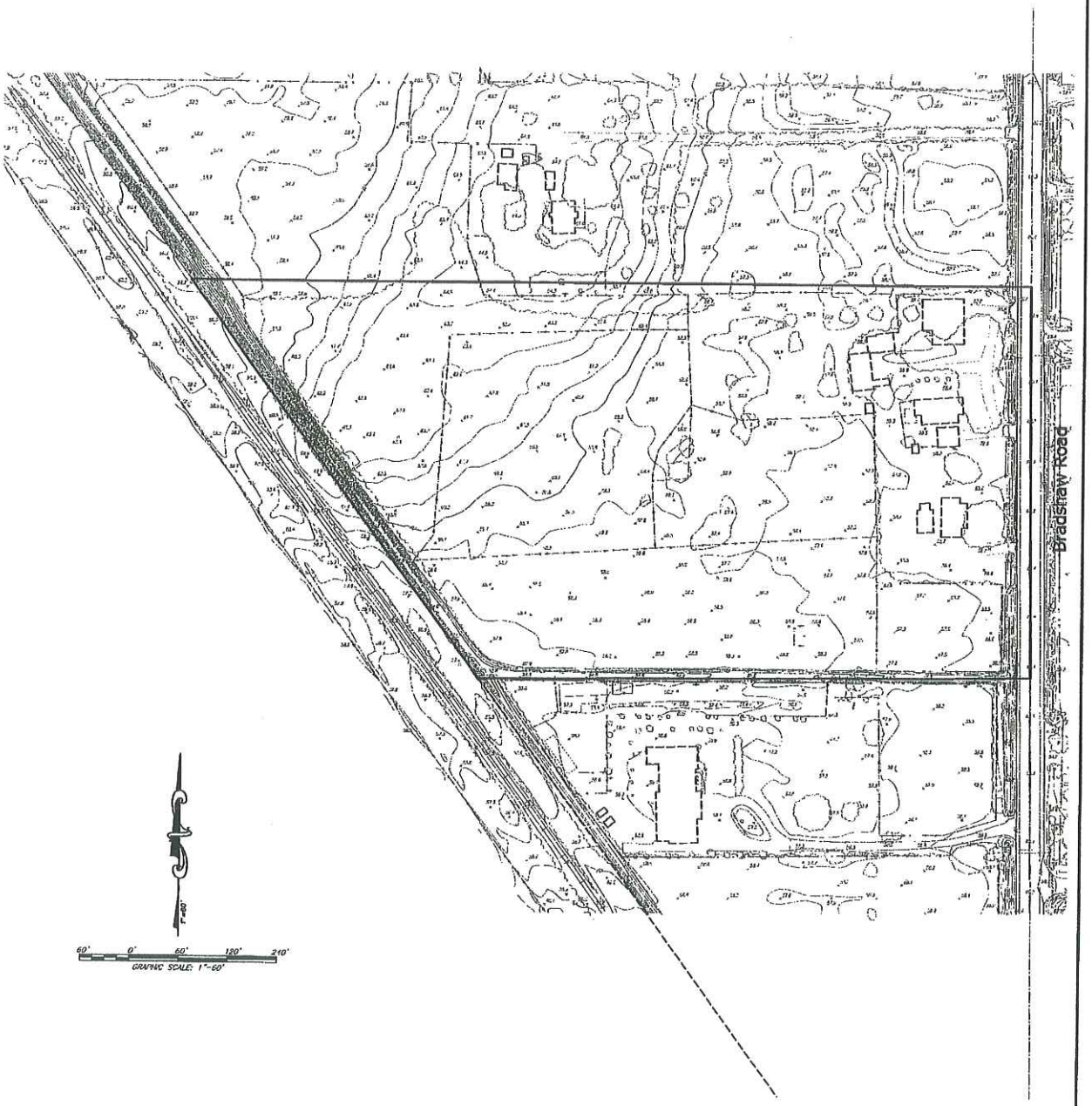
Scientific Name	Common Name	Status
Morus alba	mulberry	---
Olea europaea	olive	UPL
Paspalum dilatatum	dallis grass	FAC
Phalaris lemmoni	Lemmon's canary grass	FACW-
Plagiobothrys stipitatus var. micranthus	slender popcorn flower	OBL
Plantago lanceolata	English plantain	FAC-
Platanus racemosa	California sycamore	FACW
Poa annua	annual bluegrass	FACW-
Polypogon monspeliensis	annual rabbit-foot grass	FACW+
Ranunculus alveolatus (R. bonariensis var. trisepalus)	Carter's buttercup	OBL
Raphanus sativus	wild radish	UPL
Rubus procerus	Himalayan blackberry	FAC
Rumex conglomeratus	clustered dock	FACW
Rumex crispus	curly dock	FACW-
Silybum marianum	milk thistle	UPL
Sonchus arvensis	field sow thistle	FACU
Taeniatherum caput-medusae	medusa-head	UPL
Trifolium sp.	clover	---
Vicia villosa	winter vetch	---
Vulpia myuros	rat-tail fescue	FACU

APPENDIX D

TOPOGRAPHIC MAP

Portico Place





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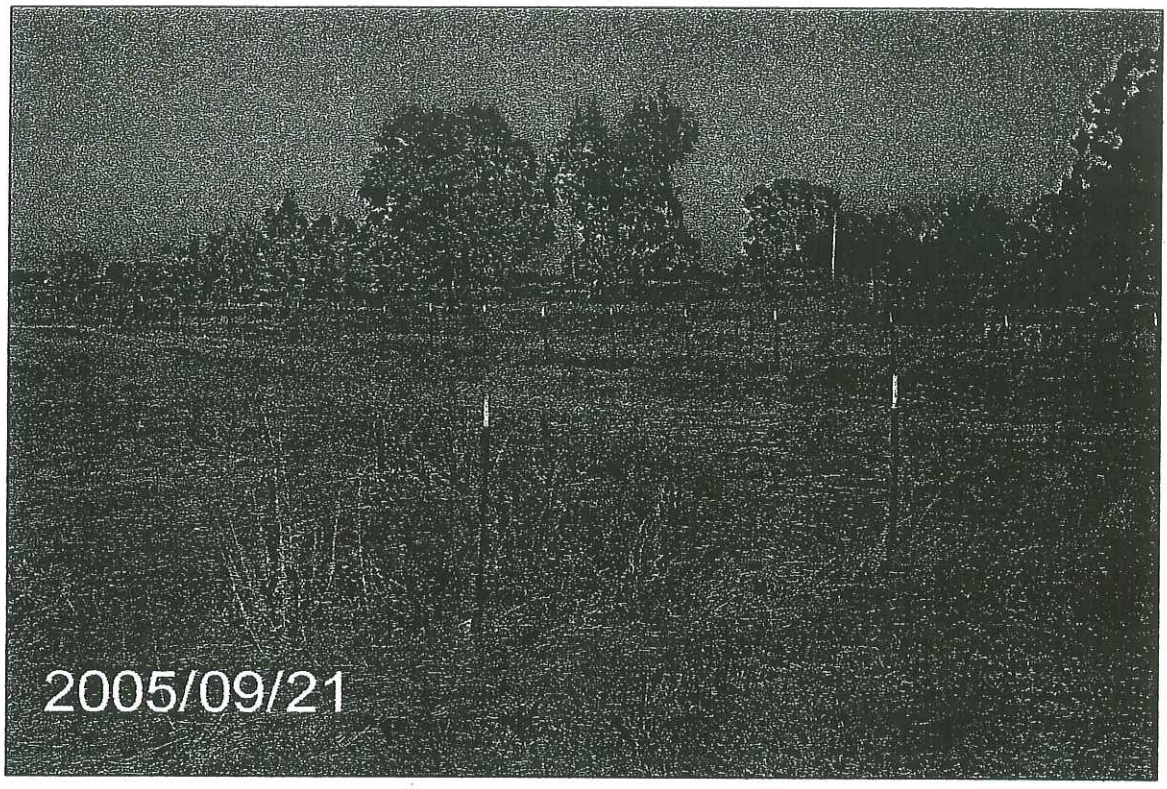
DWG 07/27/2004 09:40:33 SBS Base 07-26-04

DRY-SEASON SAMPLING FOR FEDERALLY LISTED LARGE BRANCHIOPODS AT THE PORTICO ACRES PROJECT, SACRAMENTO COUNTY, CALIFORNIA



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DEPARTMENT OF ENVIRONMENTAL REVIEW AND ASSESSMENT

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September 2005

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DRY-SEASON SAMPLING FOR FEDERALLY LISTED LARGE BRANCHIOPODS AT THE PORTICO ACRES PROJECT, SACRAMENTO COUNTY, CALIFORNIA

INTRODUCTION

Helm Biological Consulting was contracted by Baker-Williams Engineering Group to conduct dry-season sampling for federally listed large branchiopods (e.g., vernal pool fairy shrimp [*Branchinecta lynchi*] and vernal pool tadpole shrimp [*Lepidurus packardi*]) at the Portico Acres project.

The Portico Acres project consists of a 9.5-acre parcel located south of Gerber Road, north of Rogers Road, and immediately west of Bradshaw Road in the Florin-Vineyard Community Plan Development Area. The project is located in the southeast ¼ of Section 8, Township 7 North, and Range 6 East of the Elk Grove 7.5-minute US Geological Survey topographic quadrangle map (Figure 1). Gibson & Skordal identified three vernal pools, one seasonal wetland and one wet swale occurring at the site (AKA. Portico Place) (Exhibit A).

This report discusses the methods and results of the dry-season sampling for the presence of large branchiopods at the Portico Acres project, Sacramento County, California.

METHODS

Dr. Brent Helm conducted dry-season sampling under permit TE-795930-3 of Section 10 (a)(1)(A) of the federal Endangered Species Act, 16 U.S.C. 1531 *et seq.*, and its implementing regulations. Methods generally followed U.S. Fish and Wildlife Service (USFWS) *Interim Survey Guidelines to Permittees for Recovery Permits under Section*

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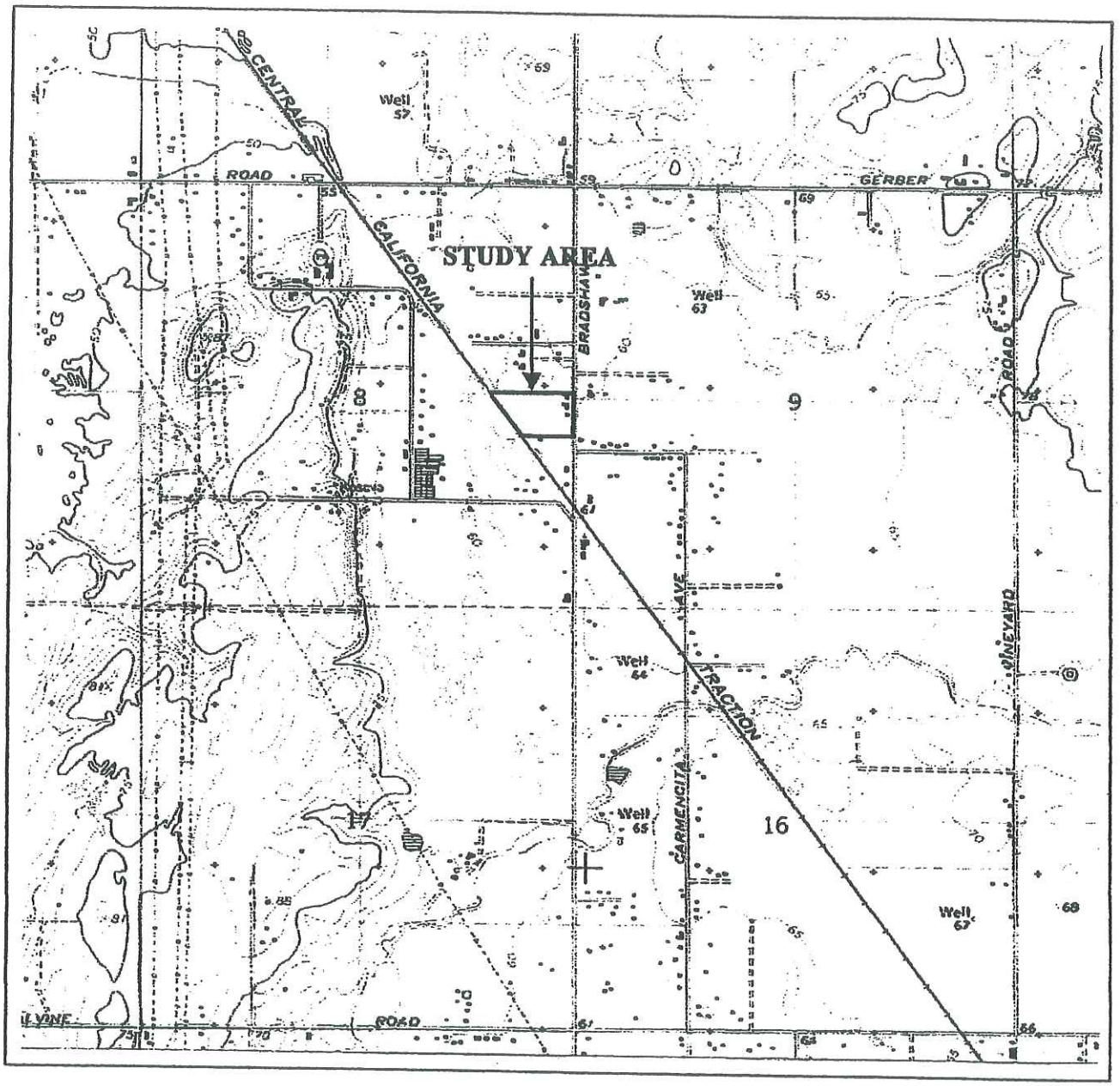
FIGURE 1

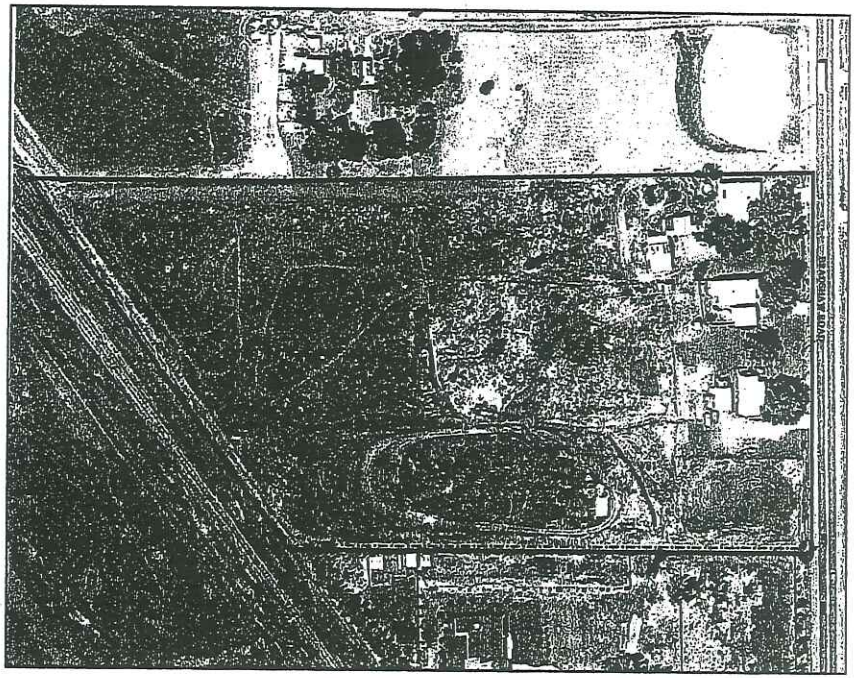
VICINITY MAP



↑
N
(Scale: 1 Inch = 2000 Feet)

Source: Elk Grove 7.5 Minute USGS Topographic Quadrangle

JURISDICTIONAL DELINEATION MAP
PORTICO PLACE PROPERTY
(Sacramento County, California)



N

0 40 80 160 Feet

Legend

- Vernal Pools-VP1-VP3 (0.02 Acre)
- Seasonal Wetland-SW1 (0.02 Acre)
- Wet Swale-WS1 (0.005 Acre)
- Irrigation-Drainage Ditches (Non-Jurisdictional)
- Data Points
- Study Area Boundary

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Prepared: August 2004
Base Map: Aerial Photography
Flown in May 2002

Exhibit A.

10 (a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods (1996) and are described below.

All areas that potentially could support federally listed large branchiopods were sampled. Potential habitat for large branchiopods is defined as any seasonal inundated depression that on average ponds water two (2) inches or greater in depth for 30 or more consecutive days. Potential habitat characteristics of large branchiopods are based on the life history of Central Valley endemics (Eriksen and Belk 1999; Helm 1998, 1999; Helm and Volmar 2002). Habitats that flow water (e.g., creeks, streams, ephemeral drainages) or semi-to-permanently inundated areas were not considered suitable habitat for federally listed large branchiopods.

Dry-season sampling involved the collection of ten-soil sub-samples mainly from the lowest topographic areas within each basin onsite. Soil samples were placed in liter size plastic freezer bags and marked with the project name, basin number, and date. The soil was then transported to a laboratory for processing and analysis.

In the laboratory, a brine solution was prepared by mixing table salt (NaCl) with lukewarm tap water in a large container. The collected soil material was placed in the brine solution. The soil material was then gently worked by hand to breakdown any persistent soil structure. The organic material rising to the top of the brine solution was skimmed off and placed in a 600-micron diameter pore-size sieve stacked atop a 75-micron diameter pore-size sieve. The soil material was processed through the top sieve by flushing it with lukewarm tap water while gently rubbing it with a soft-bristle brush. The soil retained from the 75-micron diameter pore size sieve was then removed and thinly (1 mm) spread into plastic petri dishes.

The contents of each petri dish were examined under a 10 to 240-power zoom binocular microscope. A minimum of 0.5-hour was spent searching the contents of each petri dish for large branchiopod cysts (embryonic eggs). Dr. Helm's large branchiopod cyst reference collection and scanning electron micrographs of cysts (Hill and Shepard 1998, Mura 1991, and Gilchrist 1978) were used to identify and compare any cysts observed within the soil samples.

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RESULTS

Visual examinations of the soils collected from the basins on site did not revealed evidence of large branchiopod presence (i.e., cysts or carapaces of *Lepidurus*) (Table 1).

Table 1. Results of Soil Examinations

Basin No.	Insects Exo-Skeletons	Micro-Turbularian Cysts	Cladocera Ephippia
VP1	X	X	
VP2	X	X	X
VP3*	X		
VS1	X		
SW1	X	X	

***not considered large branchiopod habitat (i.e., ponding duration and depth are not sufficient for listed large branchiopods to complete their life cycle)**

Representative photographs of the basins onsite are found in Appendix A.

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Eriksen, C. H., and D. Belk. 1999. Fairy shrimps of California's puddles, pools, and playas. Mad River Press, Inc. Eureka, CA. 196 pp.

Gilchrist, B. M. 1978. Scanning electron microscope studies of the egg shell in some Anostraca (Crustacea: Branchiopoda). Cell Tiss. Res. 193: 337-351.

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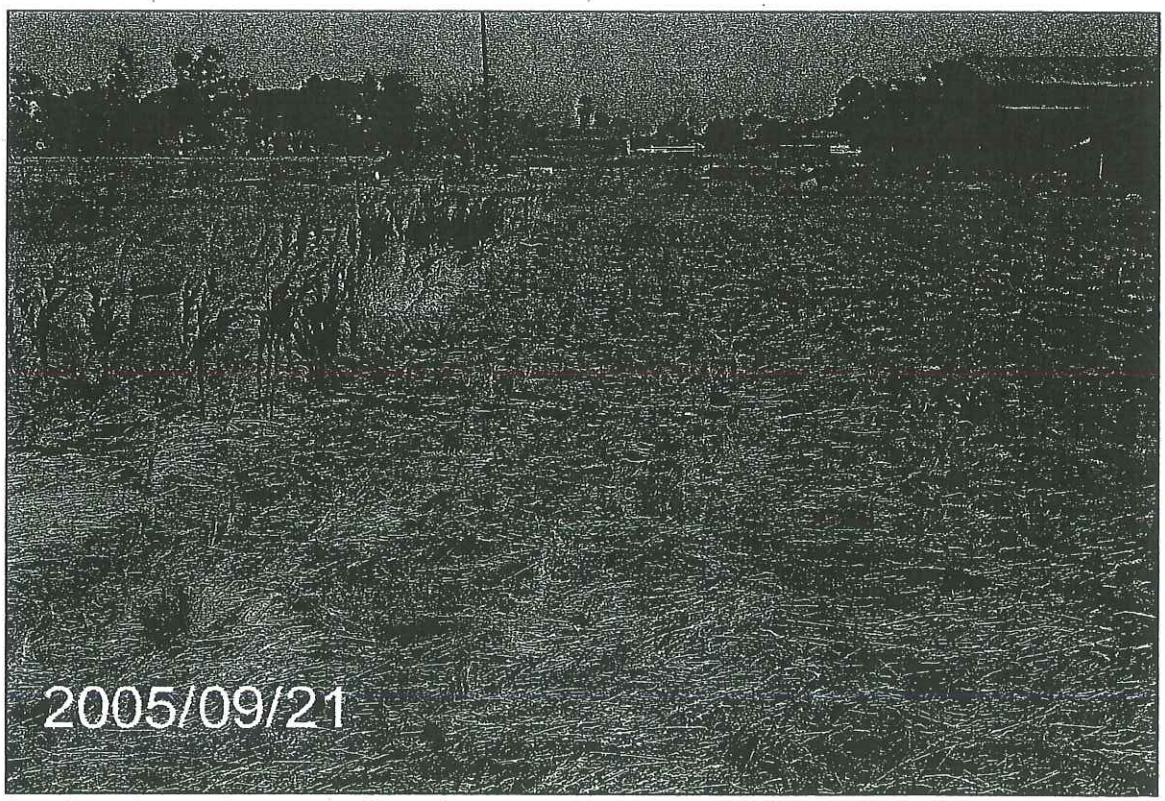
APPENDIX A. REPRESENTATIVE PHOTOGRAPHS

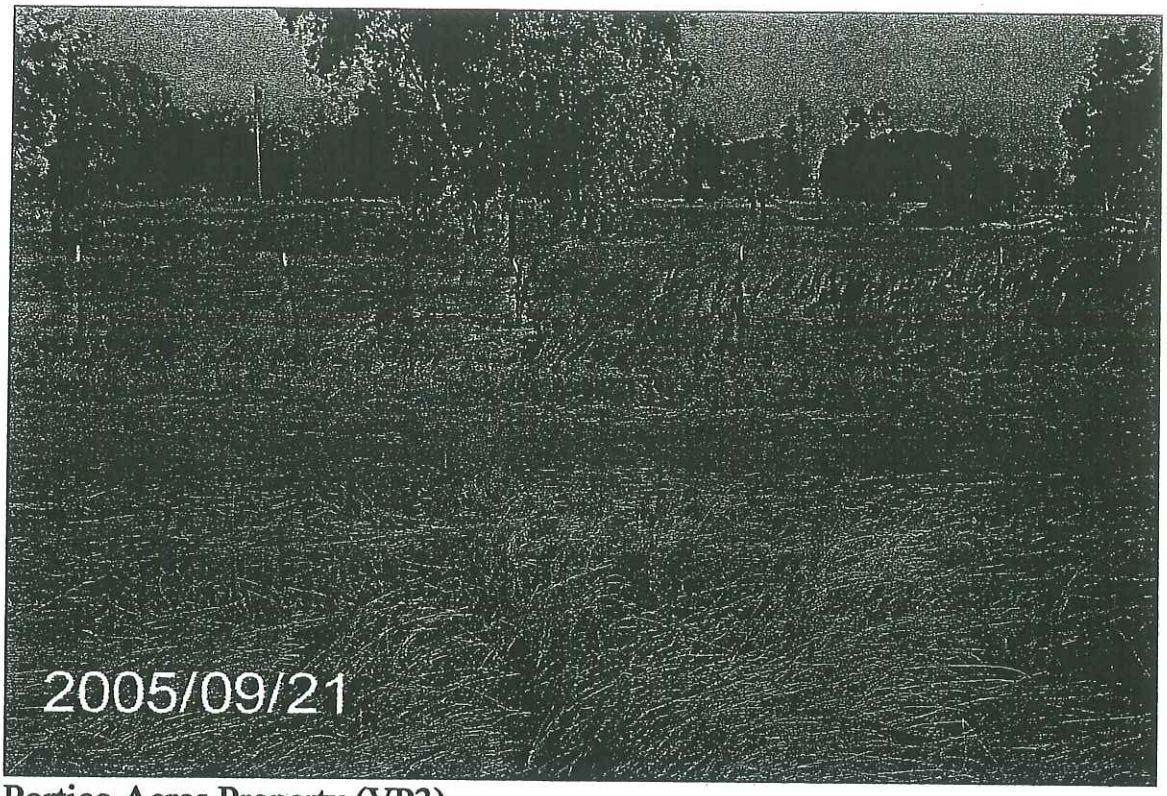
Portico Acres Property (overview)



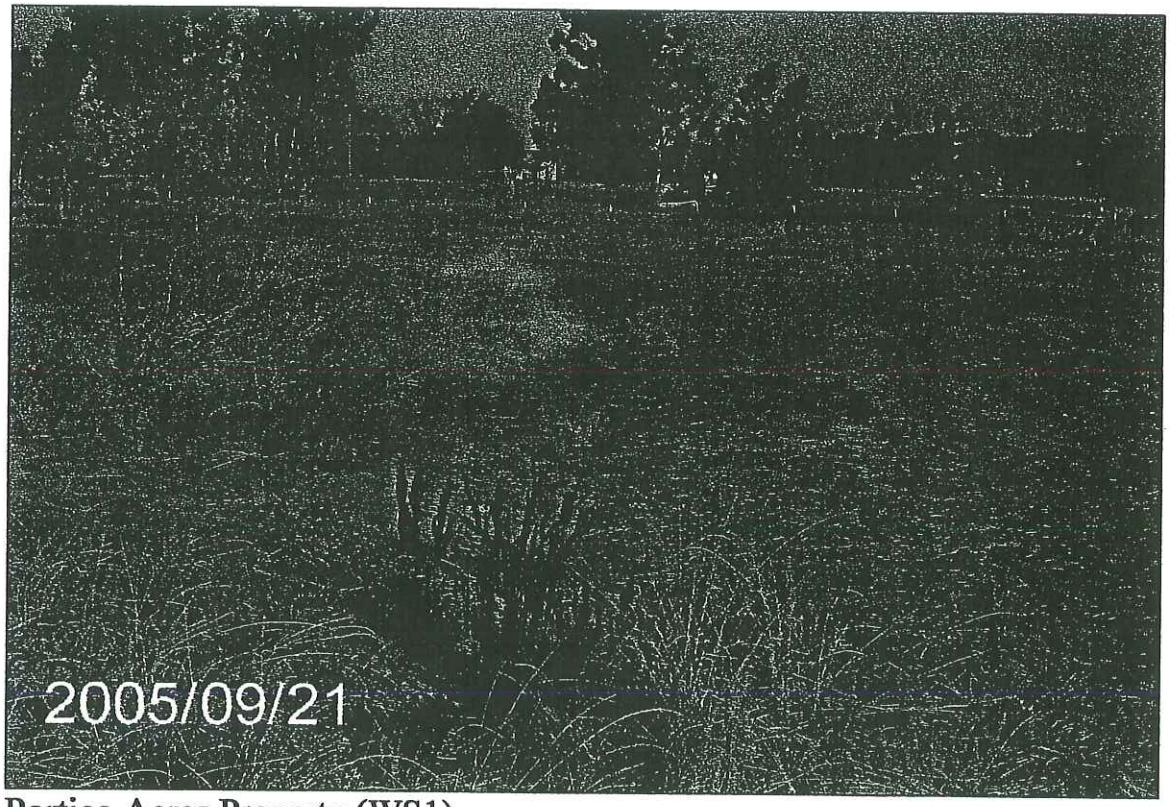
Portico Acres Property (SW1)

Portico Acres Property (VP1)

Portico Acres Property (VP2)



Portico Acres Property (VP3)



Portico Acres Property (WS1)

WET-SEASON SAMPLING
FOR
FEDERALLY LISTED LARGE BRANCHIOPODS
AT THE
PORTICO ACRES PROJECT,
SACRAMENTO COUNTY, CALIFORNIA

RECEIVED
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Prepared for: **BAKER-WILLIAMS ENGINEERING GROUP**
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Prepared by: **HELM BIOLOGICAL CONSULTING**
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Contact: **Brent Helm**
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June 2005

WET-SEASON SAMPLING FOR FEDERALLY LISTED LARGE BRANCHIOPODS AT THE PORTICO ACRES PROJECT, SACRAMENTO COUNTY, CALIFORNIA

INTRODUCTION

Helm Biological Consulting was contracted by Mike Williams of Baker-Williams Engineering Group to conduct wet-season sampling for federally listed large branchiopods (e.g., vernal pool fairy shrimp [*Branchinecta lynchi*] and vernal pool tadpole shrimp [*Lepidurus packardi*]) at the Portico Acres project.

The Portico Acres project consists of a 9.5-acre parcel located south of Gerber Road, north of Rogers Road, and immediately west of Bradshaw Road in the Florin-Vineyard Community Plan Development Area. The project is located in the southeast ¼ of Section 8, Township 7 North, and Range 6 East of the Elk Grove 7.5-minute US Geological Survey topographic quadrangle map (Figure 1).

This report discusses the methods and results of the wet-season sampling for the presence of large branchiopods at the Portico Acres project, Sacramento County, California.

METHODS

Dr. Brent Helm conducted wet-season sampling under permit TE-795930-3 of Section 10 (a)(1)(A) of the federal Endangered Species Act, 16 U.S.C. 1531 *et seq.*, and its implementing regulations. Methods generally followed U.S. Fish and Wildlife Service (USFWS) *Interim Survey Guidelines to Permittees for Recovery Permits under Section 10 (a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods* (1996) and are described below.

All areas that potentially could support federally listed large branchiopods were sampled. Potential habitat for large branchiopods is defined as any seasonal inundated depression that on average ponds water two (2) inches or greater in depth for 30 or more consecutive

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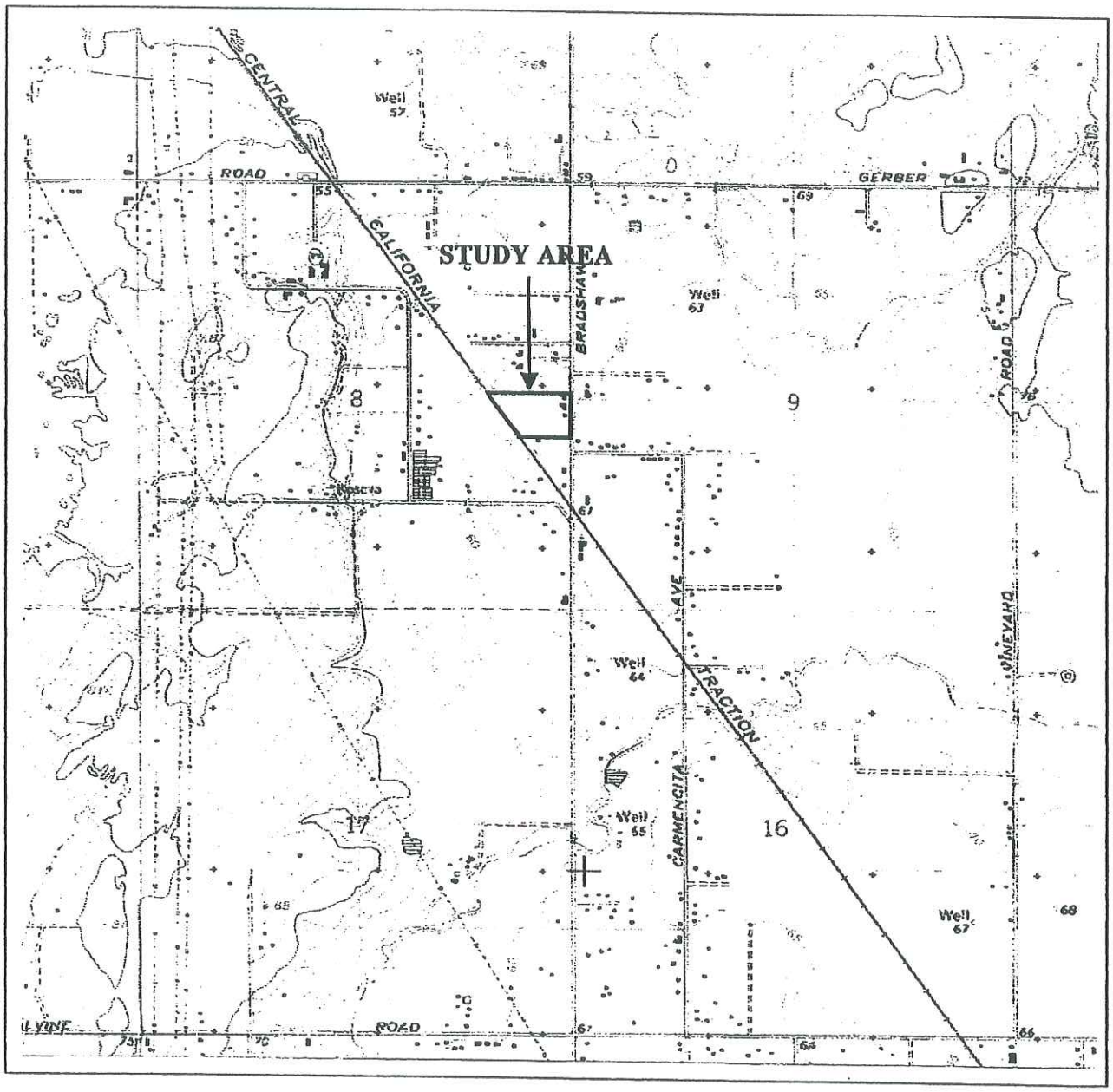
FIGURE 1

VICINITY MAP



↑
N
(Scale: 1 Inch = 2000 Feet)

Source: Elk Grove 7.5 Minute USGS Topographic Quadrangle

days. Potential habitat characteristics of large branchiopods are based on the life history of Central Valley endemics (Eriksen and Belk 1999; Helm 1998, 1999; Helm and Volmar 2002). Habitats that flow water (e.g., creeks, streams, ephemeral drainages) or semi-to-permanently inundated areas were not considered suitable habitat for federally listed large branchiopods.

Sampling was conducted on December 16 and 30, 2004; January 6 and 19, 2005; February 1, 11, and 27, 200; March 8 and 22, 2005; and April 5 and 19, 2005.

Wet-season sampling entailed dip netting all potential habitats on site for active large branchiopods. All potential habitats were sampled at roughly two-week intervals (or less), after they were inundated with a minimum of one inch of water. All macroscopic organisms captured within the dipnet were identified to the lowest taxonomic group justifiable (in the field), recorded in field data forms, and then released back into the habitat from which they were collected.

RESULTS

All five seasonally inundated basins (VP1, VP2, VP3, WS1, and SW1) occurring on site were sampled using wet-season survey techniques for the presence of large branchiopods (Exhibit A). No evidence of large branchiopods (i.e., active adults or *Lepidurus* sp. carapaces) was observed within the basins sampled.

Representative photographs of the basins occurring on site are found in Appendix A.

LITERATURE CITED

Eriksen, C. H., and D. Belk. 1999. Fairy shrimps of California's puddles, pools, and playas. Mad River Press, Inc. Eureka, CA. 196 pp.

Helm, B. P. 1999. Feeding ecology of *Linderiella occidentalis* (Dodds) (Crustacea: Anostraca). Doctoral thesis. University of California, Davis. 158 pp.

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APPENDIX A. REPRESENTATIVE PHOTOGRAPHS

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Photograph of VP2.

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Photograph of a California Kingsnake (*Lampropeltis getulus californiae*).

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Supplemental Federally-Listed Large Branchiopod Sampling at the Portico Place Property

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July 2007

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SUPPLEMENTAL FEDERALLY-LISTED LARGE BRANCHIOPOD SAMPLING AT THE PORTICO PLACE PROPERTY

INTRODUCTION

Helm Biological Consulting was contracted by Baker-Williams Engineering Group to conduct dry and wet-season sampling for large branchiopods (fairy shrimp, tadpole shrimp, and clam shrimp) that are listed as threatened or endangered under the federal Endangered Species Act (e.g., vernal pool fairy shrimp [*Branchinecta lynchi*] and vernal pool tadpole shrimp [*Lepidurus packardi*]) at the Portico Place Property.

The Portico Place Property consists of a 9.5-acre parcel located south of Gerber Road, north of Rogers Road, and west of Bradshaw Road in the Florin-Vineyard Community Plan Development Area of Sacramento County, California. Additionally, the Portico Place Property is located in the southeast ¼ of Section 8, Township 7 North, and Range 6 East of the Elk Grove 7.5-minute U.S. Geological Survey topographic quadrangle map (Latitude 038° 28' North; Longitude 121° 20' West; UTM Northing 4259522 and UTM Easting 100645256) (Figure 1).

Background

Helm Biological Consulting conducted dry- and wet-season sampling for federally-listed large branchiopods at the Portico Place Property in 2005. Subsequent to Helm Biological Consulting large branchiopod sampling, the U.S. Army Corp of Engineers (Corps) identified three additional vernal pools (VP4, VP5, and VP6) and a roadside ditch on site during a 2005 wetland delineation verification visit which are included on the Gibson & Skordal, LLC wetland map (Exhibit A).

This report supplements the 2005 dry- and wet-season reports and discusses the methods and results of the dry and wet-season sampling efforts during 2006/2007 for the presence of federally-listed large branchiopods for the additional wetlands added by the Corps at the Portico Place Property.

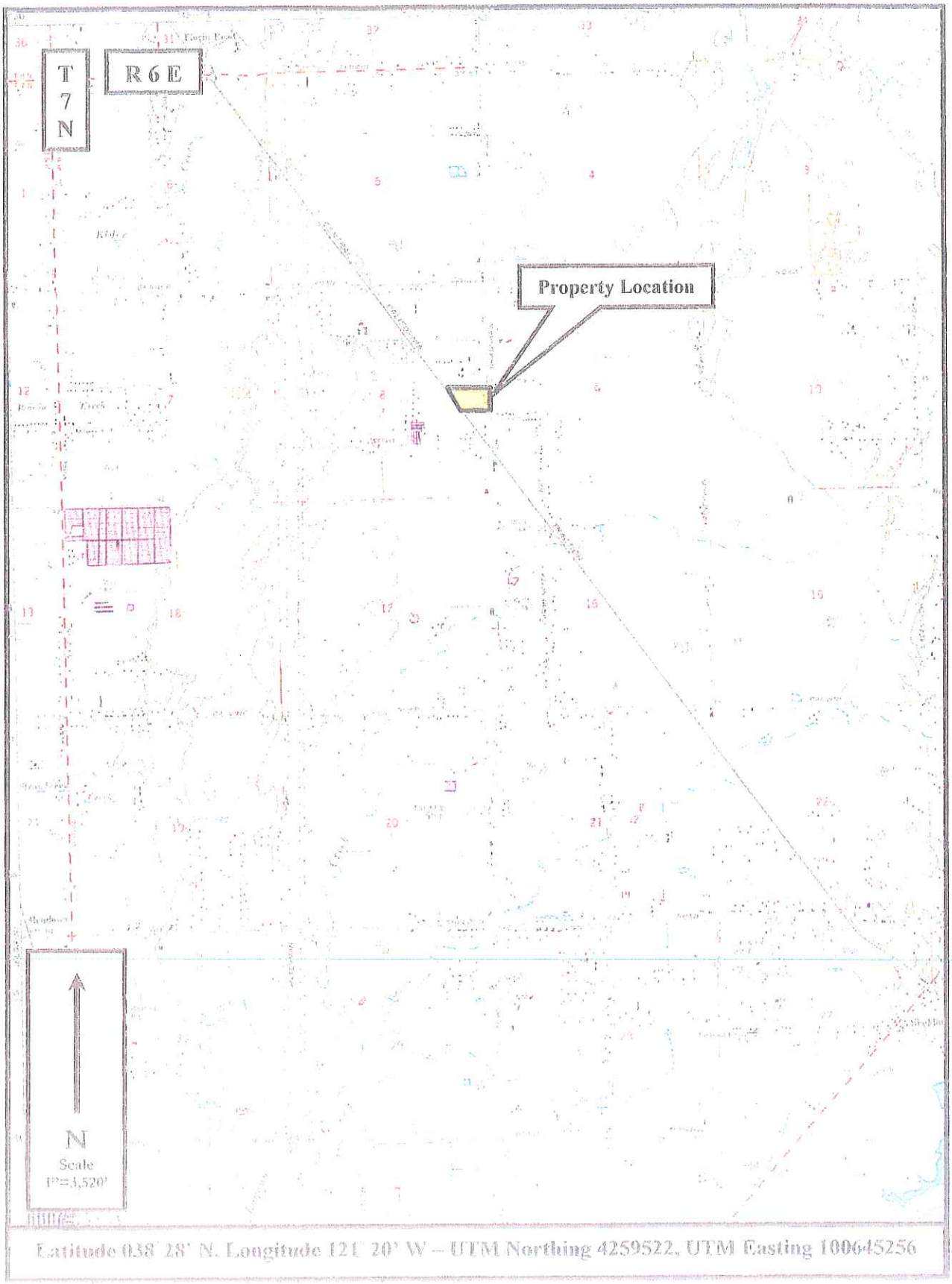
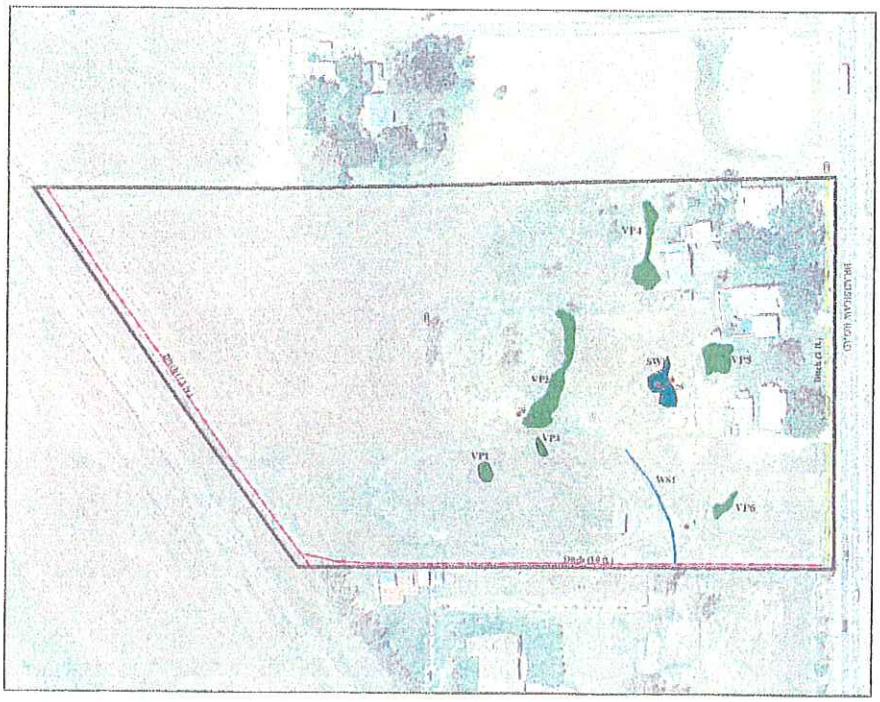


Figure 1. Portico Place Property Location
(Source: U.S. Geological Survey Florin 7.5 minute Quadrangle)

JURISDICTIONAL DELINEATION MAP
PORTICO PLACE PROPERTY
(Sacramento County, California)



Legend

- Vernal Pools-VP1-VP6 (0.15 Acre)
- Seasonal Wetland-SW1 (0.02 Acre)
- Wet Swale-WS1 (0.007 Acre)
- Jurisdictional Ditches (0.31a Acre)
- Roadside Ditch (Non-Jurisdictional)
- Data Points
- Study Area Boundary

N

0 50 100 200 Feet

GIBSON AND SKORDAL, LLC
ECOLOGICAL CONSULTANTS

Prepared: August 2004
Revised: April 2006
Base Map: Aerial Photography
Flown in May 2003

Exhibit A.

METHODS

Large Branchiopod surveys consisted of both dry-season and wet-season sampling. Survey methods generally followed the U.S. Fish and Wildlife Service's (USFWS) *Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods* (1996) and are described below.

Dry-Season Sampling

Sampling was conducted under permit TE-795930-4 of Section 10(a)(1)(A) of the federal Endangered Species Act, 16 U.S.C. 1531 *et. seq.*, and its implementing regulations.

All areas that potentially could support federally-listed large branchiopods were sampled. Potential habitat for federally-listed large branchiopods is defined as any seasonal inundated depression that on average ponds water 2.0 inches or greater in depth for 30 or more consecutive days. Potential habitat characteristics of large branchiopods are based on the life history of Central Valley endemics (Eriksen and Belk 1999; Helm 1998, 1999; Helm and Vollmar 2002). The presence of water marks, algae mats, driftlines, hydrophytic vegetation ("water-loving plants"), slope, contributing watershed, maximum potential ponding depth and aquatic arthropods (i.e., crustaceans and insects) exoskeletons were helpful indicators for evidence of ponding depth and duration. Habitats that swiftly flow water (e.g., creeks, streams, and ephemeral drainages) or semi-to-permanently inundated areas that support population of predators (e.g. bullfrogs, fish, and crayfish) were not generally considered suitable habitat for federally-listed large branchiopods.

Dry-season sampling involved the collection of a minimum of ten-soil sub-samples mainly from the lowest topographic areas within each basin on site considered potential large branchiopod habitat. Soil samples were placed in liter size plastic freezer bags and marked with the project name, basin number, and date. The soil was then transported to Helm Biological Consulting's laboratory for processing and analysis.

In the laboratory, a brine solution was prepared by mixing table salt (NaCl) with lukewarm tap water in a large container. The collected soil material was placed in the brine solution. The soil material was then gently worked by hand to breakdown any persistent soil structure. The organic material rising to the top of the brine solution was

skimmed off and placed in a 600-micron diameter pore-size sieve stacked atop a 75-micron diameter pore-size sieve. The soil material was processed through the top sieve by flushing it with lukewarm tap water while gently rubbing it with a soft-bristle brush. The soil retained from the 75-micron diameter pore size sieve was then removed and thinly (≈1.0 mm) spread into plastic petri dishes.

The contents of each petri dish were examined under a 10 to 252-power zoom binocular microscope. A minimum of 0.5-hour was spent searching the contents of each petri dish for large branchiopod cysts (embryonic eggs). Dr. Helm's large branchiopod cyst reference collection and scanning electron micrographs of cysts (Hill and Shepard 1998, Mura 1991, and Gilchrist 1978) were used to identify and compare any cysts observed within the soil samples.

Wet-Season Sampling

Dr. Brent Helm was assisted by Mr. Todd Wood. Sampling was conducted under permit TE-795930-4 of Section 10(a)(1)(A) of the federal Endangered Species Act, 16 U.S.C. 1531 *et. seq.*, and its implementing regulations.

Wet-season sampling entailed dip netting all potential habitats on site for active large branchiopods. Wet-season sampling was initiated when each basin ponded a minimum of one inch of water and continued at two-week intervals until the basins were dry or 120 continuous ponding days had occurred. Wet-season sampling was conducted on January 10, 2007; February 13 and 28, 2007; March 13 and 27, 2007; and April 11 and 28, 2007.

Information regarding invertebrate composition and relative abundance was derived from a semi-quantitative sample taken with a dip net. A dip net was lowered vertically into the deepest portion of the inundated basin (usually the center) and rested on the bottom. The 80-μm mesh size dip net was then moved forward in the direction of the longest axis of the basin for approximately one-meter. In instances where half of the basin length was less then one meter in length, the dip net was repositioned in the deepest portion of the basin and moved in the opposite direction for the remainder of the one-meter sample. Given the aperture of the dip net of 0.025 m^2 and distance the dip net was moved, roughly 0.025 m^3 or 25 liters of the water column was sampled horizontally each time. In those cases when the water column was shallower than the dip net aperture height, the volume of water per sweep was calculated by the horizontal distance the net was moved multiplied by the width of the dip net (25-cm) multiplied by the depth of water. After the completion of each sample sweep, the contents of the net were examined for aquatic

volume of water per sweep was calculated by the horizontal distance the net was moved multiplied by the width of the dip net (25-cm) multiplied by the depth of water. After the completion of each sample sweep, the contents of the net were examined for aquatic macroscopic invertebrates. All animals captured in the dip net were identified to the lowest justifiable taxon in the field, and recorded on standardized data sheets consisting of 28 taxonomic groups.

The relative numbers of individuals observed within each taxonomic group was recorded in one of five categories: rare (≤2 individuals), not common (3-10 individuals), common (11-50 individual), very common (51 -100 individuals), and abundant (>100 individuals). This method allows for the relative abundances and richness of aquatic invertebrates to be compared between and among wetlands through time. Additionally, this method allows for concentration estimates of invertebrates to be calculated as number of individuals per liter of water (= number of individuals/net aperture area x length of sweep).

If large branchiopods were not detected during the semi-quantified sampling method, additional strategically placed sweeps were made with the dip net. Additional taxonomic groups of aquatic invertebrates detected using this alternative method were noted as present by on an "X" on the standardized field data sheet. After the taxonomic identification and enumeration were completed, the contents of the dip net were placed back into the basin from which they were collected.

In addition, the maximum and average ponding depth of each basin sampled was collected during each field visit.

RESULTS

Dry-Season Sampling

Four basins (VP4, VP5, VP6, and a roadside ditch) identified by the Corps and subsequently mapped by Gibson and Skordal, LLC were sampled using dry-season techniques (Exhibit A). Visual examinations of the soils collected from the basins on site did not reveal evidence of large branchiopods (e.g., cysts or tadpole shrimp carapaces) (Table 1).

Table 1. Results of Soil Examinations

Basin No.	Insect Exo-Skeletons	Micro-Turbularian Cysts	Hydracarina Live/Eggs	Nematoda
VP4	X	X	X	
VP5	X	X		X
VP6	X		X	
*Ditch	X		X	X

*not considered large branchiopod habitat (i.e., ponding duration and depth are not sufficient for listed large branchiopods to complete their life cycle)

Wet-Season Sampling

The three vernal pools (VP4, VP5, and VP6) identified by the Corps and subsequently mapped by Gibson and Skordal, LLC. had sufficient ponding to be sampled using wet-season techniques (Exhibit A). However, no evidence of federally-listed large branchiopods (i.e., active adult fairy shrimp or tadpole shrimp, or carapaces of tadpole shrimp) was observed in the basins sampled during the 2006/2007 wet-season. Appendix A contains the field data sheets from the wet-season sampling visits.

Representative photographs of the basin on site are found in Appendix B.

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Eriksen, C. H., and D. Belk. 1999. Fairy shrimps of California's puddles, pools, and playas. Mad River Press, Inc. Eureka, CA. 196 pp.

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U. S. Fish and Wildlife Service. 1996. Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods. 11 pp.

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APPENDIX A. FIELD DATA SHEETS

Project: Portico Place
All Basins Not Ponded

Date: 1/10/07 | Surveyor(s): Helm/Wood | Weather Cond: ≈60° F | Time: 1600

Project: Portico Place

Date: 2/13/07 | Surveyor(s): Helm/Wood | Weather Cond: ≈55° F, 40% cloud cover | Time: 1600

Hydrology:
D = dry, NP = not ponding, M=moist, S = saturated to surface, IP = intermittent ponding, X = Present but not observed in 1 meter sample

Abundance:
R = Rare (≤2 individuals), NC = Not Common (3-10 individuals), C = Common (11-50 individuals), VC = Very Common (51-100 individuals), A = Abundant (>100 individuals)

Pool	Depth (inches)		Crustacea										Insecta												Mollusca			Turbellaria	Acari	Collembola	Other	Herps		Comments
				Copepods			Large Branchiopods						Coleoptera			Hemiptera			Odanota		Diptera													
No	Max	Ave	Ostracoda	Calanoida	Cyclopoda	Cladocera	LIOC	BRLY	BRME	LEPA	LYBR	CYCA	Dytiscidae	Hydrophilidae	Haliplidae	Notonectidae	Corixidae	Ephemeroptera	Zygoptera	Anisoptera	Culicidae	Chironomidae	Trichoptera	Lymnaeidae	Physidae	Planorbidae	Micro-turbularian	Hydracarini		Other Inverte	Pseud-acris	Other	
VP4	4	3																				R												
VP5	4	2																																
VP6	1	1																																
ditch	NP																																	

Project: Portico Place

Date: 2/28/07 | Surveyor(s): Helm/Wood | Weather Cond: ≈55° F, 75% cloud cover | Time: 1600

Hydrology:
D = dry, NP = not ponding, M=moist, S = saturated to surface, IP = intermittent ponding, X = Present but not observed in 1 meter sample

Abundance:
R = Rare (≤2 individuals), NC = Not Common (3-10 individuals), C = Common (11-50 individuals), VC = Very Common (51-100 individuals), A = Abundant (>100 individuals)

Pool	Depth (inches)		Crustacea										Insecta												Mollusca			Turbellaria	Acari	Collembola	Other	Herps		Comments
				Copepods			Large Branchiopods						Coleoptera			Hemiptera			Odanota		Diptera													
No	Max	Ave	Ostracoda	Calanoida	Cyclopoda	Cladocera	LIOC	BRLY	BRME	LEPA	LYBR	CYCA	Dytiscidae	Hydrophilidae	Haliplidae	Notonectidae	Corixidae	Ephemeroptera	Zygoptera	Anisoptera	Culicidae	Chironomidae	Trichoptera	Lymnaeidae	Physidae	Planorbidae	Micro-turbularian	Hydracarini		Other Inverte	Pseud-acris	Other	
VP4	5	1																																
VP5	4	2																																Observed ATV and rider in vernal pool
VP6	5	3											R																R					
ditch	NP																																	

Project: Portico Place

Date: 3/13/07 | Surveyor(s): Helm/Wood | Weather Cond: ≈80° F, clear | Time: 1630

Hydrology:
D = dry, NP = not ponding, M=moist, S = saturated to surface, IP = intermittent ponding, X = Present but not observed in 1 meter sample

Abundance:
R = Rare (≤2 individuals), NC = Not Common (3-10 individuals), C = Common (11-50 individuals), VC = Very Common (51-100 individuals), A = Abundant (>100 individuals)

Pool	Depth (inches)		Crustacea										Insecta												Mollusca			Turbellaria	Acari	Collembola	Other	Herps		Comments
				Copepods			Large Branchiopods						Coleoptera			Hemiptera			Odanota		Diptera													
No	Max	Ave	Ostracoda	Calanoida	Cyclopoda	Cladocera	LIOC	BRLY	BRME	LEPA	LYBR	CYCA	Dytiscidae	Hydrophilidae	Haliplidae	Notonectidae	Corixidae	Ephemeroptera	Zygoptera	Anisoptera	Culicidae	Chironomidae	Trichoptera	Lymnaeidae	Physidae	Planorbidae	Micro-turbularian	Hydracarini		Other Inverte	Pseud-acris	Other	
VP4	S																																	
VP5	S																																	
VP6	NP																																	
ditch	NP																																	

Project: Portico Place
All Basins Not Ponded

Date: 3/27/07 | Surveyor(s): Helm/Wood | Weather Cond: ≈60° F | Time: 1600

Project: Portico Place
All Basins Not Ponded

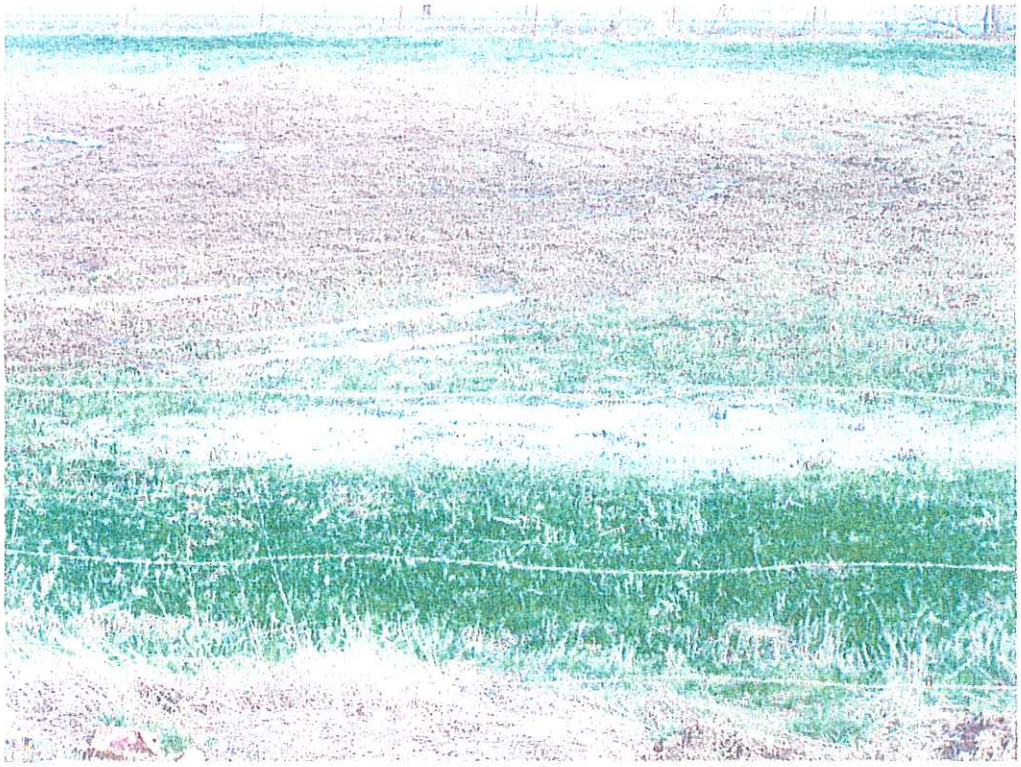
Date: 4/11/07 | Surveyor(s): Helm/Wood | Weather Cond: ≈65° F | Time: 1600

Project: Portico Place
All Basins Not Ponded

Date: 4/20/07 | Surveyor(s): Helm/Wood | Weather Cond: ≈90° F | Time: 1600

HELM
BIOLOGICAL CONSULTING
2273 Nolen Drive, Lincoln, CA 95648

APPENDIX B. REPRESENTATIVE PHOTOGRAPHS



Potico Place Property – VP6 (Note: heavy vehicle use within vernal pool)

Potico Place Property –VP5

Potico Place Property – VP4

Potico Place Property – VP6

Potico Place Property – VP5

Portico Place
04-0205

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

REPLY TO
ATTENTION OF

September 1, 2006

RECEIVED
AUG 28 2007
DEPARTMENT OF ENVIRONMENTAL
REVIEW AND ASSESSMENT

Regulatory Branch (200400652)

Anthony Scotch
Baker - Williams Engineering Group
6020 Rutland Drive, Suite 19
Carmichael, California 95608-0515

Dear Mr. Scotch:

We are responding to your consultant's request for an approved jurisdictional determination for the Portico Place site. This approximately 9.5-acre site is located on Bradshaw Road, south of Gerber Road, in Section 8, Township 7 North, Range 6 East, MDB&M, Latitude 38° 28′ 25.5″, Longitude 121° 20′ 6.44″, Sacramento County, California.

Based on available information, we concur with the estimate of waters of the United States, as depicted on the **revised April 2006, Jurisdictional Delineation Map, Portico Place Property** drawing prepared by **Gibson and Skordal, LLC**. Approximately **0.495** acres of waters of the United States, including wetlands, are present within the survey area. These waters are regulated under Section 404 of the Clean Water Act, in accordance with 33 CFR part 328.3(a)(7), since the **wetlands are adjacent to the drainage ditch which connects with another drainage ditch that flows into Gerber Creek. Gerber Creek is tributary to the Sacramento River, a navigable water of the United States, via Morrison Creek**.

This verification is valid for five years from the date of this letter, unless new information warrants revision of the determination before the expiration date. This letter contains an approved jurisdictional determination for your subject site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the South Pacific Division Office at the following address: Doug Pomeroy, Administrative Appeal Review Officer, Army Corps of Engineers, South Pacific Division, CESPD-PDS-O, 333 Market Street, Room 923, San Francisco, California 94105-2195, Telephone: 415-977-8035 FAX: 415-977-8129

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within 60 days of the NAP. Should you decide to

submit an RFA form, it must be received at the above address by October 30, 2006. It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this letter.

You should provide a copy of this letter and notice to all other affected parties, including any individual who has an identifiable and substantial legal interest in the property.

This determination has been conducted to identify the limits of Corps of Engineers' Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

Please refer to identification number 200400652 in any correspondence concerning this project. If you have any questions, please contact Mr. David Leput at our Sacramento Office, 1325 J Street, Room 1480, Sacramento, California 95814-2922, email *david.w.leput@usace.army.mil*, or telephone 916-557-5327. You may also use our website: *www.spk.usace.army.mil/regulatory.html*.

Sincerely,

ORIGINAL SIGNED
Mr. Will Ness
Chief, Sacramento Office

Enclosure(s)

Copy furnished with enclosure(s):

James C. Gibson, Gibson and Skordal, LLC Wetland Consultants, 2277 Fair Oaks Boulevard, Suite 105, Sacramento, California 95825-0599
William Marshall, Storm Water and Water Quality Certification Unit, Central Valley Regional Water Quality Control Board, 11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114
U.S. Fish and Wildlife Service, Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, California 95825-3901
Vincent King, Planner I, Planning and Community Development Department, County of Sacramento, 827 7th Street, Room 230, Sacramento, California 95814-2406

Page: 1

12/11/2008 4:27:25 PM

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: P:\2004\04-0206 Lelani Village\Env Docs\technical background info\Lelani.urb924

Project Name: Lelani

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2007 TOTALS (lbs/day unmitigated)	8.93	60.97	34.40	0.01	196.03	3.84	199.87	40.94	3.53	44.48	4,905.88
2008 TOTALS (lbs/day unmitigated)	158.26	77.67	57.49	0.02	196.08	5.06	201.14	40.96	4.65	45.61	7,756.58

WETLAND DELINEATION

FOR

LELANI VILLAGE

(SACRAMENTO COUNTY, CALIFORNIA)

August 18, 2004

RECEIVED
JUL 24 2007
DEPARTMENT OF ENVIRONMENTAL
REVIEW AND ASSESSMENT

Prepared for:
Stumbos and Company Real Estate

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

CONTENTS

WETLAND DELINEATION

LELANI VILLAGE

INTRODUCTION 1
SURVEY METHODOLOGY 1
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WATERS OF THE U.S. 5
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Figure 2 – NRCS Soil Types
Figure 3 – Wetland Delineation

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Appendix A – Wetland Delineation Data Sheets
Appendix B – Plant List
Appendix C – Wetland Delineation Map
Appendix D – Wetland Delineation in Shape-File Format (CD)

INTRODUCTION

At the request of Stumbos and Company Real Estate, we have conducted a wetland delineation of the 10-acre Lelani Village site located in Sacramento County, California. The subject property is located northwest of the Gerber Road and Elk Grove-Florin Road intersection (Figure 1 – *Project Site and Vicinity Map*). Undeveloped pastureland, rural residences, and a golf course surround the subject property. The site corresponds to a portion of section 1,Township 7 North, and Range 7 East of the "Elk Grove, California" 7.5-minute quadrangle (U.S. Department of the Interior, Geological Survey, photorevised 1979). The site is located at approximately 38° 29′ 15″ north and 121° 22′ 20″ west.

APPLICANT:

Attn: Mr. Mike Stumbos
Stumbos and Company Real Estate
2251 Fair Oaks Blvd., Suite 300
Sacramento, California 95825
Phone: (916) 646-1400
Fax: (916) 646-1601

AGENT:

Attn: Mr. Keith Kwan
ECORP Consulting, Inc.
2260 Douglas Blvd., Suite 160
Roseville, California 95661
Phone: (916) 782-9100
Fax: (916) 782-9134

SURVEY METHODOLOGY

The wetland delineation was conducted in June 3, 2004, during which time ECORP biologist Keith Kwan walked and inspected the entire site to determine the extent of potential waters of the U.S.

This wetland delineation was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and prepared in accordance with the *Minimum Standards for Acceptance of Preliminary Wetland Delineations* (U.S. Army Corps of Engineers 2001). According to these methods, wetlands are defined by a combination of hydric soil, hydrophytic vegetation, and hydrologic criteria. Plant species were identified to assess whether the hydrophytic vegetation criterion was met. In addition to the vegetation, obvious

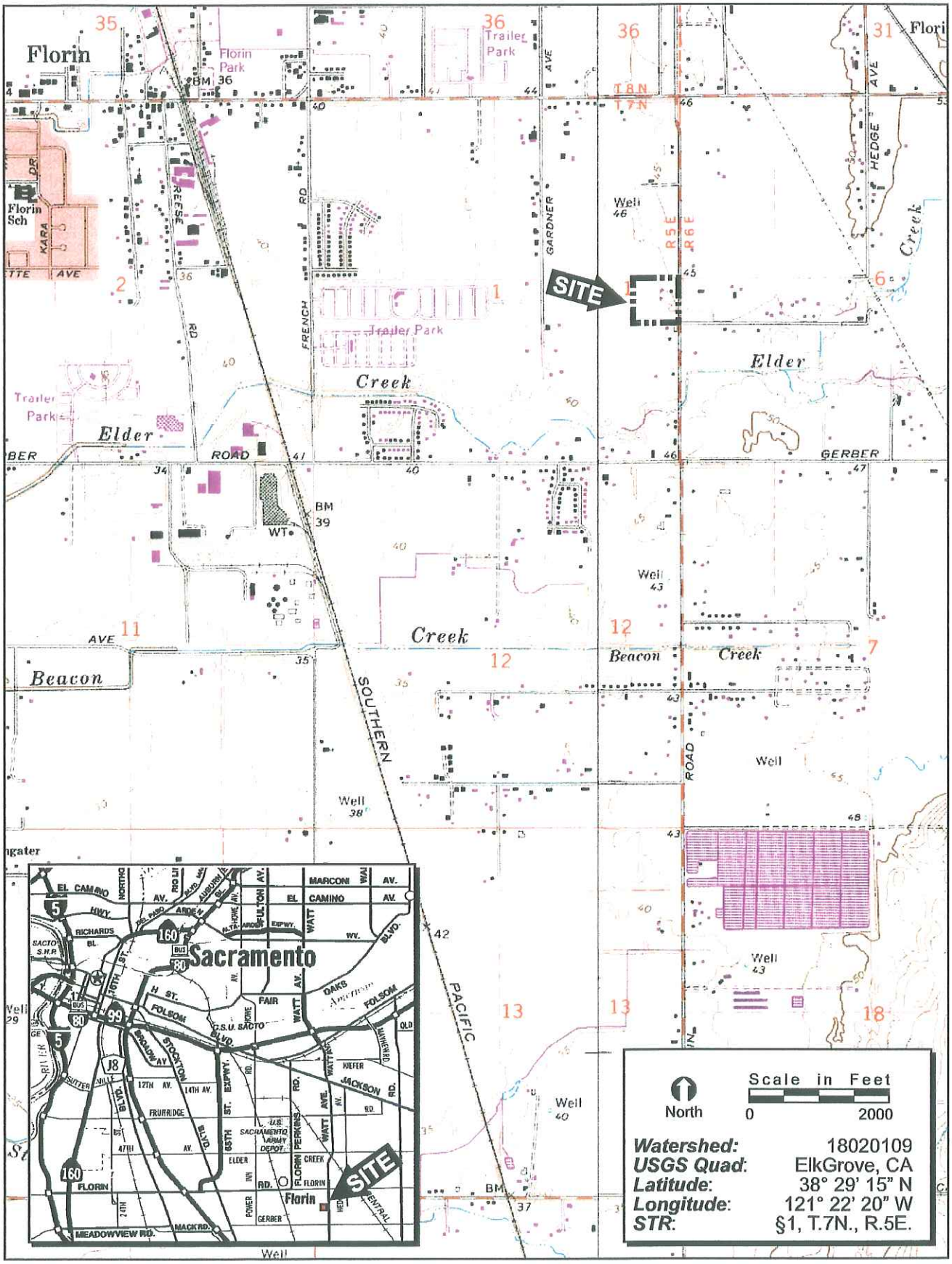

FIGURE 1. Project Site and Vicinity Map

2004-134 Lelani Village

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS
©2004

indicators of wetland hydrology were recorded. These indicators included inundation, soil saturation, oxidized root channels, etc. Soil pits were dug to approximately 16 inches, or until refusal, and the soil examined for hydric soil indicators. Typical hydric soil indicators include mottles (spots of contrasting color), gleying (bluish or greenish coloration), or dark gray coloration (chroma of 1 or less in un-mottled soils, 2 or less in mottled soils).

A color aerial photograph (scale: 1"=200;' photo date: November 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. Wetland boundaries were assessed through data point collection, review of aerial photographs, and visual inspection. Wetland boundaries that could not easily be interpreted from aerial photography were walked using a Trimble™ GPS Pathfinder Pro XR receiver with a TSCe data collector to comply with the sub-meter accuracy requirement. Each data point coordinate location is depicted on the wetland delineation map.

This field survey was conducted during the dry season, and all ephemeral features were dry. Most plants on-site have flowered and set seed.

EXISTING SITE CONDITIONS

The survey area is comprised of leveled to semi-flat terrain, and is situated at an elevation of approximately 45 feet above mean sea level. According to the *Soil Survey of Sacramento Count, California* (U.S. Department of Agriculture, Soil Conservation Service 1993), two soil units have been mapped for the site (Figure 2 – *NRCS Soil Types*). These are: (213) San Joaquin silt loam, leveled, 0 to 1 percent slopes and (216) San Joaquin-Durixeralfs complex, 0 to 1 percent slopes. Neither has been listed as a hydric soil (U.S. Department of Agriculture, Soil Conservation Service 1987), but (216) contains hydric inclusions (Galt series) in depressions.

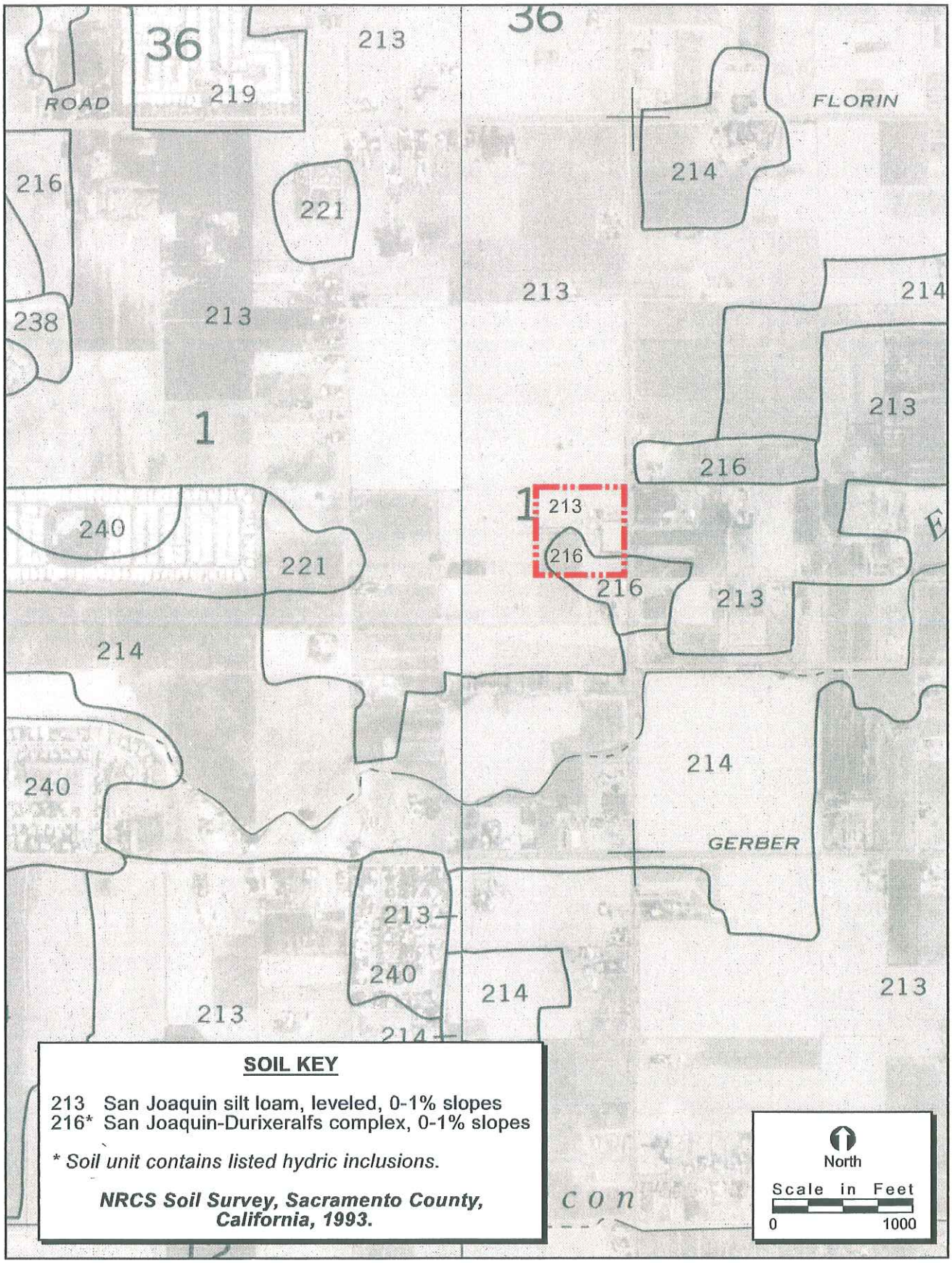

FIGURE 2. NRCS Soil Types

2004-134 Lelani Village

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Most of the site has been planted in strawberries. The strawberry fields are planted in rows and periodically irrigated. A gravel-surfaced parking area and small building are located along Elk Grove-Florin Road. An uncultivated area of annual grassland is situated along the southern boundary of the site. The ruderal grassland was comprised of non-native weedy species such as soft brome (*Bromus hordeaceus*), ryegrass (*Lolium multiflorum*), wild oats (*Avena fatua*), vetch (*Vicia* spp.), and barley (*Hordeum murinum*).

WATERS OF THE U.S.

Potentially jurisdictional waters of the U.S. mapped include one seasonal wetland (0.035 acre) (Figure 3, Appendix C (map), Appendix D (compact disk shape-file format). The small seasonal wetland area is situated within the ruderal grassland area. This wetland is the topographically low area that receives the runoff from the strawberry fields; it exhibits wetland hydrology, hydrophytic vegetation, and/or hydric soil. The vegetative composition of the seasonal wetland on-site is primarily comprised of non-native wetland generalist plants. These include ryegrass, Mediterranean barley (*Hordeum marinum*), and curly dock (*Rumex crispus*). Three parameter wetland delineation data sheets have been included as Appendix A, and a list of plant species observed at the data collection points is included as Appendix B.

INTERSTATE OR FOREIGN COMMERCE CONNECTION

The wetland mapped on-site is tributary to Elder Creek via upland area sheet flow in the roadside ditch along Elk Grove-Florin Road. Elder Creek is tributary to Morrison Creek and ultimately to the Sacramento River, which is a documented navigable water. This site is situated within the Lower Sacramento watershed, 18020109 (California Unified Watershed Assessment, February 2000). Thus, this feature 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.

CLASSIFICATION	EXISTING ACREAGE
Seasonal Wetland	0.035
TOTAL:	0.035

N

SCALE IN FEET

0 50 100

SCALE: 1" = 100'

FILENAME: -DWGS\2004-134\lelani-wd.DWG 07/01/04

FIGURE 3. Wetland Delineation

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

CONCLUSION

Potentially jurisdictional waters of the U.S. mapped include one seasonal wetland, which totals 0.035 acres. Upon verification by the Army Corps of Engineers, any impact to this feature would require permitting pursuant to Section 401 and 404 of the Clean Water Act. If the Corps of Engineers considers this wetland to be potential habitat for federally listed species (i.e., vernal pool fairy and tadpole shrimp (*Branchinecta lynchi* and *Lepidurus packardi*, respectively)), they would initiate Section 7 consultation pursuant to the Endangered Species Act.

REFERENCES

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. U. S. Army Engineer Waterways Experiment Station. Vicksburg, Mississippi.

Hickman, James C. *ed.* 1993. The Jepson Manual, Higher Plants of California, University of California Press, Berkeley, California.

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U.S. Army Corps of Engineers. 2001. Minimum Standards for Acceptance of Preliminary Wetland Delineations. Dated November 30, 2001.

U.S. Department of Agriculture, Soil Conservation Service. 1987. Hydric Soils of the United States. U.S. Department of Agriculture, Soil Conservation Service. Washington, D.C.

U.S. Department of Agriculture, Soil Conservation Service. 1993. Soil Survey of Sacramento County, California. U.S. Department of Agriculture, Soil Conservation Service. Davis, California.

U.S. Department of the Interior, Geological Survey. 1979 (photorevised). "Elk Grove, CA" 7.5-minute Quadrangle. Geological Survey. Denver, Colorado.

LIST OF APPENDICES

Appendix A – Wetland Delineation Data Sheets

Appendix B – Plant List

Appendix C – Wetland Delineation Map

Appendix D – Wetland Delineation in Shape-File Format (CD)

APPENDIX A

Wetland Delineation Data Sheets

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

ROUTINE WETLAND DELINEATION

Project/Site: Leilani Village Date: 6/3/04 Sample Point: 01

Applicant/Owner: Stumbos & Company Field Investigator(s): K. Kwan

County: Sacramento State: CA Plant Community: Annual Grassland

Quad(s): Elk Grove, CA Section/Township/Range: T. 7 North, R. 5 East, sec. 1

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)	Brohor	FacU	herb	37	5)				
2)	Lolmul	Fac	herb	21	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 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 1° or 2° hydrologic indicators observed

SOILS

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: 213 San Joaquin silt loam, leveled, 0-1% slopes Drainage Class: mod. well drained

Taxonomy [Subgroup]: thermic Abruptic Durixeralfs Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sufidic 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
0-5	10YR 4/3	—			

Comments: _____

* DECISION *

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: all criteria have not been met

General comments: edge of strawberry field

Wetland Type: _____

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HERBACEOUS COVER / DOMINANCE WORK SHEET

Species Observed	Actual Cover	Relative Cover
Bro hor	35	37
Lol mul	20	21
Gou arv	10	11
Ave fat	15	16
Leo tar	5	5
Bro dia	10	11
TOTAL SUM (Σ) =	95	100%

COVER:	
Vegetation	90
Bare Ground	
Rocks	
Other	
TOTAL =	*100%*

Species (Descending Order)	Relative Cover	Cumulative Cover	Indicator Status	Dominants
TOTAL SUM (Σ) =	100%			

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ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

ROUTINE WETLAND DELINEATION

Project/Site: Leilani Village Date: 6/3/04 Sample Point: 02

Applicant/Owner: Stumbos & Company Field Investigator(s): K. Kwan

County: Sacramento State: CA Plant Community: Annual Grassland

Quad(s): Elk Grove, CA Section/Township/Range: T. 7 North, R. 5 East, sec 1

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 inundation

VEGETATION

HYDROPHYTIC VEGETATION? Yes ☒ No ☐

	Dominant Species	Ind. Status	Stratum	Rel. % Cover		Dominant Species	Ind. Status	Stratum	Rel. % Cover
1)	Lythrys	FACW	herb	20	5)				
2)	Hormar	FAC	herb	17	6)				
3)	Lolmul	FAC	herb	17	7)				
4)	Comarv	N/L	herb	17	8)				

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 3/4 = 75 %

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: wetland ditch that drains the strawberry fields

SOILS

HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: 216 San Joaquin - Durixeralfs complex, 0-1% slopes Drainage Class: mod. well drained

Taxonomy [Subgroup]: thermic Abruptic Durixeralfs - Durixeralfs Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sufidic 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]: Galt (depressions) On Hydric Soils List: Yes ☒ No ☐

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
0-5	10YR 4/3	—			

Comments:

* DECISION *

WETLAND / WATERS DETERMINATION? Yes ☒ No ☐

Rationale: dominance of hydrophytes & strong hydrologic indicators override the absence of hydric soil colo

General comments: hydric soil inclusion (Galt series)

Wetland Type: Seasonal wetland

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HERBACEOUS COVER / DOMINANCE WORK SHEET

Species Observed	Actual Cover	Relative Cover
Lythys	6	20
Polmon	4	13
Hor mar	5	17
Lol mul	5	17
Pla sti	3	10
Con arv	5	17
Jun buf	2	7
TOTAL SUM (Σ) =	30	100%

COVER:

Vegetation	15
Bare Ground	
Rocks	
Other	
TOTAL =	*100%*

Species (Descending Order)	Relative Cover	Cumulative Cover	Indicator Status	Dominants
TOTAL SUM (Σ) =	100%			

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ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

ROUTINE WETLAND DELINEATION

Project/Site: Leilani Village Date: 6/3/04 Sample Point: 03

Applicant/Owner: Stumbos & Company Field Investigator(s): K. Kwan

County: Sacramento State: CA Plant Community: Annual Grassland

Quad(s): Elk Grove, CA Section/Township/Range: T. 7 North, R. 7 East, Sec 1

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) Bro hor	FacU	herb	53	5)			
2) Lol mul	Fac	herb	11	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 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 1° or 2° hydrologic indicators present

SOILS

HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: 216 San Joaquin - Durixeralfs complex, 0-1% slopes Drainage Class: mod. well drained

Taxonomy [Subgroup]: thermic Abruptic Durixeralfs - Durixeralfs Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sufidic 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]: Galt (depressions) On Hydric Soils List: Yes ☒ No ☐

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
0-5	10YR 4/3	—			

Comments: high chroma

* DECISION *

WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale: all criteria have not been met

General comments:

Wetland Type:

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HERBACEOUS COVER / DOMINANCE WORK SHEET

Species Observed	Actual Cover	Relative Cover
Bro hor	50	53
Lol mul	25	26
Con arv	10	11
Rum cri	tr	
Pha min	tr	
Hor mur	10	11
TOTAL SUM (Σ) =	95	100%

COVER:

Vegetation	90
Bare Ground	
Rocks	
Other	
TOTAL =	*100%*

Species (Descending Order)	Relative Cover	Cumulative Cover	Indicator Status	Dominants
TOTAL SUM (Σ) =	100%			

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APPENDIX B

Plant List

Lelani Village – Wetland Delineation
Plants Observed at Data Points

Abbr.	Scientific Name	Common Name	Indicator Status
AVE FAT	*Avena fatua*	Wild oat	N/L
BRO DIA	*Bromus diandrus*	Ripgut brome	N/L
BRO HOR	*Bromus hordeaceus*	Soft brome	FACU-
CON ARV	*Convolvulus arvensis*	Morning glory	N/L
HOR MAR	*Hordeum marinum*	Mediterranean barley	FAC
JUN BUF	*Juncus bufonius*	Toad rush	FACW+
LEO TAR	*Leontodon taraxacoides*	Hairy hawkbit	FACU
LOL MUL	*Lolium multiflorum*	Ryegrass	FAC*
LYT HYS	*Lythrum hyssopifolia*	Hyssop loosestrife	FACW
PHA MIN	*Phalaris minor*	Littleseed canary grass	N/L
PLA STI	*Plagiobothrys stipitatus*	Slender popcorn-flower	OBL
POL MON	*Polypogon monspeliensis*	Annual rabbit-foot grass	FACW+
RUM CRI	*Rumex crispus*	Curly dock	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.

Page: 1

12/23/2008 10:21:55 AM

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name:

Project Name: Florin Vineyards 04-0207

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2009 TOTALS (lbs/day unmitigated)	22.72	127.86	64.21	650.14	6.96	657.10	135.79	6.40	142.19	12,528.10
2010 TOTALS (lbs/day unmitigated)	1,632.08	159.14	187.58	650.70	8.90	659.60	135.99	8.16	144.15	27,792.89

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	44.97	10.73	33.66	0.10	0.10	13,318.30

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	63.16	62.34	758.70	92.47	17.90	58,145.36

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SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	108.13	73.07	792.36	92.57	18.00	71,463.66

Construction Emissons Mitigation Fee Calculation

PART 1: PROJECT INFORMATION

Project Name:	Florin Vineyards		
Control/Application #:	04-0207		
Single Family Dwelling Units:	656	*Note: Enter information only in blue bordered cells*	
Multi Family Dwelling Units:	94	Total Residential Acreage:	102
Non-residential Square Feet:	14000	Total Non-residential Acreage:	29

PART 2: EMISSIONS INFORMATION

Year	Activity Phase	NOx (lbs/day) unmitigated	NOx (lbs/day) mitigated*	NOx over threshold (lbs/day)	duration (days)	Total significant NOx (lbs)
	Demolition (on road)					
	Demolition (off road)		0.00			
	TOTAL Demolition		0.00	0	0	0.00
	Grading		0.00	0	0	0.00
	Building Construction	159.14	127.31	42.31	31	1311.67
	Building Construction	127.86	102.29	17.29	234	4045.39
	Building Construction		0.00	0	0	0.00
	Asphalt		0.00	0	0	0.00
	Total project Nox over threshold (lbs)		*5357.06*			
	Total project Nox over threshold (tons)		*2.68*			

PART 3: MITIGATION FEE RESULTS

*MITIGATION FEE ($14,300/TON)***	*$38,303*
ADMINISTRATIVE FEE (5.0%)	*$1,915*
TOTAL FEE	***$40,218***

>>> *Fee is to be paid to the SMAQMD, either in total or on a by acre basis, prior to any ground disturbance.*

Mitigation Fee ($/acre) **$292.39**

* Assumes a construction mitigation plan which achieves a 20% reduction in NOx from on-site, off-road equipment.

** Or the $/ton of NOx cost-effectiveness value in effect at the time the fee is collected.

REVISED JURISDICTIONAL DELINEATION AND SPECIAL STATUS SPECIES EVALUATION

KB FLORIN VINEYARDS PROPERTY

SACRAMENTO COUNTY, CALIFORNIA

RECEIVED
JUL 23 2007
DEPARTMENT OF ENVIRONMENTAL REVIEW AND ASSESSMENT

AUGUST 2004
REVISED OCTOBER 2006

Prepared For:

KB HOME
2420 Del Paso Road, Suite 200
Sacramento, California 95834

Prepared By:

GIBSON & SKORDAL,LLC
Wetland Consultants
2277 Fair Oaks Blvd., Suite 105
Sacramento, California 95825

INTRODUCTION

The purpose of this report is to present the results of a jurisdictional delineation and special status species evaluation conducted for the KB Florin Vineyards Property.

LOCATION

The study area is approximately 130 acres and located north of Florin Road and east and west of South Watt Avenue, Sacramento County, California. The study area lies within Sections 31 and 36, Township 8 North and Range 5 East. The coordinates for the center of the property are Latitude 38°, 29' and 56" North and Longitude 121°, 22', and 26" West. Figure 1 is a vicinity map showing the location of the study area.

METHODOLOGY

Field studies were conducted on May 16 and August 7, 2004 for the purpose of delineating existing waters including wetlands in the study area and evaluating special status species and their habitats.

Jurisdictional Delineation

The boundaries of wetlands, data points, and other site features were surveyed in the field by Gibson & Skordal, LLC utilizing a Trimble GPS data logger with sub-meter accuracy. The delineation map was prepared by layering the GPS field data over aerial photography flown in May of 2002 by the United States Geological Survey (USGS). Mr. Dave Leput field verified our delineation on March 29, 2006. All requested changes are incorporated into this report.

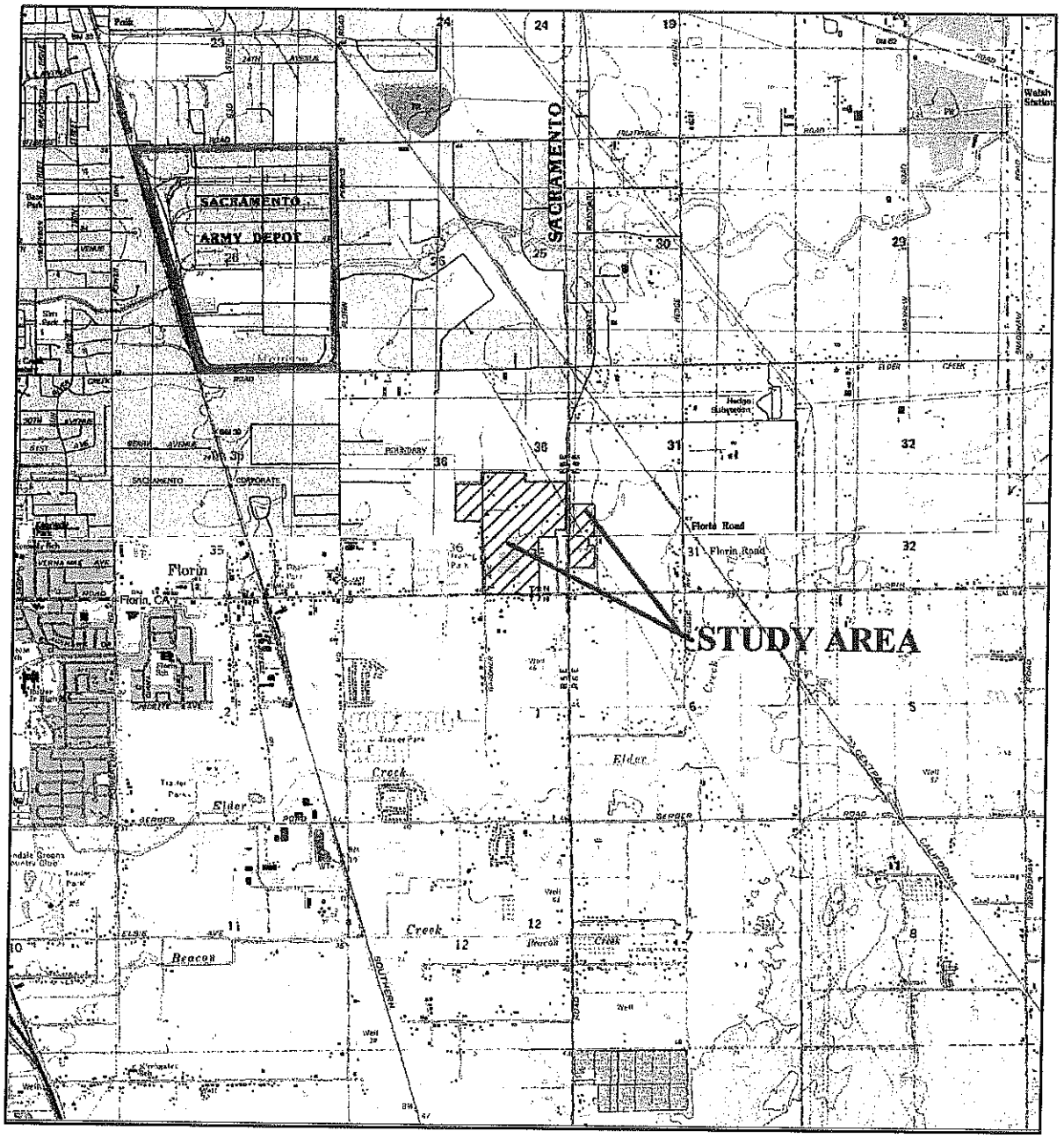
The **"Corps of Engineers Wetlands Delineation Manual"**[1] was used as the standard of determining whether specific areas are wetlands potentially subject to regulation under Section 404 of the Clean Water Act. Corps of Engineers' regulations (33 CFR 328) was used to determine the presence of waters of the United States other than wetlands. The **"National List of Plant Species That Occur in Wetlands: California (Region 0)"**[2] was used to determine the

[1] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station. Vicksburg, Miss.

[2] Reed, P.B. 1988. National List of Plant Species That Occur In Wetlands: California (Region 0). Biological Report 88(26.10). May 1988. National Ecology Research Center, National Wetlands Inventory, U.S. Fish & Wildlife Service, St. Petersburg, Florida.

FIGURE 1

VICINITY MAP



N

SOURCE: Elk Grove, Florin, Sacramento East and Carmichael, CA USGS 7.5 Minute Topographic Maps, N.T.S.

wetland indicator status of plants observed in the study area. The **"Soil Survey of Sacramento County, California"**[3] was used to evaluate soil mapping in the study area.

Detailed data on vegetation, soils, and hydrology characteristics was taken in the field. Data forms documenting the basis for determining which areas are wetland or upland are provided in Appendix A. The delineation map is included in Appendix B.

Special Status Species Evaluation

The special status species evaluation includes those species identified as having relative scarcity and/or declining populations by the United States Fish & Wildlife Service (FWS) or California Department of Fish & Game (CDFG). Special status species include those formally listed as threatened or endangered, those proposed for formal listing, candidates for Federal listing, and those considered to be Species of Concern by FWS or Species of Special Concern by CDFG. In addition to these, we also included those species considered to be "special animals" or "fully protected" by the CDFG and those plant species considered to be rare, threatened or endangered in California by the California Native Plant Society (CNPS).

In our evaluation, we considered those special status species documented by the California Natural Diversity Database (CNDDB) as occurring in the vicinity of the study area. A record search of the CNDDB was conducted for the Elk Grove, Florin, Carmichael, and Sloughhouse 7.5 Minute USGS quadrangles to identify all documented sightings of special status species in the vicinity of the study area. In addition to these species, we included other special status species that may have some potential for occurring in the study area based on historical range data and/or the presence of suitable habitat.

GENERAL SITE CONDITIONS AND HABITATS

The study area is approximately 130 acres in size. Approximately 110 acres are located west of Watt Avenue and approximately 20 acres are located east of Watt Avenue. The terrain is flat with elevation being approximately 45 feet. Surface water drains to the west though channelized ditches. These ditches are tributaries to Florin Creek which is a tributary of Morrison Creek. The land has been historically farmed but over half is currently fallow. The portions that are farmed include a small area of land in the western portion of the study area along Gardner Road currently used for vegetables, a small area in the northern portion of the study area managed for

[3] USDA, Soil Conservation Service. 1993. Soil Survey of Sacramento County, California.

irrigated pasture and an area that is dry-farmed hay in the southern portion of the study area. Portions of the land are disked each year for fire control. There are numerous rural residences within the study area.

The soil mapping unit within the study area is San Joaquin silt loam, leveled, 0 to 1 percent slopes. San Joaquin soils are classified as Durixeralfs. San Joaquin soils are not classified as hydric soils but they can have inclusions of hydric soils in depressions and along drainages.

The predominant plant community within the study area is non-native annual grassland. The most common species comprising the non-native annual grassland community are medusa head (*Taeniatherum caput-medusae*), ripgut grass *(Bromus diandrus*), soft chess (*Bromus mollis*), yellow star-thistle (*Centaurea solstitialis*) and wild oats (*Avena fatua*). Trees within the study area are largely limited to ornamental species associated with residences. There are two interior live oaks (*Quercus wislizenii*) and one fig (*Ficus sp.*) located away from residences in non-native annual grassland habitat in the southern portion of the study area. A partial list of plants observed in the study area is provided in Appendix C.

EXISTING WATERS/WETLANDS

A total of 2.1000 acres of jurisdictional wetlands/waters of the United States were delineated within the study area. Of this total, approximately 0.1270 acre is comprised of vernal pool, 0.9426 acre is comprised of seasonal wetlands, 0.813 acre is comprised of Florin Creek, and 0.2114 acre is comprised of a tributary ditch to Florin Creek. In addition, there is 0.0283 acre of non-jurisdictional seasonal wetlands and 0.1610 acre of non-jurisdictional ditches. The delineation map is included in Appendix B. Table 1 provides a breakdown of the delineated waters/wetlands.

Vernal pools are shallow depressions underlain by a hardpan that restricts the downward movement of water and act to perch groundwater near the surface during periods of precipitation. They typically flood after a series of storms in the late fall and early winter and normally dry out in the spring. We delineated one vernal pool within the study area. This vernal pool appears to have been created within a scraped area that may have been a road. The dominant vegetation within this vernal pool is purple hairgrass (*Deschampsia danthonioides*) and slender popcorn flower (*Plagiobothrys stipitatus micranthus*). Other associate species include creeping spikerush (*Eleocharis macrostachya*), perennial rye (*Lolium perenne*), Mediterranean barley (*Hordeum hystrix*), and hairy hawkbit (*Leontodon leysseri*).

TABLE 1

AREAS OF EXISTING WETLANDS IDENTIFIED ON THE KB FLORIN VINEYARDS PROPERTY

Vernal Pools:

Ref. #	Area (Sq.Ft.)
VP1	5,472
VP2	47
Total =	5,519 Sq. Ft. or 0.127 Acre

Seasonal Wetlands Jurisdictional:

Ref. #	Area (Sq.Ft.)	Ref. #	Area (Sq.Ft.)
SW1	3,931	SW27	37
SW2	174	SW28	764
SW4	3,833	SW29	1,039
SW5	523	SW30	73
SW6	1,917	SW31	1,624
SW7	1,374	SW32	1,391
SW8	1,686	SW33	331
SW10	1,574	SW34	91
SW11	40	SW35	105
SW12	505	SW36	1,839
SW13	2,851	SW37	2,338
SW15	734	SW38	3,117
SW16	30	SW39	291
SW17	72	SW40	149
SW18	41	SW41	1,507
SW19	222	SW42	274
SW20	113	SW43	92
SW21	461	SW44	202
SW22	120	SW45	341
SW23	211	SW46	107
SW24	940	SW47	2,038
SW25	731	SW48	908
SW26	114	SW49	206
			41,061 Sq. Ft. or 0.9426 Acre

TABLE 1 (Cont.)

Seasonal Wetlands Non-Jurisdictional:

Ref. #	Area (Sq.Ft.)
SW3	346
SW9	119
SW14	766
	1,231 Sq. Ft. or 0.0283 Acre

Ditch Jurisdictional:

9,210 Sq. Ft.
or 0.2114 Acre

Ditch Non-Jurisdictional:

7,015 Sq. Ft.
or 0.1610 Acre

Florin Creek:

Ref. #	Area (Sq.Ft.)
FC1	14,723
FC2	20,691
	35,414 Sq. Ft. or 0.813 Acre

Total Jurisdictional Waters/Wetlands = 2.1000 Acres
Total Non-jurisdictional Waters/Wetlands = 0.1893 Acre

Seasonal wetland depressions are similar to vernal pools in that they are shallow depressions that pond water in the winter and spring. Like vernal pools, they are underlain by a hardpan. They experience ponding during times of heavier precipitation. We differentiated between vernal pools and depressional seasonal wetlands based on their characteristic plant community. Whereas, vernal pools are dominated by native species endemic to vernal pools, seasonal wetlands are dominated by non-native grasses. The most common plants within these seasonal wetlands are perennial rye and Mediterranean barley. All of the seasonal wetlands have been substantially degraded by disking and plowing.

Florin Creek enters the property midway along its eastern boundary and flows west across the study area, and then north along the western border. Several lateral ditches connect with this ditch within the study area. The plant community within the delineated areas is sparse and generally characteristic of seasonal wetlands.

Corps of Engineers regulations (33 CFR Part 328) normally excludes irrigation and drainage ditches constructed in uplands from regulation under Section 404 of the Clean Water Act. Whether the ditches are jurisdictional depend on whether they were constructed totally in uplands. We reviewed the USGS topographic maps and the Sacramento County Soil Survey to assess whether they provide an indication of whether the ditches were constructed totally in uplands. Neither of these references provided any indication that the ditches were either excavated in wetlands or previously existing channelized natural drainage courses. We then consulted historic aerial photographs obtained from the Natural Resources Conservation Service. We obtain copies of aerial photographs taken in 1937, 1957, 1964, and 1972. These photographs are included in Appendix D.

The 1937 aerial photograph shows that the entire study area and surrounding lands had been leveled and converted to orchards and vineyards. The large irrigation/drainage ditch, as well as the lateral ditches, appears to be in place at their approximate current location. The 1957 aerial photograph shows that a majority of the orchards and vineyards were eliminated with the remainder of the land in grassland or irrigated pasture. That pattern of agricultural uses as well as the location and extent of irrigation/drainage ditches appears to remain approximately the same in subsequent aerial photographs to the present. Based on this, it is not possible to determine whether the irrigation/drainage ditches were constructed in wetlands or previously existing channelized watercourses.

While the delineated waters exhibit the requisite characteristics of waters of the United States, they must either be part of a surface tributary system to navigable waters or adjacent to waters

that are part of a surface tributary system in order to be classified as jurisdictional waters of the United States. As stated previously, surface drainage from the study areas flow west in an excavated drainage ditch. This ditch continues to flow west to Florin Creek. Florin Creek is a tributary of Morrison Creek which is a tributary to the Sacramento River, a navigable water of the United States. The Corps of Engineers made their final determination as to the jurisdiction of all features on the property.

SPECIAL STATUS SPECIES

Table 2 provides a list of special status species that were evaluated including their listing status, habitat associations, and whether potential habitats occur in the study area. Of the twenty-four special status species evaluated in Table 2, ten species including the bank swallow, Bogg's Lake hedge-hyssop, California tiger salamander, giant garter snake, Sacramento orcutt grass, slender orcutt grass, Swainson's hawk, valley elderberry longhorn beetle, vernal pool fairy shrimp, and vernal pool tadpole shrimp are Federal and/or State listed threatened and/or endangered species. The following is a detailed summary of special status species and their habitats as they relate to the study area.

Swainson's Hawk and Other Raptors

Swainson's hawk (*Buteo swainsoni*) is a raptor species currently listed as threatened in California by the CDFG. They typically nest in tall cottonwoods, valley oaks, or willows associated with riparian corridors with adjacent grassland, pasture, and/or cropland with a high density of rodents. The Central Valley population typically breeds and nests in late spring through early summer before migrating to Central America and South America for the fall and winter seasons.

The NDDB records lists several documented nest sites in the vicinity, the closest being approximately 4 miles away near the Wilton Road crossing of Deer Creek. Swainson's hawks have been shown to forage in grasslands up to 10 miles from their nesting sites. Given this, the pasture and grassland habitat in the study area provides potential foraging habitat for Swainson's hawk. Additionally, there is suitable foraging habitat present for a variety of other raptors including white-tailed kite, northern harrier, red-tailed hawk, sharp-shinned hawk, and Cooper's hawk. The larger trees in the study area provide suitable nesting habitat for white tailed kites, Swainson's hawk, sharp-shinned hawk, Cooper's hawk and red-tailed hawks.

TABLE 2

EVALUATION OF SPECIAL STATUS SPECIES HABITATS

	State Status	Federal Status	CNPS Listing	Habitat Association	Potential Habitat In Study Area
Birds					
Accipiter cooperi (Cooper's hawk)	Species of Special Concern	None		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes -suitable foraging & marginal nesting habitat
Accipiter striatus (sharp-shinned hawk)	Species of Special Concern	None		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes -suitable foraging & marginal nesting habitat
Agelaius tricolor (tricolored blackbird)	Species of Special Concern	Species of Concern		Colonial nester in cattails, bullrush, or blackberries associated with marsh habitats.	No
Athene cunicularia (burrowing owl)	Species of Special Concern	Species of Concern		Nests in abandoned ground squirrel burrows associated with open grassland habitats.	Yes -habitat present, but no owls observed on site.
Buteo swainsoni (Swainson's hawk)	Threatened	None		Nests in tall cottonwoods, valley oaks or willows. Forages in fields, cropland, irrigated pature, and grassland near large riparian corridors.	Yes -suitable foraging & nesting habitat
Circus cyaneus (northern harrier)	Species of Special Concern	None		Forages in open grasslands, nests on ground in shrubby vegetation.	Yes - foraging only
Elanus leucurus (white-tailed kite)	Fully Protected	None		Nests in riparian corridors along streams and rivers, and forages in nearby grasslands and fields.	Yes -suitable foraging & nesting habitat present
Riparia riparia (bank swallow)	Threatened	Species of Concern		Colonial nester in vertical cliffs and banks associated with riparian zones along streams, rivers, and lakes.	No
Amphibians & Reptiles					
Ambystoma trigrinum californiense (California tiger salamander)	Species of Special Concern	Threatened		Breeds in ponds or other deeply ponded wetlands, and uses gopher holes and ground squirrel burrows in adjacent grasslands for upland refugia/foraging.	Marginal breeding habitat present in vernal pool
Clemmys marmorata marmorata (northwestern pond turtle)	Species of Special Concern	Species of Concern		Ponds, rivers, streams, wetlands, and irrigation ditches with associated marsh habitat.	No
Scaphiopus hammondii (western spadefoot)	Species of Special Concern	Species of Concern		Breeds in vernal pools, seasonal wetlands and associated swales. Forages and hibernates in adjacent grasslands.	Yes
Thamnophis gigas (giant garter snake)	Threatened	Threatened		Rivers, canals, irrigation ditches, rice fields, and other aquatic habitats with slow moving water and heavy emergent vegetation.	No

TABLE 2

EVALUATION OF SPECIAL STATUS SPECIES HABITATS

Invertebrates					
Branchinecta lynchi (vernal pool fairy shrimp)	None	Threatened		Vernal pools and other seasonally ponded wetlands.	Yes -potential habitat in VP & SW's
Branchinecta mesovallensis (midvalley fairy shrimp)	None	None		Vernal pools and other seasonally ponded wetlands.	Yes -potential habitat in VP & SW's
Desmocerus californicus dimorphus (valley elderberry longhorn beetle)	None	Threatened		Dependent upon elderberry plant (Sambucus mexicana) as primary host species	No
Lepidurus packardi (vernal pool tadpole shrimp)	None	Endangered		Vernal pools and other deeply ponded seasonal wetlands.	Yes -marginal habitat in VP
Linderiella occidentalis (California linderiella)	None	None		Vernal pools and other seasonally ponded wetlands.	Yes -potential habitat in VP & SW's
Plants					
Downingia pusilla (dwarf downingia)	None	None	CNPS-2	Vernal pools	Yes -suitable habitat in VP
Gratiola heterosepala (Bogg's Lake hedge-hyssop)	Endangered	None	CNPS-1B	Vernal pools and margins of lakes/ponds	Yes -suitable habitat in VP
Juncus leiospermus var. ahartii (Ahart's dwarf rush)	None	Species of Concern	CNPS-1B	Vernal pools	Yes -suitable habitat in VP
Legenere limosa (legenere)	None	Species of Concern	CNPS-1B	Vernal pools	Yes -suitable habitat in VP
Orcuttia tenuis (slender orcutt grass)	Endangered	Threatened	CNPS-1B	Vernal pools	Yes-marginal habitat in VP.
Orcuttia viscida (Sacramento orcutt grass)	Endangered	Threatened	CNPS-1B	Vernal pools	Yes-marginal habitat in VP.
Sagittaria sanfordii (Sanford's arrowhead)	None	Species of Concern	CNPS-1B	Deep aquatic habitats associated with canals, drainages, and ditches.	No

Burrowing owl (*Athene cunicularia*) is a ground nesting raptor species afforded protection by CDFG as a species of special concern due to potentially declining populations in the Central Valley of California. They typically inhabit open grassland habitats where they nest in abandoned ground squirrel burrows and other nesting cavities associated with raised mounds, levees, or soft berm features. Although there is potential nesting and foraging habitat available for burrowing owls, we did not observe any potential nesting burrows or any indication of current burrowing owl activity at the site.

Tricolored Blackbird

Tricolored blackbirds (*Agelaius tricolor*) are afforded protection by CDFG as a species of special concern due to declining populations in the region. They are colonial nesters preferring to nest in dense stands of cattails and/or bullrush, but they also commonly nest in blackberry thickets associated with drainages, ditches, and canals. There have been a number of documented sightings of tricolored blackbird nesting colonies in the Florin and Elk Grove quadrangles, but the locations have been excluded from CNDDB records for protection purposes.

The absence of suitable nesting habitat in the study area would eliminate any reasonable potential for tricolored blackbirds to nest at the site.

California Tiger Salamander

The California tiger salamander (*Ambystoma trigrinum californiense*) is a Federally threatened species and a California Species of Special Concern that typically breeds in seasonal or permanent ponds. California tiger salamander (CTS) may also breed in deeper ponded vernal pools, seasonal wetlands and/or other seasonal pools within swales or channels. They typically spend a majority of their life cycle living below ground in ground squirrel burrows or pocket gopher burrows in grasslands situated adjacent to suitable breeding sites.

There is marginal breeding habitat in the delineated vernal pool. The lack of connectivity with other potential CTS breeding sites would greatly restrict if not eliminate any potential for CTS to utilize the site.

Giant Garter Snake

The giant garter snake is a Federal and State-listed threatened species. The habitat of giant garter snakes (GGS) is rivers, canals, drainage and irrigation ditches and other aquatic habitats with

slow moving water and emergent vegetation. The irrigation/drainage ditches within the study area do not experience ponded water during the summer under current conditions. As a result, they do not support the requisite habitat for GGS. There are no documented sightings of the GGS in the vicinity of the study area. There is one documented sighting within the Morrison Creek drainage basin. That sighting, made in 1965, is located at the downstream terminus of Morrison Creek, approximately 9.5 stream miles southwest of the study area. GGS have been observed at numerous locations in and along Laguna Creek, east of Highway 99, which is a separate drainage basin.

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (*Desmocerus californicus*) is a Federal threatened species that is dependent upon the elderberry plant (*Sambucus sp.*) as a primary host species. Elderberry shrubs are a common component of riparian areas throughout the Sacramento Valley region, and they have been documented as occurring at numerous locations in the vicinity of the study area.

Given the absence of elderberry shrubs in the study area, there is no potential for valley elderberry longhorn beetle to occur at the site.

Vernal Pool Branchiopods

Federally listed vernal pool branchiopods including the threatened vernal pool fairy shrimp (*Branchinecta lynchi*) and the endangered vernal pool tadpole shrimp (*Lepidurus packardi*) have been documented as occurring in Elk Grove and Florin USGS quadrangles. Other non-listed branchiopods known to occur in the region include California linderiella (*Linderiella occidentalis*) and midvalley fairy shrimp (*Branchinecta mesovallensis*).

The branchiopod species listed above are generally restricted to vernal pools and/or other seasonally ponded wetlands that sustain inundation during the winter before drying up in the late spring. The vernal pool and the seasonal wetlands in the study area provide potential habitat for special status branchiopods including the vernal pool fairy shrimp, mid-valley fairy shrimp, and California linderiella. The vernal pool in the study area provides potential habitat for the vernal pool tadpole shrimp.

Special Status Plants

Special status plant species identified on the CNDDB as occurring in the vicinity of the study area, or may potentially occur in the area, include Ahart's dwarf rush (*Juncus leiospermus ahartii*), dwarf downingia (*Downinia pusilla*), Bogg's Lake hedge-hyssop (*Gratiola heterosepala*), legenere (*Legenere limosa*), Sacramento orcutt grass (*Orcuttia viscida*), slender orcutt grass (*Orcuttia tenuis*), and Sanford's arrowhead (*Sagittaria sanfordii*).

Ahart's dwarf rush, dwarf downingia, legenere, Bogg's Lake hedge-hyssop, Sacramento orcutt grass, and slender orcutt grass are all strongly associated with vernal pool habitats. Bogg's Lake hedge-hyssop can also occur around the perimeter of lakes and ponds. Conversely, Sanford's arrowhead generally occurs in deep aquatic habitats associated with drainages, canals, and larger ditches that sustain inundation and/or slow moving water into early summer.

The vernal pool in the study provides potential habitat for Ahart's dwarf rush, Bogg's Lake hedge-hyssop, dwarf downingia, Sacramento orcutt grass, slender orcutt grass, and legenere. The drainage ditches in the study area do not support suitable long-term flows or ponding conditions typically associated with the establishment of Sanford's arrowhead populations. Moreover, we did not observe Sanford's arrowhead during our field surveys.

SUMMARY

We identified a total of 2.1000 acres of jurisdictional waters/wetlands in the study area including 0.1270 acre of vernal pool, 0.9426 acre of seasonal wetland, 0.813 acres of Florin Creek, and 0.2114 acre of ditch which is tributary to Florin Creek.

In regards to special status species and their habitats, a number of special status raptors including Swainson's hawk, sharp-shinned hawk, Cooper's hawk, white-tailed kite, northern harrier, and burrowing owls would have a reasonable potential for occurring in the study area based on the presence of suitable foraging and/or nesting habitat. In the event that future development of the site occurs during the raptor nesting season, we recommend that a raptor nesting survey be completed within two weeks of the start of project construction.

The vernal pool and seasonal wetlands in the study area provide potential habitat for special status branchiopods including vernal pool fairy shrimp, mid-valley fairy shrimp, California tadpole shrimp and California linderiella. At this time, protocol branchiopod surveys have not

been conducted for this site. The vernal pool may also provide potential habitat for California tiger salamander and special status plants including Ahart's dwarf rush, Bogg's Lake hedge-hyssop, dwarf downingia, and legenere.

Other Federally listed special status species including the giant garter snake, valley elderberry longhorn beetle, and Sanford's arrowhead would have little, if any, potential for occurring in the study area based on the absence of suitable habitat.

APPENDIX A

DATA FORMS

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Deane Florin Vineyards Applicant/Owner: Natomas Gardner Investment Grp Investigator(s): Tom Skordal & Jim Gibson	Date: 8/16/04 City/County: Sacramento County State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Excavated Ditch Transect ID: 1 Data Point ID: A

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Xanthium strumarium (D)	herb	FAC+	9.		
2. Lolium perenne (D)	"	FAC	10.		
3. Lythrum hyssopifolia	"	FACW	11.		
4. Hordeum hystrix	"	FAC	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ✓ Water Marks
- ✓ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: clear OHW line

Map Unit Name
(Series and Phase): San Joaquin Silt Loam, leveled, 0-1% slopes Drainage Class: Moderately well drained
Field Observations
Taxonomy (Subgroup): Abruptic Durixeralfs Confirm Mapped Type? Yes (No)

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
8"	10YR4/2	10YR4/4		loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ✓ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is this Data Point Within a Wetland?	(Yes)	No
Wetland Hydrology Present?	(Yes)	No			
Hydric Soils Present?	(Yes)	No			

Remarks:

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Deane Florin Vineyards Applicant/Owner: Natomas Gardner Investment Grp Investigator(s): Tom Skordal & Jim Gibson	Date: 5/16/04 City/County: Sacramento County State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Upland Transect ID: 1 Data Point ID: B

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus mollis (D)	herb	FACU	9.		
2. Avena fatua (D)	"	UPL	10.		
3. Hordeum leporinum (D)	"	UPL	11.		
4. Brica minor	"	FACW-	12.		
5. Erodium botrys	"	UPL	13.		
6. Geranium dissectum	"	UPL	14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: No hydrology indicators observed

Map Unit Name
(Series and Phase): San Joaquin Silt Loam, leveled, 0-1% slope

Drainage Class: Moderately well drained

Field Observations
Confirm Mapped Type? Yes (No)

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
5"	10YR3/4			Sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: No hydric soil indicators observed

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes (No)	Is this Data Point Within a Wetland? Yes (No)
Wetland Hydrology Present?	Yes (No)	
Hydric Soils Present?	Yes (No)	

Remarks:

Non-Wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Deane Florin Vineyards Applicant/Owner: Natomas Gardens Investment Grp Investigator(s): Tom Skordal & Jim Gibson	Date: 5/16/04 City/County: Sacramento County State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Upland Transect ID: Data Point ID: 2

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus mollis (D)	HERB	FACU	9.		
2. Bromus diandrus (D)	"	UPL	10.		
3. Convolvulus arvensis (D)	"	UPL	11.		
4. Hordeum leporinum	"	UPL	12.		
5. Erodium botrys	"	UPL	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks): ___ Streams, Lake, or Tide Gauge ___ Aerial Photographs ___ Other ___ No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: ___ Inundated ___ Saturated in Upper 12 inches ___ Water Marks ___ Drift Lines ___ Sediment Deposits/Organic Detritus ___ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ___ Oxidized Root Channels in Upper 12 inches ___ Water-Stained Leaves ___ Local Soil Survey Data ___ FAC-Neutral Test ___ Other (Explain in Remarks)
Field Observations: Depths of Surface Water: _____(in.) Depth to Free Water in Pit: _____(in.) Depth to Saturated Soil: _____(in.)	

Remarks: No hydrology indicators observed

Map Unit Name
(Series and Phase): San Joaquin Silt Loam, leveled, 0-1% slopes

Drainage Class: Moderately well drained

Field Observations
Confirm Mapped Type? Yes (No)

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
5"	10YR 3/4			Sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: No hydric soil indicators observed

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes (No)	Is this Data Point Within a Wetland? Yes (No)
Wetland Hydrology Present?	Yes (No)	
Hydric Soils Present?	Yes (No)	

Remarks:

Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Deane Florin Vineyards Applicant/Owner: Natomas Gardner Investment Grp Investigator(s): Tom Skordal & Jim Gibson	Date: 5/16/04 City/County: Sacramento County State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Vernal Pool Transect ID: 3 Data Point ID: A

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Deschampsia dantsioides (D)	herb	FACW	9.		
2. Plagiobothrys stipitatus (D)	"	OBL	10.		
3. Eleocharis macrostachya	"	OBL	11.		
4. Hordeum hystrix	"	FAC	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks): ___ Streams, Lake, or Tide Gauge ___ Aerial Photographs ___ Other ___ No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: ___ Inundated ___ Saturated in Upper 12 inches ___ Water Marks ___ Drift Lines ✓ Sediment Deposits/Organic Detritus ___ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ___ Oxidized Root Channels in Upper 12 inches ___ Water-Stained Leaves ___ Local Soil Survey Data ✓ FAC-Neutral Test ___ Other (Explain in Remarks)
Field Observations: Depths of Surface Water: _____(in.) Depth to Free Water in Pit: _____(in.) Depth to Saturated Soil: _____(in.)	

Remarks:

Map Unit Name
(Series and Phase): San Joaquin Silt Loam, leveled, 0-1% slopes

Drainage Class: Moderately well drained

Field Observations
Confirm Mapped Type? Yes (No)

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1"	10YR4/2	10YR4/6		Sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ✓ Aquic Moisture Regime
- ___ Reducing Conditions
- ✓ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is this Data Point Within a Wetland? (Yes) No
Wetland Hydrology Present?	(Yes)	No	
Hydric Soils Present?	(Yes)	No	

Remarks:

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Deane Florin Vineyards Applicant/Owner: Natomas Gardner Investment Grp Investigator(s): Tom Skordal & Jim Gibson	Date: 5/16/04 City/County: Sacramento County State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Upland Transect ID: 3 Data Point ID: B

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus diandrus (D)	herb	UPL	9.		
2. Bromus mollis (D)	"	FACU	10.		
3. Erodium botrys (D)	"	UPL	11.		
4. Convolvulus arvensis	"	UPL	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks): ___ Streams, Lake, or Tide Gauge ___ Aerial Photographs ___ Other ___ No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: ___ Inundated ___ Saturated in Upper 12 inches ___ Water Marks ___ Drift Lines ___ Sediment Deposits/Organic Detritus ___ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ___ Oxidized Root Channels in Upper 12 inches ___ Water-Stained Leaves ___ Local Soil Survey Data ___ FAC-Neutral Test ___ Other (Explain in Remarks)
Field Observations: Depths of Surface Water: _____(in.) Depth to Free Water in Pit: _____(in.) Depth to Saturated Soil: _____(in.)	

Remarks: No Positive hydrology indicators observed

Map Unit Name
(Series and Phase): San Joaquin Silt Loam, leveled, 0-1% slopes

Drainage Class: Moderately well drained

Field Observations
Confirm Mapped Type? Yes (No)

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
4"	10YR 3/4	10YR 5/6		Sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: No positive soil indicators observed.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	(No)	Is this Data Point Within a Wetland? Yes (No)
Wetland Hydrology Present?	Yes	(No)	
Hydric Soils Present?	Yes	(No)	

Remarks:

Non-Wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Deane Florin Vineyards Applicant/Owner: Natomas Gardner Investment Grp Investigator(s): Tom Skordal & Jim Gibson	Date: 5/16/04 City/County: Sacramento County State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Seasonal Wetland Transect ID: 4 Data Point ID: A

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Hordeum hystrix (D)	herb	FAC	9.		
2. Lolium perenne (D)	"	FAC	10.		
3. Bromus mollis	"	FACU	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ✓ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ✓ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks:

Map Unit Name
(Series and Phase): San Joaquin Silt Loam, leveled, 0-1% slopes

Drainage Class: Moderately well drained

Field Observations
Confirm Mapped Type? Yes (No)

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
2"	10YR4/2	10YR4/6		Silty loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ✓ Aquic Moisture Regime
- ___ Reducing Conditions
- ✓ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is this Data Point Within a Wetland? (Yes) No
Wetland Hydrology Present?	(Yes)	No	
Hydric Soils Present?	(Yes)	No	

Remarks:

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Deane Florin Vineyards Applicant/Owner: Natomas Gardens Investment Grp Investigator(s): Tom Skendal & Jim Gibson	Date: 5/16/04 City/County: Sacramento County State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Upland Transect ID: 4 Data Point ID: B

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus mollis (D)	herb	FACU	9.		
2. Lolium perenne (D)	"	FAC	10.		
3. Bromus rigidus	"	UPL	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 50%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: No positive indicators observed

Map Unit Name
(Series and Phase): San Joaquin Silt Loam, leveled, 0-1% slopes

Drainage Class: Moderately well drained

Field Observations
Confirm Mapped Type? Yes (No)

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
3"	10YR 4/2			fine sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: No positive indicators observed

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes (No)	Is this Data Point Within a Wetland? Yes (No)
Wetland Hydrology Present?	Yes (No)	
Hydric Soils Present?	Yes (No)	

Remarks:

Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Deane Florin Vineyards Applicant/Owner: Natomas Gardner Investment Grp Investigator(s): Tom Skordal & Jim Gibson	Date: 5/16/04 City/County: Sacramento County State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Transect ID: Data Point ID: 5

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus mollis (D)	herb	FACU	9.		
2. Lolium perenne (D)	"	FAC	10.		
3. Medicago polymorpha (D)	"	UPL	11.		
4. Bromus rigidus	"	UPL	12.		
5. Hordeum hystrix	"	FAC	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 33%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: No positive indicators observed

Map Unit Name
(Series and Phase): San Joaquin Silt Loam, leveled, 0-1% slopes Drainage Class: Moderately well drained
Field Observations
Taxonomy (Subgroup): Abruptic Durixeralfs Confirm Mapped Type? Yes (No)

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
3"	10YR3/3			Silty loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: No Positive indicators observed

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes (No)	Is this Data Point Within a Wetland?	Yes (No)
Wetland Hydrology Present?	Yes (No)		
Hydric Soils Present?	Yes (No)		

Remarks:

Non wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Deane Florin Vineyards Applicant/Owner: Natomas Gardens Investment Grp Investigator(s): Tom Skordal & Jim Gibson	Date: 5/16/04 City/County: Sacramento County State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Transect ID: Data Point ID: 6

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Avena fatua (D)	Herb	UPL	9.		
2. Bromus mollis (D)	"	FACU	10.		
3. Convolvulus arvensis D	"	UPL	11.		
4. Erodium botrys	"	UPL	12.		
5. Lolium perenne (D)	"	FAC	13.		
6. Geranium dissectum	"	UPL	14.		
7. Bromus diandrus	"	UPL	15.		
8. Hordeum hystrix	"	FAC	16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 25%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: No positive indicators observed

Map Unit Name
(Series and Phase): San Joaquin Silt Loam, leveled, 0-1% slopes

Drainage Class: Moderately well drained

Field Observations
Confirm Mapped Type? Yes (No)

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
3"	10YR3/3			sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: No positive indicators observed

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes (No)	Is this Data Point Within a Wetland? Yes (No)
Wetland Hydrology Present?	Yes (No)	
Hydric Soils Present?	Yes (No)	

Remarks:

Non-wetland

APPENDIX B

DELINEATION MAP

APPENDIX C

PLANT LIST

LIST OF PLANTS OBSERVED ON THE DEANE FLORIN VINEYARDS PROPERTY AND THEIR STATUS AS WETLAND INDICATOR SPECIES

Scientific Name	Common Name	Status [1&2]
Agrostis avenacea	hairy flower bentgrass	FACW*
Aira caryophyllea	silver hairgrass	UPL
Avena sp.	wild oats	UPL
Brassica sp.	mustard	NI
Briza minor	little quaking grass	FACW-
Brodiaea sp.	brodiaea	---
Bromus diandrus (*B. rigidus*)	rip-gut grass	UPL
Bromus mollis	soft chess	FACU-
Centaurea solstitialis	yellow star-thistle	UPL
Cichorium intybus	chickory	UPL
Cirsium sp.	thistle	---
Convolvulus arvensis	bindweed	UPL
Cynodon dactylon	Bermuda grass	FAC
Cyperus eragrostis	tall flatsedge	FACW
Deschampsia danthonioides	purple hairgrass	FACW
Eremocarpus setigerus	doveweed	UPL
Erodium sp.	filaree	UPL
Geranium dissectum	cut-leaf geranium	UPL
Holocarpha virgata	tarweed	UPL
Hordeum hystrix (*H. geniculatum*)	Mediterranean barley	FAC
Hordeum leporinum	barley	NI
Hypochaeris glabra	smooth cats tongue	UPL
Juncus bufonius	toad rush	FACW+
Lactuca serriola	prickly lettuce	FAC
Lasthenia sp.	goldfields	NI
Leontodon leysseri	hairy hawkbit	FACU
Lolium perenne (*L. multiflorum*)	perennial ryegrass	FAC*
Lotus purshianus	Spanish clover	FAC
Marrubium vulgare	common horehound	FAC
Paspalum dilatatum	dallis grass	FAC
Plagiobothrys stipitatus var. *micranthus*	slender popcorn flower	OBL
Plantago lanceolata	English plantain	FAC-
Poa annua	annual bluegrass	FACW-

[1] Reed, P.B. 1988. National List of Plant Species That Occur in Wetlands: California (Region 0). Biological Report 88(26.10) May 1988. National Ecology Research Center, National Wetland Inventory, U.S. Fish and Wildlife Service, St. Petersburg, Fl.

[2] OBL = obligate; FACW = facultative wetland; FAC = facultative; FACU = facultative upland; UPL = upland; and NI = no indicator.

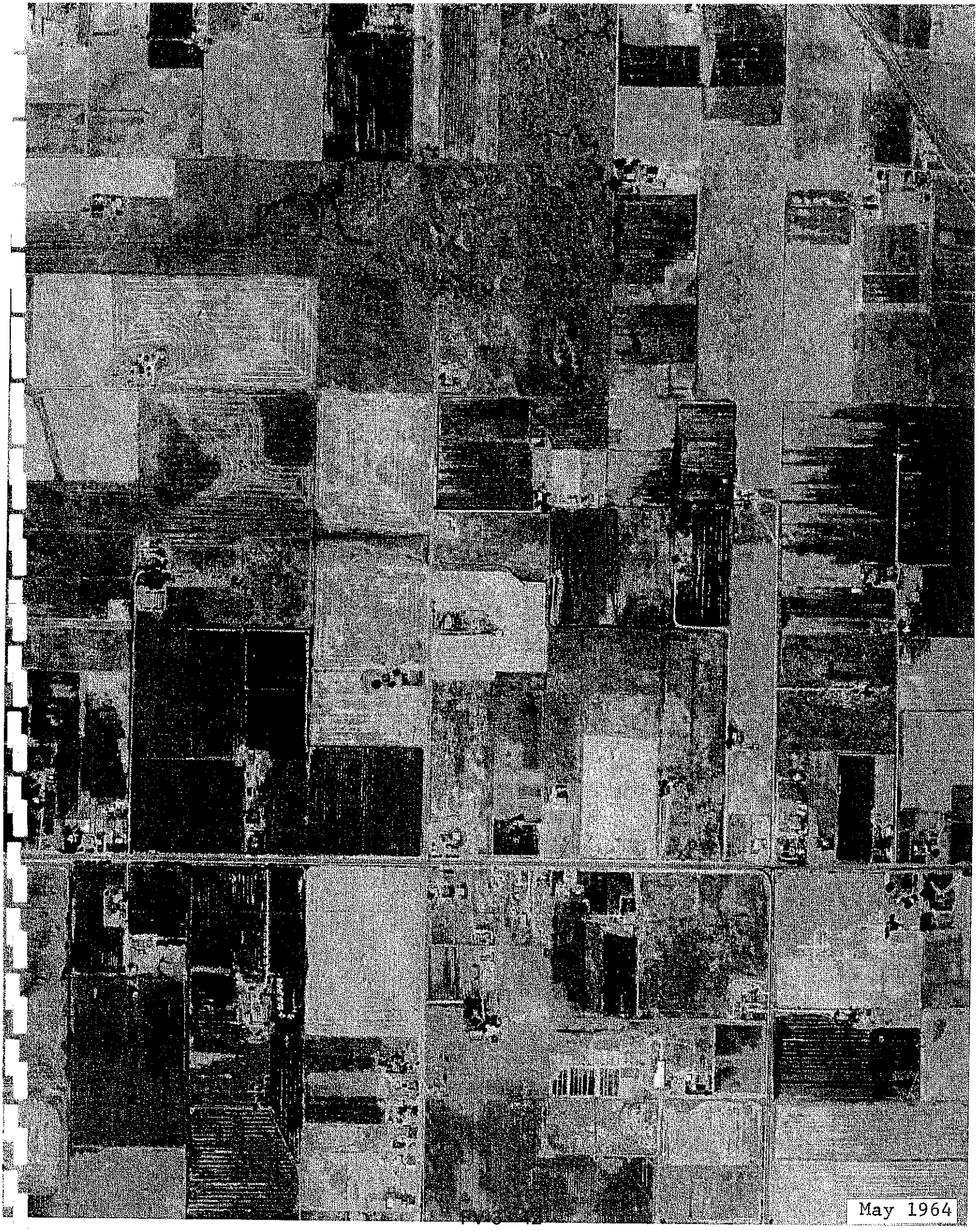
Scientific Name	Common Name	Status
Polypogon monspeliensis	annual rabbit-foot grass	FACW+
Raphanus sativus	wild radish	UPL
Rubus procerus	Himalayan blackberry	FAC
Rumex conglomeratus	clustered dock	FACW
Rumex crispus	curly dock	FACW-
Silybum marianum	milk thistle	UPL
Sonchus arvensis	field sow thistle	FACU
Taeniatherum caput-medusae	medusa-head	UPL
Trifolium sp.	clover	---
Vicia villosa	winter vetch	---
Vulpia myuros	rat-tail fescue	FACU

APPENDIX D

AERIAL PHOTOGRAPHS

Clodfelter
August 1937

September 1957


May 1964

August 1972

7819-00
Supplement to
Florin Vineyards

SIERRA NEVADA ARBORISTS

NATOMAS GARDENS INVESTMENT GROUP

APN 064-0080-043

Florin Vineyard Gap Area
County of Sacramento, California

***INITIAL* ARBORIST REPORT**
AND
INVENTORY SUMMARY

Submitted by:

Edwin E. Stirtz, Consulting Arborist
ISA Certified Arborist WE-0510A
Member, American Society of Consulting Arborists
SIERRA NEVADA ARBORISTS

September 3, 2004

503 Anthony Court ◆ Roseville, CA 95678 ◆ 916-784-7940 ◆ 916-784-1901 Fax

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COPYRIGHT STATEMENT

This consultant's report, dated September 3, 2004, is for the exclusive and confidential use of Natomas Gardens Investment Group concerning development of APN 064-0080-043 located within the Florin Vineyard Community Plan Area in the County of Sacramento, 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

September 3, 2004

Mr. Larry Deane
NATOMAS GARDENS INVESTMENT GROUP
2264 Fair Oaks Boulevard, Suite 100
Sacramento, California 95825

Re: ***Initial Arborist Report and Inventory Summary:***
APN 064-0080-043 – Florin Vineyard Gap Area, County of Sacramento

Dear Mr. Deane:

On September 2, 2004, Sierra Nevada Arborists visited APN 064-0080-043 located within the Florin Vineyard Community Plan Area in the County of Sacramento, California. The purpose of this site visit was to conduct a field inspection to identify, inventory and evaluate all trees within the project boundaries which measure 4 inches and greater in diameter at breast height ("DBH"), specifically including the identification of any native oaks, California Sycamore, Northern California Black Walnut, Oregon Ash, Goodding's Black Willow, California Box Elder and White Alder, and any other significant trees which measure 19 inches DBH and larger. The trees which met the defined criteria were identified in the field with a round, metal-stamped number tag beginning with Tree No. 196 which was affixed to the tree's trunk. For your reference, the numbers utilized in this report correspond to the tree tag affixed to the tree in the field, and those numbers have been rough-plotted on the enclosed excerpt from the site plan which was provided for reference by Bruce Walters of MacKay & Somps Civil Engineers.

SUMMARY

As you will see, 53 trees totaling 800 aggregate diameter inches have been documented within this report. Our site visit found that the vast majority of these trees are ***non-native species*** which are not protected by the County of Sacramento Tree Preservation and Protection Ordinance; however, these trees have been memorialized within this report due to their size (i.e., all trees which measure 4"+ DBH) to accurately document the trees' species, diameter and dripline measurements for mapping purposes as requested by DERA. For ease of reference, the ***non-ordinance*** trees have been highlighted in blue within the accompanying Inventory Summary.

Our site visit found 11 trees totaling 312 aggregate diameter inches which may be protected by Ordinance either due to their species and/or size. Composition of these 11 trees is exclusively non-native species which measure 19"+DBH.

Recommended Removals

At this time no trees have been recommended for removal from the project site due to noted defects. It should also be noted that a few trees within the project boundaries possess structural defects and/or characteristics which warrant further evaluation and/or annual monitoring to assess the trees' ongoing structural integrity. For reference, these trees have been separately highlighted in yellow within the accompanying Inventory Summary. At this juncture these trees have not been recommended for removal since development plans have not yet been finalized. We draw your attention to these trees, however, and note that ***precaution should be taken if development and/or pedestrian activity will occur within the fall zone of these trees.*** If retained, these trees should be monitored on an annual basis by an ISA Certified Arborist to assess the trees' ongoing structural integrity and potential for hazard in a developed environment.

Construction Impact Assessment

Please note that while this is a detailed review of the trees within the current project boundaries specific tree impacts cannot be definitively assessed until development plans have been finalized. As you know, trees are living organisms whose condition may change at any time. Therefore, a complete assessment of construction impacts and specific mitigation recommendations cannot be made until those development plans have been refined and finalized. At that time an ISA Certified Arborist should review the improvement plans to provide an analysis of construction impacts, including identification of trees which may require removal for home construction and other contemplated development activities. This will be particularly important if home construction and/or pedestrian activities will fall within or near the fall zone of a tree which has been noted as having structural defects, questionable long-term longevity and/or a conditional rating which is less than "fair". The review should also include an assessment of impacts which will be sustained by those trees which will be preserved within the project boundaries, along with associated mitigation recommendations. In the meantime, this report provides recommendations for pre-construction maintenance, as well as General Preservation Recommendations which should be utilized as a guideline for the protection of trees which may be preserved within the development area.

GENERAL COMMENTS AND ARBORIST'S DISCLAIMER

As you know, a tree permit and/or authorization to develop should be obtained from the County of Sacramento approving contemplated development activities, including the removal of protected trees, within the project area. All terms and conditions of the tree permit are the sole and exclusive responsibility of the developer. It should also be noted that prior to final inspection the County *may* require written verification from an ISA Certified Arborist certifying the approved removal activities and/or implementation of the mitigation measures outlined for the preserved trees on the site. Sierra Nevada Arborists cannot provide written Certification of Compliance unless we have been provided with a copy of the approved site development plans and applicable permits, and are on site to monitor and observe regulated activities during the course of construction. Therefore, it will be necessary for the developer to notify Sierra Nevada

Arborists well in advance (at least 48-hours prior notice) of any regulated activities which are scheduled to occur on site so that those activities can be properly monitored and documented for compliance certification.

Lastly, at this juncture we believe implementation of the general recommendations outlined within this report will attempt to afford the trees the best possibility for survival. However, these recommendations and their implementation should not be viewed as a guarantee or warranty against the trees' ultimate demise and/or failure in the future, and are being provided solely for the purpose of obtaining development authorization from the County of Sacramento. Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of the trees and ***attempt to reduce the risk of living near trees***. Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Since trees are living organisms, conditions are often hidden within the tree and below ground, and their condition may change at any time. Arborists cannot guarantee that a tree will be healthy and/or safe under all circumstances, or for a specific period of time. Likewise remedial treatments cannot be guaranteed. Trees can be managed but they cannot be controlled. To develop land and live near trees is to accept some degree of risk and the only way to eliminate all risk associated with trees is to eliminate all of the trees. ***An entity who develops land and/or builds homes with a tree in the vicinity should be aware of this Arborists' Disclaimer and be further advised that the developer and their future homeowners assume the risk that a tree could at any time suffer a branch and/or limb failure, blow over in a storm and/or fail for no apparent reason which may cause bodily injury or property damage.*** Sierra Nevada Arborists cannot predict acts of nature including, without limitation, storms of sufficient strength which can take down even a healthy tree. The information contained within this report is believed to be true to the best of the author's knowledge and experience as of the date it was prepared; however, certain conditions may exist which only a comprehensive, scientific, investigation might reveal which should be performed by other consulting professionals. Neither this author nor Sierra Nevada Arborists has assumed any responsibility for liability associated with the preserved trees on or adjacent to APN 064-0080-043, their future demise and/or any damage which may result therefrom.

Thank you for allowing Sierra Nevada Arborists to assist you with this review and analysis. 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
Member, American Society of Consulting Arborists

EES:ks
Enclosures
cc: Mr. Bruce Walters, MacKay & Somps Civil Engineers (w/enclosures)

NATOMAS GARDENS INVESTMENT GROUP
APN 064-0080-043 (Florin Community Plan Area)
County of Sacramento, California
ARBORIST INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ARBORIST REMOVALS (inches)	NOTABLE CHARACTERISTICS	MAINTENANCE RECOMMENDATIONS
						RT CR	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
196	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	10,11	21	14	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Weak primary crotch; callusing wounds, south side, at 2' above grade with no decay apparent at this time; slightly above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
197	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	9,10,10	29	15	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Weak primary crotches; slightly above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
198	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		18	24	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
199	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	8,9	17	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
200	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		13	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
201	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		13	20	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
202	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	9,10,11,17	47	21	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Weak primary crotches	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
203	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		14	19	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
204	Modesto Ash	*(Fraxinus velutina)*		24	30	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Weak primary crotches; slightly above average amount of deadwood	Clean out crown; prune to reduce weight; consider use of cable system to help support primary crotches
205	Modesto Ash	*(Fraxinus velutina)*		17	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
206	Foothill Pine	*(Pinus sabiniana)*		31	26	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood/failures	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
207	Fruitless Mulberry	*(Morus alba)*		25	22	Fair	Fair	Poor to fair	Fair	Fair	Fair		Pruned for utility line clearance	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
208	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	3,3,4,4,4	18	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
209	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	5,11	16	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
210	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	2,3,3,4	12	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
211	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	3,4	7	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
212	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		8	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
213	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	4,7	11	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
214	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		6	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
215	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		9	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
216	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		17	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
217	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		9	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
218	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		5	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
219	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		10	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
220	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		11	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
221	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	5,5	10	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
222	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	7,9	16	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
223	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	5,6	11	5	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
224	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	5,6	11	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
225	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	3,15	18	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
226	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	4,5	9	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
227	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		15	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
228	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		5	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
229	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	10,13	23	22	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Weak primary crotch; easterly stem failed at 10' above grade	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
230	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	11,11	22	20	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Weak primary crotch	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
231	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		8	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
232	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	3,4,5	12	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
233	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	5,7	12	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								

NATOMAS GARDENS INVESTMENT GROUP
APN 064-0080-043 (Florin Community Plan Area)
County of Sacramento, California
ARBORIST INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ARBORIST REMOVALS (inches)	NOTABLE CHARACTERISTICS	MAINTENANCE RECOMMENDATIONS
						RT CR	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
234	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	2,6	8	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
235	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	2,4	6	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
236	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	2,2,3,4,4	15	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
237	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	3,4,5	12	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
238	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	2,3,3,3,4	15	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
239	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	4,4	8	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
240	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	3,3	6	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
241	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	8,8,9,9,9	43	20	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Weak primary crotches; slightly above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
242	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	7,8	15	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
243	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	3,4,4,4,5,7	27	13	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Weak primary crotches; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
244	Lombardi Poplar	*(Populus lombardii)*	2,4,4,4	14	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
245	Lombardi Poplar	*(Populus lombardii)*		20	13	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
246	Lombardi Poplar	*(Populus lombardii)*	3,3,3,4,4	17	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
247	Lombardi Poplar	*(Populus lombardii)*	2,3	5	5	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
248	Lombardi Poplar	*(Populus lombardii)*	4,5	9	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								

TOTAL INVENTORIED TREES = 53 Trees (800 aggregate diameter inches)
ARBORIST-RECOMMENDED TREE REMOVALS = 0 Trees
PRECAUTIONARY TREES SEPARATELY HIGHLIGHTED FOR REFERENCE

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.

STREET AND UTILITY MITIGATIVE MEASURES

Generally, impacts from street construction alone are less of an impact than those occurring with dry and wet utility construction. Often it is very difficult or impossible to effectively preserve a tree with more than 30% of its critical root zone area falling within the PUE/street.

Dry Utilities.

Since dry utilities are typically located behind the curb and gutter and/or sidewalks, where applicable, they fall within the closest proximity to trees preserved outside of the roadway. The dry utilities tend to be shallow, within the top 5 feet of the soil profile. Unfortunately, in this region that is also typically where tree roots are found. Where possible, dry utilities should be routed on the opposite side of the street from tree locations. This would require more street crossings than normally planned; however, impacts to trees would be greatly lessened. In some circumstances, hand digging the utilities through critical root zone areas may be an option. Since the dry utility profile is usually 3-4 in depth and includes multiple conduits or plumbing due to the various utilities, boring beneath the critical root zone area is not usually effective.

Wet Utilities.

The greatest conflicts with wet utilities typically arise from deep sanitary sewers or storm drains. Soil conditions and safety concerns often require than trench openings at ground level be quite large. Therefore, the storm and sewer locations must be carefully considered. In some circumstances where a particularly valuable tree may be impacted by wet utilities boring may be an option. Since water main construction tends to be more shallow than storm drains or sewers, and flow lines are not as critical, boring can often be most effective in preserving tree roots.

Streets/Hardscape.

Should the street construction sections be 18" or less, the percentage of encroachment into the critical root zone area may be able to exceed 20%. If this is possible, determinations cannot be made until an accurate evaluation of the root system profiles on the site has been completed. It is impossible to preserve roots within the street section profile. Further, the construction of the street alters the gaseous exchange and oxygen to the tree's root system. In some circumstances aeration systems may mitigate a small portion of these impacts.

Hardscape (concrete slabs, walkways, etc.) should be minimized within the critical root zone area. Grade cuts in excess of 12" should be avoided. In some circumstances aeration systems may be required to reduce root system stress.

CONCLUSION

In an effort to minimize tree removals in the early phases of a project a category for potential tree removals should be established. This category would include those trees which are located in areas that would expose them to moderate or significant encroachments and/or construction impacts. As construction occurs and construction staking is installed, assessment of impacts are much more accurate than those based simply on plan review. At that time, determinations by the Project Arborist and Agency Representatives may result in preservation of trees which may have previously appeared as requiring removal on the plans.

DEFINITIONS AND RATINGS

Within this report you will find the following information defined as follows:

Tree Number:	Corresponds to aluminum tag attached to the tree.
Species Identification:	Scientific and common species name.
Diameter ("DBH"):	This is the trunk diameter as measured at breast height (industry standard 4.5 feet above ground level).
Dripline radius ("DLR"):	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.

Structure and Vigor Ratings:

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.

Encroachment Ratings:

MINOR - No anticipated long-term negative effects

MODERATE – Potential long-term negative effects

SIGNIFICANT – Probable long-term negative effects

Maintenance Recommendations:

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.

SUBSURFACE LIQUID FERTILIZATION INJECTION/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.

JURISDICTIONAL DELINEATION AND SPECIAL STATUS SPECIES EVALUATION

KWAN-ELDER CREEK ESTATES

SACRAMENTO COUNTY, CALIFORNIA

RECEIVED
JUN 26 2007
DEPARTMENT OF ENVIRONMENTAL REVIEW AND ASSESSMENT

AUGUST 2004
REVISED SEPTEMBER 2006

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INTRODUCTION

The purpose of this report is to present the results of a jurisdictional delineation and special status species evaluation conducted for the Kwan Elder Creek Estates Property.

LOCATION

The study area includes a ± 90-acre parcel located south of Florin Road, north of McCoy Avenue, west of Hedge Avenue, and east of Elk Grove-Florin Road in the Florin-Vineyard Community Plan development area. It lies in a portion of Section 6, Township 7 North, Range 6 East of Sacramento County, California (Latitude 38° 29' North, Longitude 121° 22' West). Figure 1 is a vicinity map.

METHODOLOGY

Field studies were conducted on August 6, 2004 for the purpose of delineating existing waters and wetlands in the study area and evaluating special status species and their habitats.

Jurisdictional Delineation

The boundary of existing wetlands as well as data points and other site features were surveyed in the field by Gibson & Skordal, LLC utilizing a Trimble GPS data logger with sub-meter accuracy. The delineation map was prepared by layering the GPS field data over aerial photography flown in May of 2002 by the United States Geological Survey (USGS).

The **"Corps of Engineers Wetlands Delineation Manual"**[1] was used as the standard of determining whether specific areas are wetlands potentially subject to regulation under Section 404 of the Clean Water Act. Corps of Engineers' regulations (33 CFR 328) was used to determine the presence of waters of the United States other than wetlands. The **"National List of Plant Species That Occur in Wetlands: California (Region 0)"**[2] was used to determine the wetland indicator status of plants observed in the study area. The **"Soil Survey of Sacramento County, California"**[3] was used to evaluate soil mapping in the study area.

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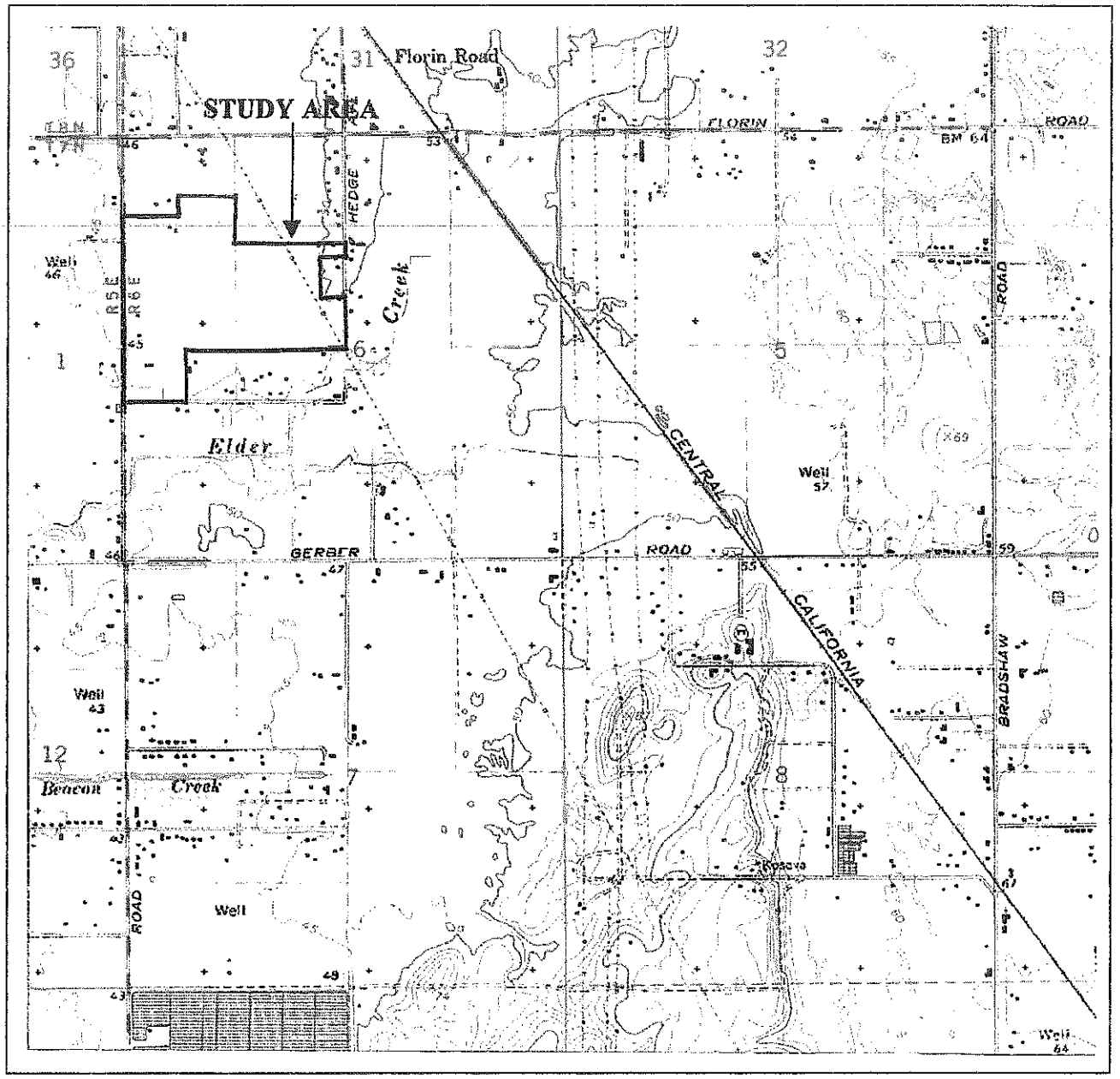
[1] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station. Vicksburg, Miss.

[2] Reed, P.B. 1988. National List of Plant Species That Occur In Wetlands: California (Region 0). Biological Report 88(26.10). May 1988. National Ecology Research Center, National Wetlands Inventory, U.S. Fish & Wildlife Service, St. Petersburg, Florida.

[3] USDA, Soil Conservation Service. 1993. Soil Survey of Sacramento County, California.

FIGURE 1

VICINITY MAP



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N
(Scale: 1 Inch = 2000 Feet)

Source: Elk Grove 7.5 Minute USGS Topographic Quadrangle

Detailed data on vegetation, soils, and hydrology characteristics was taken in the field. Data forms documenting the basis for determining which areas are wetland or upland are provided in Appendix A. Mr. Dave Leput, U.S. Army Corps of Engineers, field verified our delineation on May 12, 2006. Requested changes have been incorporated into this report.

Special Status Species Evaluation

The special status species evaluation includes those species identified as having relative scarcity and/or declining populations by the United States Fish & Wildlife Service (FWS) or California Department of Fish & Game (CDFG). Special status species include those formally listed as threatened or endangered, those proposed for formal listing, candidates for Federal listing, and those considered to be Species of Concern by FWS or Species of Special Concern by CDFG. In addition to these, we also included those species considered to be "special animals" or "fully protected" by the CDFG and those plant species considered to be rare, threatened or endangered in California by the California Native Plant Society (CNPS).

In our evaluation, we considered those special status species documented by the California Natural Diversity Database (CNDDB) as occurring in the vicinity of the study area. A record search of the CNDDB was conducted for the Elk Grove, Florin, Carmichael, and Sloughhouse 7.5 Minute USGS quadrangles to identify all documented sightings of special status species in the vicinity of the study area. In addition to these species, we included other special status species that may have some potential for occurring in the study area based on historical range data and/or the presence of suitable habitat.

GENERAL SITE CONDITIONS AND HABITATS

The study area is generally bordered by Hedge Avenue to the east, Elk Grove-Florin Road to the west, and a mix of irrigated pasture/grassland and ranchettes to the north and south. The site supports a commercial golf range, Vineyard Driving Range, located near the northwest corner of the site. Several existing home complexes with associated barns, sheds, and out-structures located in the northeast, southeast, and southwest corners of the study area. The southeast and southwest portions of the study area are currently being irrigated for use as grazing pasture.

A majority of the study area is characterized by level to gently sloping terrain that supports annual grassland/pasture that has been historically irrigated for use as grazing pasture. Typical

grassland habitat is characterized by soft chess (*Bromus mollis*), rat-tail fescue (*Vulpia myuros*), rip-gut brome (*Bromus diandrus*), and filaree (*Erodium sp.*). Other common associates include tarweed (*Holocarpha virgata*), hare barley (*Hordeum leporinum*), wild oats (*Avena sp.*), (*Leontondon leysseri*), perennial rye (*Lolium perenne*), Mediterranean barley (*Hordeum hystrix*), little quaking grass (*Briza minor*), and medusa head (*Taeniatherum caput-medusae*).

The flood irrigated pasture in the southwest corner of the study area is characterized by a mix of irrigation tolerant species including tall flatsedge (*Cyperus eragrostis*), Bermuda grass (*Cynodon dactylon*), dallis grass (*Paspalum dilatatum*), English plantain (*Plantago lanceolata*), chicory (*Cichorium intybus*), soft chess, and bird's foot trefoil (*Lotus corniculatus*). Scattered trees associated with the home-sites include California walnut (*Juglans californica*), blue gum (*Eucalyptus sp.*), mulberry (*Morus alba*), olive (*Olea europaea*), valley oak (*Quercus lobata*), apple (*Malus sylvestris*), cultivated orange, and a variety of other ornamentals.

Soils in the study area are mapped as San Joaquin silt loam, leveled, 0 to 1 percent slopes; San Joaquin silt loam, 0 to 3 percent slopes; and San Joaquin-Durixeralfs complex, 0 to 1 percent slopes. San Joaquin soils are moderately deep, moderately well drained soils that generally occur on low terrace features or on the side slopes of low terraces. The Durixeralfs are shallow to moderately deep, well-drained soils that have been significantly cut and altered by past leveling activities. Although none of these soil types are listed as hydric, the San Joaquin units have hydric inclusions in depressions and drainageways. Figure 2 provides a soils map for the site.

EXISTING WATERS

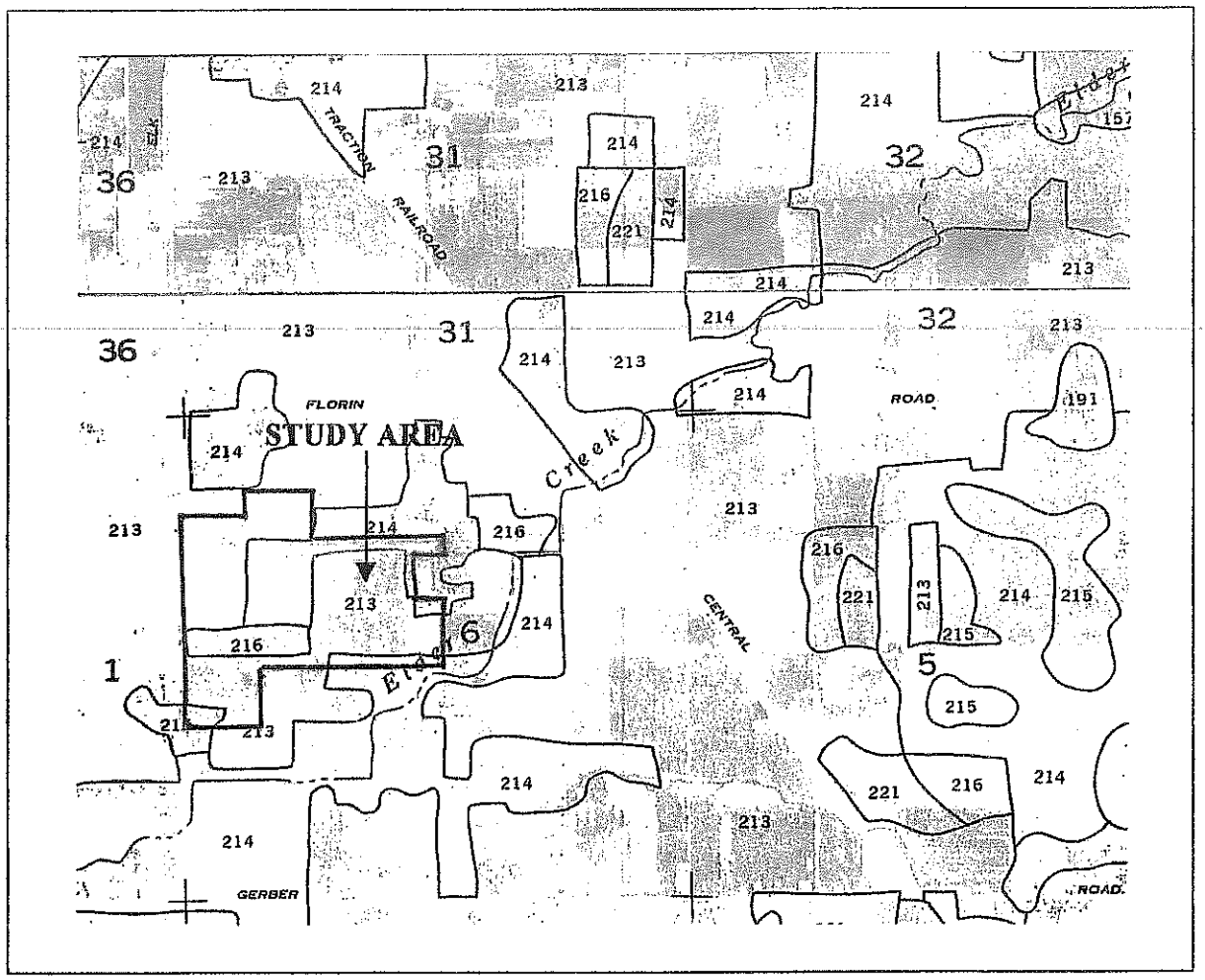
We identified a total of 8.73 acres of existing waters in the study area including 3.49 acres of vernal pools, 4.92 acres of seasonal wetlands, 0.22 acres of seasonal ponds, and 0.10 acre of ditches. Table 1 provides the area of existing waters by type and reference number. Appendix B contains a delineation map showing the location of wetlands, data points, and study area boundary. Appendix C provides a list of plant species observed in the study area including their status as wetland indicators.

Vernal Pools

We identified fourteen vernal pools (VP1-VP14) in the study area that range from 48-sq. ft. to 130,194-sq. ft. in area. The vernal pools occur in medium to deep depressions that experience ponding and saturation conditions that persist for long duration following periods of heavy

FIGURE 2

SOILS MAP



Soil Unit	Soil Name	Soil Classification	Drainage Class
213	San Joaquin silt loam, leveled, 0-1% slopes	Abruptic Durixeralfs	moderately well drained
214	San Joaquin silt loam, 0-3% slopes	Abruptic Durixeralfs	moderately well drained
216	San Joaquin-Durixeralfs complex, 0-1% slopes	Abruptic Durixeralfs, Durixeralfs	moderately well drained

Source: USDA, Soil Conservation Service. 1993. Soil Survey of Sacramento County, California

TABLE 1

AREAS OF EXISTING WATERS IDENTIFIED ON THE KWAN-ELDER CREEK ESTATES PROPERTY

Roadside Ditches: 4,250 Sq. Ft. or 0.10 Acre

Vernal Pools:

Ref. #	Area (Sq.Ft.)	Ref. #	Area (Sq.Ft.)	Ref. #	Area (Sq.Ft.)
VP1	11,437	VP6	410	VP11	560
VP2	195	VP7	72	VP12	559
VP3	130,194	VP8	818	VP13	2,684
VP4	353	VP9	2,781	VP14	924
VP5	48	VP10	890		

Total = 151,925 Sq. Ft. or 3.49 Acres

Seasonal Wetlands:

Ref. #	Area (Sq.Ft.)	Ref. #	Area (Sq.Ft.)
SW1	5,047	SW6	981
SW2	266	SW7	1,129
SW3	170,100	SW8	1,353
SW4	34,810	SW9	62
SW5	735		

Total = 214,483 Sq. Ft. or 4.92 Acres

Seasonal Ponds:

Ref. #	Area (Sq.Ft.)
P1	8,077
P2	1,441

Total = 9,518 Sq. Ft. or 0.22 Acres

TOTAL WETLANDS = 8.73 ACRES

precipitation in the winter and early spring. Wetland hydrology field indicators observed include location within a defined depression overlying tight or restrictive soils, oxidized root channels on live roots, and algae matting in the deep zones of the wetlands. Hydric soils were generally assumed present in the vernal pools based on strong field indicators of the presence of an aquic moisture regime.

Vernal pools were differentiated from other seasonal wetlands in the field by the presence of wetland plant community dominated by one or more species typically considered endemic to or strongly associated with vernal pool habitat. Typical vernal pools in the study area are dominated by creeping spikerush (*Eleocharis macrostachya*), smooth goldfields (*Lasthenia glaberrima*), and coyote thistle (*Eryngium vaseyi*). Other common associates include Carter's buttercup (*Ranunculus alveolatus*), slender popcorn flower (*Plagiobothrys stipitatus*), annual rabbit-foot grass (*Polypogon monspeliensis*), wooly marbles (*Psilocarphus brevissimus*), Downingina (*Downingia sp.*), purple hairgrass (*Deschampsia danthonioides*), perennial rye, and Mediterranean barley.

The adjacent upland is marked by a distinct rise in landscape position lacking wetland hydrology and hydric soils, and the emergence of an annual grassland plant community typically dominated by non-hydrophytes.

Seasonal Wetlands

In addition to the vernal pools, we identified 4.92 acres of seasonal wetlands including nine seasonal wetlands (SW1-SW9) ranging from 62-sq. ft. to 170,000-sq. ft. in area. The seasonal wetlands occur in shallow depressions that sustain long-term ponding and/or saturation conditions following periods of heavy rainfall in the winter. Some of the seasonal wetlands, including SW3 and SW4, are further augmented and/or altered by irrigation run-off from the on-site golfing range and adjacent irrigated pasture to the north.

Wetland hydrology field indicators include location within a defined depression overlying tight or restrictive soils, oxidized root channels on live roots, and algae matting in the deeper zones of the wetland. As in the vernal pools, soils in the seasonal wetlands lacked typical hydric soil color and morphology. Hydric soils were generally assumed to be present based on strong field indicators of the presence of an aquic moisture regime.

A majority of the seasonal wetlands support a facultative plant community dominated by Mediterranean barley and perennial rye. Other common associates include creeping spikerush,

annual rabbit-foot grass, loosestrife (*Lythrum hyssopifolia*), curly dock, Carter's buttercup, and toad rush (*Juncus bufonius*). The adjacent upland community is marked by a gentle rise in landscape position, a lack of wetland hydrology and hydric soil indicators, and the emergence of an annual grassland plant community.

Excavated Basins

We also identified two excavated basins, P1 and P2, which are isolated basins that have historically used for storage and detention of irrigation water. Given that the basins were historically excavated in uplands for purposes of irrigation and are currently maintained as such, they do not appear to meet the criteria for designation as jurisdictional waters/wetlands. Other than overflow pipes, there is no surface outlet from the basins.

Jurisdictional Status

The Corps of Engineers determined that only jurisdictional waters on the site are the 0.10 acres of roadside ditches. The remainder of the waters has no direct connection to other waters of the United States or potential surface tributary features.

SPECIAL STATUS SPECIES

Table 2 provides a list of special status species that were evaluated including their listing status, habitat associations, and whether potential habitats occur in the study area. Of the twenty-four special status species evaluated in Table 2, ten species including the bank swallow, Bogg's Lake hedge-hyssop, California tiger salamander, giant garter snake, Sacramento orcutt grass, slender orcutt grass, Swainson's hawk, valley elderberry longhorn beetle, vernal pool fairy shrimp, and vernal pool tadpole shrimp are Federal and/or State listed threatened and/or endangered species. The following is a detailed summary of special status species and their habitats as they relate to the study area.

Swainson's Hawk and Other Raptors

Swainson's hawk (*Buteo swainsoni*) is a raptor species currently listed as threatened in California by the CDFG. They typically nest in tall cottonwoods, valley oaks, or willows associated with riparian corridors with adjacent grassland, pasture, and/or cropland with a high density of

TABLE 2

EVALUATION OF SPECIAL STATUS SPECIES HABITATS

	State Status	Federal Status	CNPS Listing	Habitat Association	Potential Habitat In Study Area
Birds					
Accipiter cooperi (Cooper's hawk)	Species of Special Concern	None		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes -suitable foraging and nesting habitat
Accipiter striatus (sharp-shinned hawk)	Species of Special Concern	None		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes -suitable foraging and nesting habitat
Agelaius tricolor (tricolored blackbird)	Species of Special Concern	Species of Concern		Colonial nester in cattails, bullrush, or blackberries associated with marsh habitats.	No
Athene cunicularia (burrowing owl)	Species of Special Concern	Species of Concern		Nests in abandoned ground squirrel burrows associated with open grassland habitats.	Yes -suitable foraging and nesting habitat
Buteo swainsoni (Swainson's hawk)	Threatened	None		Nests in tall cottonwoods, valley oaks or willows. Forages in fields, cropland, irrigated pature, and grassland near large riparian corridors.	Yes -suitable foraging and nesting habitat
Circus cyaneus (northern harrier)	Species of Special Concern	None		Forages in open grasslands, nests on ground in shrubby vegetation.	Yes - foraging only
Elanus leucurus (white-tailed kite)	Fully Protected	None		Nests in riparian corridors along streams and rivers, and forages in nearby grasslands and fields.	Yes -suitable foraging and nesting habitat
Riparia riparia (bank swallow)	Threatened	Species of Concern		Colonial nester in vertical cliffs and banks associated with riparian zones along streams, rivers, and lakes.	No
Amphibians & Reptiles					
Ambystoma trigrinum californiense (California tiger salamander)	Species of Special Concern	Threatened		Breeds in ponds or other deeply ponded wetlands, and uses gopher holes and ground squirrel burrows in adjacent grasslands for upland refugia/foraging.	Yes -marginal habitat present
Clemmys marmorata marmorata (northwestern pond turtle)	Species of Special Concern	Species of Concern		Ponds, rivers, streams, wetlands, and irrigation ditches with associated marsh habitat.	No
Scaphiopus hammondii (western spadefoot)	Species of Special Concern	Species of Concern		Breeds in vernal pools, seasonal wetlands and associated swales. Forages and hibernates in adjacent grasslands.	Yes
Thamnophis gigas (giant garter snake)	Threatened	Threatened		Rivers, canals, irrigation ditches, rice fields, and other aquatic habitats with slow moving water and heavy emergent vegetation.	No

TABLE 2

(Continued)

	State Status	Federal Status	CNPS Listing	Habitat Association	Potential Habitat In Study Area
Invertebrates					
Branchinecta lynchi (vernal pool fairy shrimp)	None	Threatened		Vernal pools and other seasonally ponded wetlands.	Yes -potential habitat in VP's & deep zones of SW's
Branchinecta mesovallensis (midvalley fairy shrimp)	None	None		Vernal pools and other seasonally ponded wetlands.	Yes -potential habitat in VP's & deep zones of SW's
Desmocerus californicus dimorphus (valley elderberry longhorn beetle)	None	Threatened		Dependent upon elderberry plant (Sambucus mexicana) as primary host species	No
Lepidurus packardi (vernal pool tadpole shrimp)	None	Endangered		Vernal pools and other deeply ponded seasonal wetlands.	Yes -potential habitat in VP's & deep zones of SW's
Linderiella occidentalis (California linderiella)	None	None		Vernal pools and other seasonally ponded wetlands.	Yes -potential habitat in VP's & deep zones of SW's
Plants					
Downingia pusilla (dwarf downingia)	None	None	CNPS-2	Vernal pools	Yes -potential habitat in VP's & deep zones of SW's
Gratiola heterosepala (Bogg's Lake hedge-hyssop)	Endangered	None	CNPS-1B	Vernal pools and margins of lakes/ponds	Yes -potential habitat in VP's & deep zones of SW's
Juncus leiospermus var. ahartii (Ahart's dwarf rush)	None	Species of Concern	CNPS-1B	Vernal pools	Yes -potential habitat in VP's & deep zones of SW's
Legenere limosa (legenere)	None	Species of Concern	CNPS-1B	Vernal pools	Yes -potential habitat in VP's & deep zones of SW's
Orcuttia tenuis (slender orcutt grass)	Endangered	Threatened	CNPS-1B	Vernal pools	Yes -suitable habitat in VP1, but no plants were observed.
Orcuttia viscida (Sacramento orcutt grass)	Endangered	Threatened	CNPS-1B	Vernal pools	Yes -suitable habitat in VP1, but no plants were observed.
Sagittaria sanfordii (Sanford's arrowhead)	None	Species of Concern	CNPS-1B	Deep aquatic habitats associated with canals, drainages, and ditches.	No

rodents. The Central Valley population typically breeds and nests in late spring through early summer before migrating to Central America and South America for the fall and winter seasons.

Based on CNDDB sighting records, active Swainson's hawk nests have been documented within a 3 to 3 ½-mile radius, or closer, of the study area including several older nests along the east side of Highway 99 between Calvine Road and Sheldon Road, and multiple nests within the Cosumnes River and Deer Creek corridor to the south. Given this, the pasture and grassland habitat in the study area provides potential foraging habitat for Swainson's hawk, and the larger trees provide potential nesting habitat for Swainson's hawk. Additionally, there is suitable foraging and/or nesting habitat present for a variety of other raptors including white-tailed kite, northern harrier, red-tailed hawk, sharp-shinned hawk, and Cooper's hawk.

Burrowing owl (*Athene cunicularia*) is a ground nesting raptor species afforded protection by CDFG as a species of special concern due to potentially declining populations in the Central Valley of California. They typically inhabit open grassland habitats where they nest in abandoned ground squirrel burrows and other nesting cavities associated with raised mounds, levees, or soft berm features. Although there is potential nesting and foraging habitat available for burrowing owls, we did not observe any potential nesting burrows or any indication of current burrowing owl activity at the site.

Tricolored Blackbird

Tricolored blackbirds (*Agelaius tricolor*) are afforded protection by CDFG as a species of special concern due to declining populations in the region. They are colonial nesters preferring to nest in dense stands of cattails and/or bullrush, but they also commonly nest in blackberry thickets associated with drainages, ditches, and canals. There have been a number of documented sightings of tricolored blackbird nesting colonies in the Florin and Elk Grove quadrangles, but the locations have been excluded from CNDDB records for protection issues.

The dense Himalayan blackberry thickets associated with the irrigated pasture in the southwest portion of the study area may provide marginal potential for use as nesting habitat by tricolored blackbirds. However, the blackberry thickets do not provide highly suitable nesting habitat due to the absence of associated open water and marsh habitat.

California Tiger Salamander

The California tiger salamander (*Ambystoma trigrinum californiense*) is a Federally threatened species and a California Species of Special Concern that typically breeds in seasonal or permanent ponds. California tiger salamander (CTS) may also breed in deeper ponded vernal pools, seasonal wetlands and/or other seasonal pools within swales or channels. They typically spend a majority of their life cycle living below ground in ground squirrel burrows or pocket gopher burrows in grasslands situated adjacent to suitable breeding sites.

The deeper vernal pools and the excavated basins in the study area may provide marginal potential for use by CTS. However, they are not highly suitable for CTS use due to the seasonal nature of their ponding regimes.

Giant Garter Snake

Giant garter snake (GGS) is designated as a Federal threatened and State threatened species afforded special protection by FWS and CDFG. GGS is generally associated with larger canals, irrigation ditches, and other semi-permanent to permanent aquatic sites with slow moving water and an abundance of emergent vegetation. Although GGS has been documented within Elk Grove Creek and lower Morrison Creek situated to the west of Highway 99, there have not been any documented GGS sightings along the east side of Highway 99 including the region surrounding the study area.

However, the absence of potential or suitable GGS breeding habitat present in the study area would eliminate any reasonable potential for GGS to utilize this site.

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (*Desmocerus californicus*) is a Federal threatened species that is dependent upon the elderberry plant (*Sambucus sp.*) as a primary host species. Elderberry shrubs are a common component of riparian areas throughout the Sacramento Valley region, and they have been documented as occurring at numerous locations in the vicinity of the study area.

Given the absence of elderberry shrubs in the study area, there is no potential for valley elderberry longhorn beetle to occur at the site.

Vernal Pool Branchiopods

Federally listed vernal pool branchiopods including the threatened vernal pool fairy shrimp *(Branchinecta lynchi)* and the endangered vernal pool tadpole shrimp (*Lepidurus packardi*) have been documented as occurring in Elk Grove and Florin USGS quadrangles. Other non-listed branchiopods known to occur in the region include California linderiella (*Linderiella occidentalis*) and midvalley fairy shrimp (*Branchinecta mesovallensis*).

Vernal pool branchiopods are generally restricted to vernal pools and/or other seasonally ponded wetlands that sustain inundation during the winter before drying up in the late spring. The vernal pools and the seasonal wetlands in the study area provide potential habitat for special status branchiopods including the Federally listed vernal pool fairy shrimp and vernal pool tadpole shrimp. At this time, protocol surveys to determine presence or absence of Federally listed branchiopods have not been conducted for the study area.

Special Status Plants

Special status plant species identified on the CNDDB as occurring in the vicinity of the study area, or may potentially occur in the area, include Ahart's dwarf rush (*Juncus leiospermus ahartii*), dwarf downingia (*Downinia pusilla*), Bogg's Lake hedge-hyssop (*Gratiola heterosepala*), legenere (*Legenere limosa*), Sacramento orcutt grass (*Orcuttia viscida*), slender orcutt grass (*Orcuttia tenuis*), and Sanford's arrowhead (*Sagittaria sanfordii*).

Ahart's dwarf rush, dwarf downingia, legenere, Bogg's Lake hedge-hyssop, Sacramento orcutt grass, and slender orcutt grass are all strongly associated with vernal pools habitats. Bogg's Lake hedge-hyssop can also occur around the perimeter of lakes and ponds. Conversely, Sanford's arrowhead generally occurs in deep aquatic habitats associated with drainages, canals, and larger ditches that sustain inundation and/or slow moving water into early summer.

The vernal pools in the study area, including VP1-VP4, provide potential habitat for Ahart's dwarf rush, Bogg's Lake hedge-hyssop, dwarf downingia, and legenere. In addition, VP1 may also provide potential habitat for Sacramento orcutt grass and slender orcutt grass. Given the absence of suitable habitat, there is little if any potential for Sanford's arrowhead to occur in the study area. We did not observe Sacramento orcutt grass, slender orcutt grass, or Sanford's arrowhead in the study area during our field surveys. Field surveys were conducted too late in the growing season to adequately determine presence or absence of Ahart's dwarf rush, Bogg's Lake hedge-hyssop, dwarf downingia, and legenere.

SUMMARY

We identified a total of 8.73 acres of waters in the study area, with the exception of the 0.10 acre of roadside ditches, the Corps has determined that all of the existing mapped waters are "*isolated*" and are not subject to regulation under Section 404 of the Clean Water Act.

A variety of special status raptors including Swainson's hawk, sharp-shinned hawk, Cooper's hawk, white-tailed kite, northern harrier, and burrowing owl would have a reasonable potential for occurring in the study area based on the presence of suitable foraging and/or nesting habitat. In the event that future development of the site occurs during the raptor nesting season, we recommend that a raptor nesting survey be completed within two weeks of the start of project construction.

The vernal pools and seasonal wetlands in the study area provide potential habitat for special status branchiopods including the Federally listed vernal pool fairy shrimp and vernal pool tadpole shrimp. At this time, protocol branchiopod surveys have not been conducted for this site. Although there is marginal habitat available for California tiger salamander, the low suitability of the existing habitat and the absence of documented sightings in the vicinity would restrict any potential for California tiger salamander to occur in the study area.

The vernal pools may also provide potential habitat for special status plants including Ahart's dwarf rush, Bogg's Lake hedge-hyssop, dwarf downingia, and legenere. Although there is suitable habitat present for Sacramento orcutt grass and slender orcutt grass, neither of these species was found in the study area during our field surveys.

APPENDIX A

DATA FORMS

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Kwan Elder Creek Estates	Date: 8-6-04
Applicant/Owner: L.K. Development One, Inc.	City/County: Sacramento Co.
Investigator(s): D. Skordal	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Seasonal Wetland (SW1)
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 1
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: A

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Hordeum hystrix (D)		FAC	9.		
2. Lolium perenne (D)		FAC	10.		
3. Lythrum hyssopifolia		FACW	11.		
4. Rumex crispus		FACW-	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100% FAC Dominated

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ✓ Sediment Deposits/Organic Detritus / Algal
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ✓ Oxidized Root Channels in Upper 12 inches
- ✓ Water-Stained Leaves
- ___ Local Soil Survey Data
- ✓ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Shallow depression w/ algae matting, water stains, & oxid. rhizospheres on live roots!

Map Unit Name (Series and Phase): (213) San Joaquin silt loam, leveled, 0-1 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-8	10YR 3/4	yes		Sandy silt loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ✓ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: Hydric soils assumed based on field indicators of aquic moisture regime.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes) No	Is this Data Point Within a Wetland? (Yes) No
Wetland Hydrology Present?	(Yes) No	
Hydric Soils Present?	(Yes) No	

Remarks: Seasonal Wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Kwan Elder Creek Estates	Date: 8-6-04
Applicant/Owner: L.K. Development One, Inc.	City/County: Sacramento Co.
Investigator(s): D. Skordal	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Adjacent upland - grassland
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 1
Is the area a potential Problem Area? (If needed, explain on reverse.) Yes (No)	Data Point ID: B

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus Mollis (D)		FACU-	9.		
2. Hordeum hystrix (D)		FAC	10.		
3. Erodium sp. (D)		UPL	11.		
4. Lolium perenne		FAC	12.		
5. Rumex Crispus		FACW-	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 33%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Level terrain ± 6"-8" above bottom elev. of adjacent SW, area lacks indicators of wetland hydrology!

Map Unit Name (Series and Phase): (213) San Joaquin silt loam, leveled, 0-1 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-8	10YR 4/4	yes		sandy silt loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	No	Is this Data Point Within a Wetland?	Yes	No
Wetland Hydrology Present?	Yes	No			
Hydric Soils Present?	Yes	No			

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: Kwan Elder Creek Estates	Date: 8-6-04
Applicant/Owner: L.K. Development One, Inc.	City/County: Sacramento Co.
Investigator(s): D. Skordal	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Seasonal Wetland (deep)
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 2
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: A

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Eleocharis Macrostachya (D)		OBL	9.		
2. Lolium perenne		FAC	10.		
3. Hordeum hystrix		FAC	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Deep depression w/ algae matting, water stains, & oxid. rhizospheres on live roots!

Map Unit Name (Series and Phase): (213) San Joaquin silt loam, leveled, 0-1 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-8	10YR 4/3	yes		sandy silt loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ✓ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: Hydric Soils assumed based on strong indicators of aquic moisture regime.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes) No	Is this Data Point Within a Wetland?	(Yes) No
Wetland Hydrology Present?	(Yes) No		
Hydric Soils Present?	(Yes) No		

Remarks: Vernal pool/Seasonal Wetland Habitat!

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Kwan Elder Creek Estates	Date: 8-6-04
Applicant/Owner: L.K. Development One, Inc.	City/County: Sacramento Co.
Investigator(s): D. Skordal	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Seasonal Wetland (Shallow)
Is the site significantly disturbed (Atypical Situation)? Yes No	Transect ID: 2
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: B

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Hordeum hystrix (D)		FAC	9.		
2. Lolium perenne		FAC	10.		
3. Polygonum monspeliensis		FACW	11.		
4. Lythrum hyssopifolia		FACW	12.		
5. Brodiaea minor		UPL	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100% FAC Dominated

Remarks: FAC community

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ✓ Sediment Deposits/Organic Detritus/Algae
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ✓ Oxidized Root Channels in Upper 12 inches
- ✓ Water-Stained Leaves
- ___ Local Soil Survey Data
- ✓ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Shallow depression w/ algae matting, water stains, & oxidized root channels on live roots!

Map Unit Name (Series and Phase): (213) San Joaquin silt loam, leveled, 0-1 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-8	10YR 4/3	yes		silt loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ✓ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: Hydric Soil assumed based on field indicators of aquic moisture regime.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes) No	Is this Data Point Within a Wetland?	(Yes) No
Wetland Hydrology Present?	(Yes) No		
Hydric Soils Present?	(Yes) No		

Remarks: Seasonal Wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Kwan Elder Creek Estates	Date: 8-6-04
Applicant/Owner: L.K. Development One, Inc.	City/County: Sacramento Co.
Investigator(s): D. Skordal	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Adjacent upland – grassland
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 2
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: C

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus Mollis (D)		FACU-	9.		
2. Vulpia myuros (D)		FACU	10.		
3. Bromus diandrus		UPL	11.		
4. Briza Minor		FACW	12.		
5. Erodium sp.		UPL	13.		
6. Holocarpha virgata		UPL	14.		
7. Rumex crispus		FACW-	15.		
8. Hordeum hystrix		FAC	16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). None

Remarks: Upland grassland community located between SW3 and SW4.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Sloping terrain ± 8-12" above bottom elev. of adj. SW's. Area lacks indicators of wetland hydrology.

Map Unit Name (Series and Phase): (213) San Joaquin silt loam, leveled, 0-1 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-8	10YR 4/3	None		fine sandy loam

Hydric Soil Indicators:

___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed or Low-Chroma Colors
___ Concretion in upper 3 inches
___ High Organic Content in Surface Layer in Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (No)
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? Yes (No)

Is this Data Point Within a Wetland? Yes (No)

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Kwan Elder Creek Estates	Date: 8-6-04
Applicant/Owner: L.K. Development One, Inc.	City/County: Sacramento Co.
Investigator(s): D. Skordal	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Seasonal wetland (shallow)
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 2
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: D

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Hordeum hystrix (D)		FAC	9.		
2. Lolium perenne		FAC	10.		
3. Rumex crispus		FACW-	11.		
4. Vulpia myuros		FACU	12.		
5. Bromus mollis		FACU	13.		
6. Leontodon leysseri		FACU	14.		
7. Eremocarpus setigerus		UPL	15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100% FAC Dominated

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ✓ Sediment Deposits/Organic Detritus/Algae
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ✓ Oxidized Root Channels in Upper 12 inches
- ✓ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Shallow depression w/ algae matting, water stains, & oxidized root channels on live roots!

Map Unit Name (Series and Phase): (213) San Joaquin silt loam, leveled, 0-1 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-8	10YR 4/3	yes		sandy silt loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ✓ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: Hydric Soils assumed based upon indicators of aquic Moisture regime.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes) No	Is this Data Point Within a Wetland?	(Yes) No
Wetland Hydrology Present?	(Yes) No		
Hydric Soils Present?	(Yes) No		

Remarks: Seasonal Wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Kwan Elder Creek Estates	Date: 8-6-04
Applicant/Owner: L.K. Development One, Inc.	City/County: Sacramento Co.
Investigator(s): D. Skordal	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Seasonal Wetland ~~Irrigated~~
Is the site significantly disturbed (Atypical Situation)? Irrigated (Yes) No	Transect ID: 2
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: E

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Juncus xiphioides (D)		OBL	9.		
2. Hordeum hystrix (D)		FAC	10.		
3. Lolium perenne (D)		FAC	11.		
4. Deschampsia danthonioides		FACW	12.		
5. Polypogon monspeliensis		FACW+	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks: Area recieves irrigation run-off from adjacent golf range fairway!

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Defined depression w/ algae matting & oxidized rhizospheres; currently influenced/augmented by summer irrigation run-off!

Map Unit Name (Series and Phase): (214) - San Joaquin silt loam, 0-3 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-8	10YR 4/4			fine silt loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ✓ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: Hydric soils assumed based upon indicators of aquic moisture regime!

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes) No	Is this Data Point Within a Wetland?	(Yes) No
Wetland Hydrology Present?	(Yes) No		
Hydric Soils Present?	(Yes) No		

Remarks: Seasonal Wetland — Irrigated

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Kwan Elder Creek Estates	Date: 8-6-04
Applicant/Owner: L.K. Development One, Inc.	City/County: Sacramento Co.
Investigator(s): D. Skordal	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Adjacent upland-grassland
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 2
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: F

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus Mollis (D)		FACU-	9.		
2. Vulpia myuros (D)		FACU	10.		
3. Leontodon leysseri		FACU	11.		
4. Lolium perenne		FAC	12.		
5. Hordeum hystrix		FAC	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). None

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Gentle slope ± 6" above adjacent SW; area lacks indicators of wetland hydrology.

Map Unit Name (Series and Phase): (214) - San Joaquin silt loam, 0-3 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-6	10YR 4/3	None		Sandy silt loam

Hydric Soil Indicators:

___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed or Low-Chroma Colors
___ Concretion in upper 3 inches
___ High Organic Content in Surface Layer in Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (No)
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? Yes (No)

Is this Data Point Within a Wetland? Yes (No)

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Kwan Elder Creek Estates	Date: 8-6-04
Applicant/Owner: L.K. Development One, Inc.	City/County: Sacramento Co.
Investigator(s): D. Skordal	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Vernal Pool (deep)
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 3
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: A

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Lasthenia glaberrima (D)		OBL	9.		
2. Eleocharis Macrostachya (D)		OBL	10.		
3. Eryngium vaseyi (D)		FACW	11.		
4. Ranunculus alveolatus		OBL	12.		
5. Alopecurus howellii		FACW	13.		
6. Psilocarphus brevissimus		OBL	14.		
7. Plagiobothrys stipitatus		OBL	15.		
8. Polypogon monspeliensis		FACW	16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Deep, defined depression w/ algae matting and oxidized root channels on live roots.

SOILS

Map Unit Name (Series and Phase): (214) - San Joaquin silt loam, 0-3 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-10	10YR4/2	yes/heavy		clay loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ✓ Aquic Moisture Regime
- ✓ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ✓ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes) No	Is this Data Point Within a Wetland? (Yes) No
Wetland Hydrology Present?	(Yes) No	
Hydric Soils Present?	(Yes) No	

Remarks: Vernal Pool

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Kwan Elder Creek Estates	Date: 8-6-04
Applicant/Owner: L.K. Development One, Inc.	City/County: Sacramento Co.
Investigator(s): D. Skordal	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Adjacent upland-grassland
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 3
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: B

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus Mollis (D)		FACU-	9.		
2. Vulpia myuros (D)		FACU	10.		
3. Taeniatherum caput-medusae (D)		UPL	11.		
4. Holocarpha virgata		UPL	12.		
5. Leontodon leyseri		FACU	13.		
6. Hordeum hystrix		FAC	14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). None

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Undulating terrain ± 2 feet above elev. of adjacent UP; area lacks indicators of wetland hydrology!

Map Unit Name (Series and Phase): (214) - San Joaquin silt loam, 0-3 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-6	10YR 3/3	yes		Sandy silt loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	No	Is this Data Point Within a Wetland?	Yes No
Wetland Hydrology Present?	Yes	No		
Hydric Soils Present?	Yes	No		

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: Kwan Elder Creek Estates	Date: 8-6-04
Applicant/Owner: L.K. Development One, Inc.	City/County: Sacramento Co.
Investigator(s): D. Skordal	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Irrigated pasture - grazed
Is the site significantly disturbed (Atypical Situation)? Irrigated (Yes) No	Transect ID:
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: 4

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus Mollis (D)		FACU-	9.		
2. Vulpia myuros (D)		FACU	10.		
3. Hordeum hystrix (D)		FAC	11.		
4. Holocarpha virgata		UPL	12.		
5. Rumex crispus		FACW	13.		
6. Rumex conglomerates		FACW	14.		
7. Lolium perenne		FAC	15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 33%

Remarks: Formerly irrigated horse pasture - heavily grazed!

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Nearly level to gentle slope, irrigated in recent past for horse grazing. Lacks indicators of wetland hydrology!

Map Unit Name (Series and Phase): (214) - San Joaquin silt loam, 0-3 % slopes

Drainage Class: Mod. well drained

Taxonomy (Subgroup): Abruptic Durixeralfs

Field Observations Confirm Mapped Type? Yes No

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-6	10YR 3/3	none		Fine sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	No
Wetland Hydrology Present?	Yes	No
Hydric Soils Present?	Yes	No

Is this Data Point Within a Wetland? Yes No

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Kwan Elder Creek Estates	Date: 8-6-04
Applicant/Owner: L.K. Development One, Inc.	City/County: Sacramento Co.
Investigator(s): D. Skordal	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Upland grassland
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID:
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: 5

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Hordeum hystrix (D)		FAC	9.		
2. Lolium perenne (D)		FAC	10.		
3. Erodium botrys (D)		UPL	11.		
4. Bromus Mollis		FACU-	12.		
5. Bromus diandrus		UPL	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 66% FAC

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Shallow depression lacking algae matting, water stains, oxidized root channels and/or other indicators of long-term saturation or ponding.

Map Unit Name (Series and Phase): (213) San Joaquin silt loam, leveled, 0-1 % slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-8	10YR 4/3	Yes/faint		Sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? FAC (Yes) No

Wetland Hydrology Present? Yes (No)

Hydric Soils Present? Yes (No)

Is this Data Point Within a Wetland? Yes (No)

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Kwan Elder Creek Estates	Date: 8-6-04
Applicant/Owner: L.K. Development One, Inc.	City/County: Sacramento Co.
Investigator(s): D. Skordal	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Flood Irrigated Pasture
Is the site significantly disturbed (Atypical Situation)? Irrigated (Yes) No	Transect ID:
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: 6

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Cynodon dactylon (D)		FAC	9.		
2. Paspalum dilatatum (D)		FAC	10.		
3. Elymus sp.		—	11.		
4. Plantago lanceolata			12.		
5. Cichorium intybus			13.		
6. Cyperus eragrostis (D)			14.		
7. Lotus corniculatus			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).

Remarks: Vegetation sustained by flood irrigation!

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ✓ Inundated → Irrigation (Artificial)
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Leveled terrain currently inundated by flood irrigation for grazing pasture. Area lacks indicators of wetland hydrology absent irrigation.

Map Unit Name (Series and Phase): (216) San Joaquin-Durixeralfs Complex, 0-1% Slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs / Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-10	10YR 3/3	yes		clay loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	FAC	(Yes)	No
Wetland Hydrology Present?		Yes	(No)
Hydric Soils Present?		Yes	(No)

Is this Data Point Within a Wetland? Yes (No)

Remarks: Non-wetland

APPENDIX B

DELINEATION MAP

APPENDIX C

PLANT LIST

LIST OF PLANT SPECIES OBSERVED ON THE KWAN-ELDER CREEK ESTATES PROPERTY AND THEIR STATUS AS WETLAND INDICATOR SPECIES

Scientific Name	Common Name	Status [1&2]
Agrostis avenacea	hairy flower bentgrass	FACW*
Aira caryophyllea	silver hairgrass	UPL
Alopecurus howellii	Howell's foxtail	FACW+
Amsinckia intermedia	fiddleneck	UPL
Artemesia douglasiana	Douglas' wormwood	FACW
Asclepias fascicularis	slender milkweed	FAC
Asclepias speciosa	showy milkweed	FAC
Avena fatua	wild oats	UPL
Avena barbata ssp. *consanguinea*	slender wild oats	UPL
Boisduvalia cleistogama	cleistogamous spike-primrose	OBL
Brassica sp.	mustard	NI
Briza minor	little quaking grass	FACW-
Brodiaea sp.	brodiaea	---
Bromus diandrus (*B. rigidus*)	rip-gut grass	UPL
Bromus mollis	soft chess	FACU-
Centaurea solstitialis	yellow star-thistle	UPL
Chenopodium album	lamb's quarters	FAC
Cichorium intybus	chickory	UPL
Cirsium sp.	thistle	---
Convolvulus arvensis	bindweed	UPL
Cynodon dactylon	Bermuda grass	FAC
Cyperus eragrostis	tall flatsedge	FACW
Deschampsia danthonioides	purple hairgrass	FACW
Downingia sp.	downingia	OBL
Echinochloa crusgalli	barnyard grass	FACW
Eleocharis macrostachya	creeping spikerush	OBL
Eremocarpus setigerus	doveweed	UPL
Erodium sp.	filaree	UPL
Eryngium vaseyi	coyote thistle	FACW
Eucalyptus sp.	gum	---
Festuca arundinacea	tall fescue	FAC-
Geranium dissectum	cut-leaf geranium	UPL
Holocarpha virgata	tarweed	UPL
Hordeum hystrix (*H. geniculatum*)	Mediterranean barley	FAC
Hordeum leporinum	barley	NI

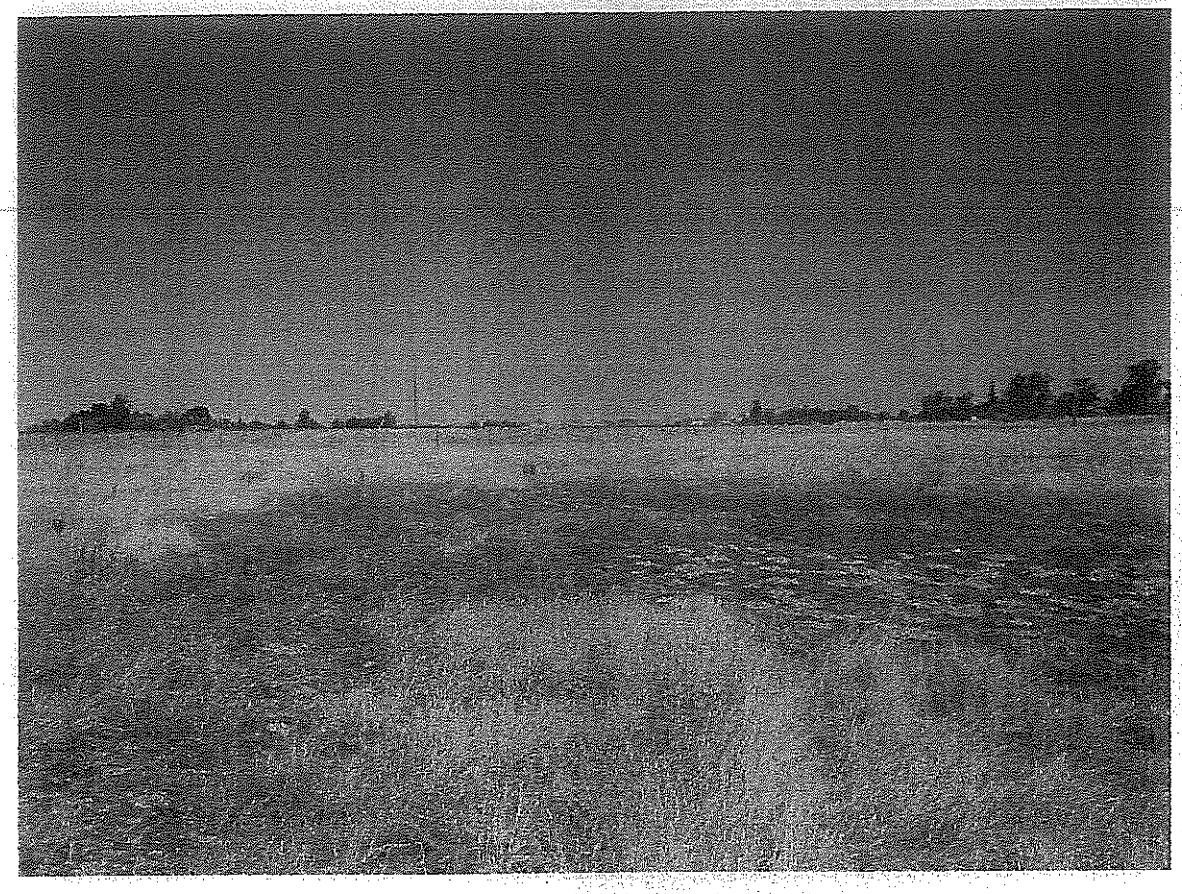
[1] Reed, P.B. 1988. National List of Plant Species That Occur in Wetlands: California (Region 0). Biological Report 88(26.10) May 1988. National Ecology Research Center, National Wetland Inventory, U.S. Fish and Wildlife Service, St. Petersburg, Fl.

[2] OBL = obligate; FACW = facultative wetland; FAC = facultative; FACU = facultative upland; UPL = upland; and NI = no indicator.

Scientific Name	Common Name	Status
Hypochaeris glabra	smooth cats tongue	UPL
Juglans californica (J. nigra)	California walnut	UPL
Juncus bufonius	toad rush	FACW+
Juncus sp.	rush	---
Juncus xiphioides	iris-leaf rush	OBL
Lactuca serriola	prickly lettuce	FAC
Lasthenia glaberrima	smooth goldfields	OBL
Lasthenia fremontii	Fremont's goldfields	OBL
Leontodon leysseri	hairy hawkbit	FACU
Leptochloa fascicularis	bearded sprangle-top	OBL
Lolium perenne (L. multiflorum)	perennial ryegrass	FAC*
Lotus corniculatus	bird's foot trefoil	FAC
Lotus purshianus	Spanish clover	FAC
Lupinus bicolor	two-color lupine	UPL
Lythrum hyssopifolia	loosestrife	FACW
Malus sylvestris	apple	UPL
Marrubium vulgare	common horehound	FAC
Morus alba	mulberry	---
Navarretia leucocephala	white-headed navarretia	OBL
Olea europaea	olive	UPL
Paspalum dilatatum	dallis grass	FAC
Picris echioides	bristly ox-tongue	FAC
Phalaris sp.	canary grass	---
Plagiobothrys stipitatus var. micranthus	slender popcorn flower	OBL
Plantago lanceolata	English plantain	FAC-
Platanus racemosa	California sycamore	FACW
Poa annua	annual bluegrass	FACW-
Polygonum aviculare	postrate knotweed	FAC
Polypogon monspeliensis	annual rabbit-foot grass	FACW+
Prunus sp.	fruit trees	UPL
Psilocarphus brevissimus	wooly marbles	OBL
Quercus lobata	valley oak	FAC
Ranunculus alveolatus (R. bonariensis var. trisepalus)	Carter's buttercup	OBL
Raphanus sativus	wild radish	UPL
Rosa californica	wild rose	FAC+
Rubus procerus	Himalayan blackberry	FAC
Rumex acetosella	sheep sorrel	FAC-
Rumex conglomeratus	clustered dock	FACW
Rumex crispus	curly dock	FACW-
Salix hindsiana	sandbar willow	FACW
Silybum marianum	milk thistle	UPL
Solanum sp.	nightshade	FACU-UPL
Sonchus arvensis	field sow thistle	FACU

Scientific Name	Common Name	Status
Spergularia rubra	purple sand spurry	FAC-
Taeniatherum caput-medusae	medusa-head	UPL
Trichostema lanceolatum	vinegar weed	UPL
Trifolium hirtum	rose clover	UPL
Trifolium sp.	clover	---
Typha angustifolia	narrow-leaf cattail	OBL
Veronica peregrina	purslane speedwell	OBL
Vicia villosa	winter vetch	---
Vulpia myuros	rat-tail fescue	FACU
Xanthium spinosum	spiny cocklebur	FAC+
Xanthium strumarium	rough cocklebur	FAC+

Dry-Season Sampling for Federally Listed Large Branchiopods at the Elder Creek Estates Project Sacramento County, California



Prepared for: LK Development One, Inc.
9601 Jorney Court
Granite Bay, California 95746
Contact: Tim Kwan
(916) 783-7878

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DEPARTMENT OF ENVIRONMENTAL REVIEW AND ASSESSMENT

Prepared by: Helm Biological Consulting
8110 Granite Oaks Drive
Granite Bay, CA 95746
Contact: Brent Helm
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November 2004

DRY-SEASON SAMPLING FOR FEDERALLY LISTED LARGE BRANCHIOPODS AT THE ELDER CREEK ESTATES PROJECT SACRAMENTO COUNTY, CALIFORNIA

INTRODUCTION

Helm Biological Consulting was contracted by LK Development One, Inc., to conduct dry-season sampling for federally listed large branchiopods (e.g., vernal pool tadpole shrimp and vernal pool fairy shrimp) at the Elder Creek Estates Project.

The Elder Creek Estates project consists of a 90-acre parcel located south of Florin Road and just east of Elk Grove-Florin Road, in the City of Elk Grove, Sacramento County, California (Northwest ½ of Section 6, Township 7 North, and Range 6 East of the Elk Grove 7.5 Minute U.S. Geologic Survey Topographic Quadrangle map) (Figure 1).

This report discusses the methods and results of the dry-season sampling for the presence of large branchiopods in seven seasonally inundated basins at the Elder Creek Estates, Sacramento County, California.

METHODS

Dr. Brent Helm conducted dry-season sampling under permit TE-795930-3 of Section 10 (a)(1)(A) of the federal Endangered Species Act, 16 U.S.C. 1531 *et seq.*, and its implementing regulations. Methods generally followed U.S. Fish and Wildlife Service (USFWS) *Interim Survey Guidelines to Permittees for Recovery Permits under Section 10 (a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods* (1996) and are described below.

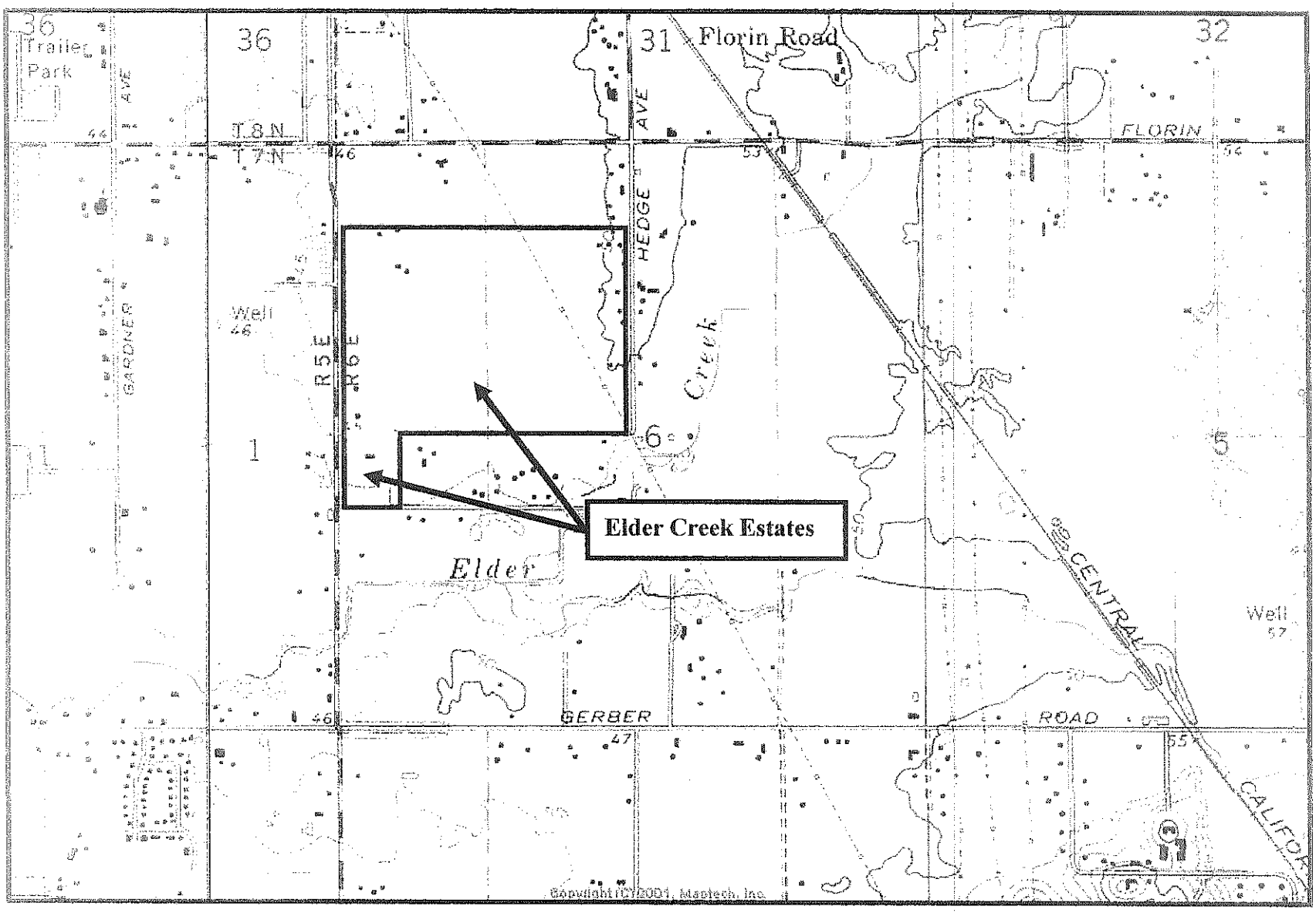

Figure 1. Site vicinity (Source: US Geological Survey Elk Grove 7.5 minute Quadrangle map)

Sampling involved the collection of ten soil sub-samples mainly from the lowest topographic areas within each suitable habitat onsite. Soil samples were placed in 1-liter size plastic freezer bags and marked with the project name, basin number, and date. The soil was then transported to a laboratory for processing and analysis.

In the laboratory, a brine solution was prepared by mixing table salt (NaCl) with lukewarm tap water in a large container. The collected soil material was placed in the brine solution. The soil material was then gently worked by hand to breakdown any persistent soil structure. The organic material rising to the top of the brine solution was skimmed off and placed in a 600-micron diameter pore-size sieve stacked atop a 75-micron diameter pore-size sieve. The soil material was processed through the top sieve by flushing it with lukewarm tap water while gently rubbing it with a soft-bristle brush. The soil retained from the 75-micron diameter pore size sieve was then removed and thinly (1 mm) spread into plastic petri dishes.

The contents of each petri dish were examined under a 10 to 240-power zoom binocular microscope. A minimum of 0.5-hour was spent searching the contents of each petri dish for large branchiopod cysts (embryonic eggs). Dr. Helm's large branchiopod cyst reference collection and scanning electron micrographs of cysts (Hill and Shepard 1998, Mura 1991, and Gilchrist 1978) were used to identify and compare any cysts observed within the soil samples.

RESULTS

Visual examinations of the soils collected from the seven basins onsite did not reveal any evidence of large branchiopod species occurrence (i.e., fairy shrimp or tadpole shrimp cysts, carapaces of *Lepidurus* sp) (See Table 1).

Table 1. Results of Soil Examinations

Basin No.	Insects Exo-Skeletons	Micro-Turbularian Cysts	Ostracod Carapaces	Cladocera Epphippia	Copepod Cysts	Ostracod Cysts	Collombolia
W-1	X			X			X
W-2	X	X	X	X	X		
W-3	X	X	X	X			X
W-4	X	X		X			
W-5	X	X	X	X			
W-6	X			X			X
W-7	X	X					X

Representative photographs of the basins onsite are found in Appendix A.

LITERATURE CITED

Gilchrist, B. M. 1978. Scanning electron microscope studies of the egg shell in some Anostraca (Crustacea: Branchiopoda). Cell Tiss. Res. 193: 337-351.

Hill, R. E., and W. D. Shepard. 1998. Observation on the identification of California anostracan cysts. Hydrobiologia 359: 113-123.

Mura, G. 1991. SEM morphology of resting eggs in the species of the genus *Branchinecta* from North America. J. Crust. Biol. 11: 432-436.

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APPENDIX A. REPRESENTATIVE PHOTOGRAPHS

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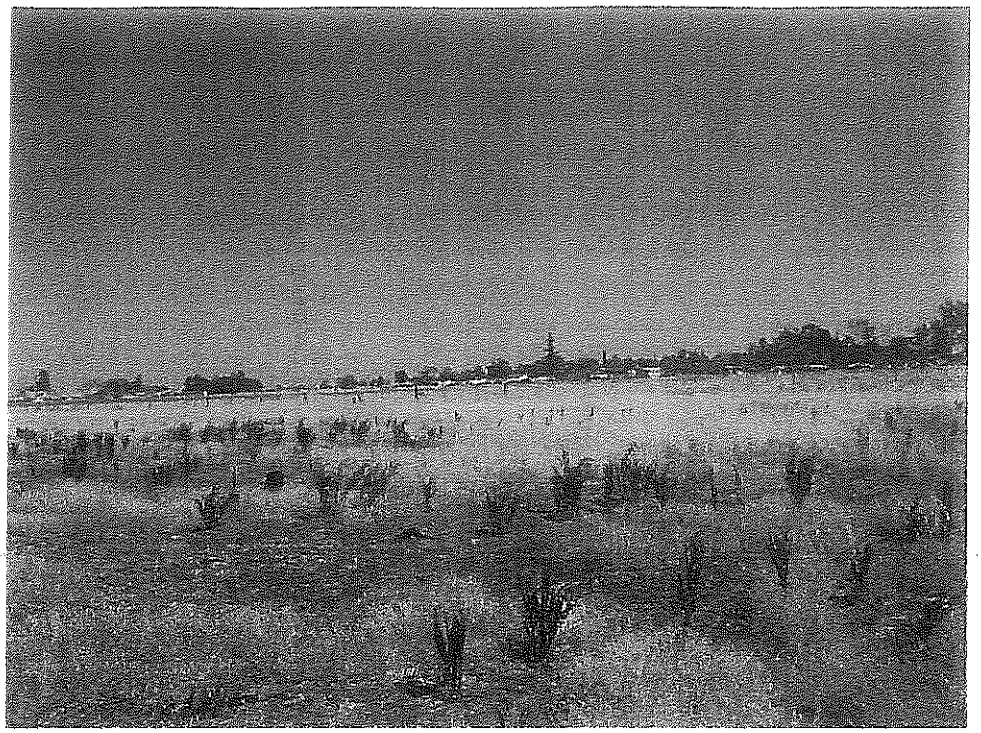
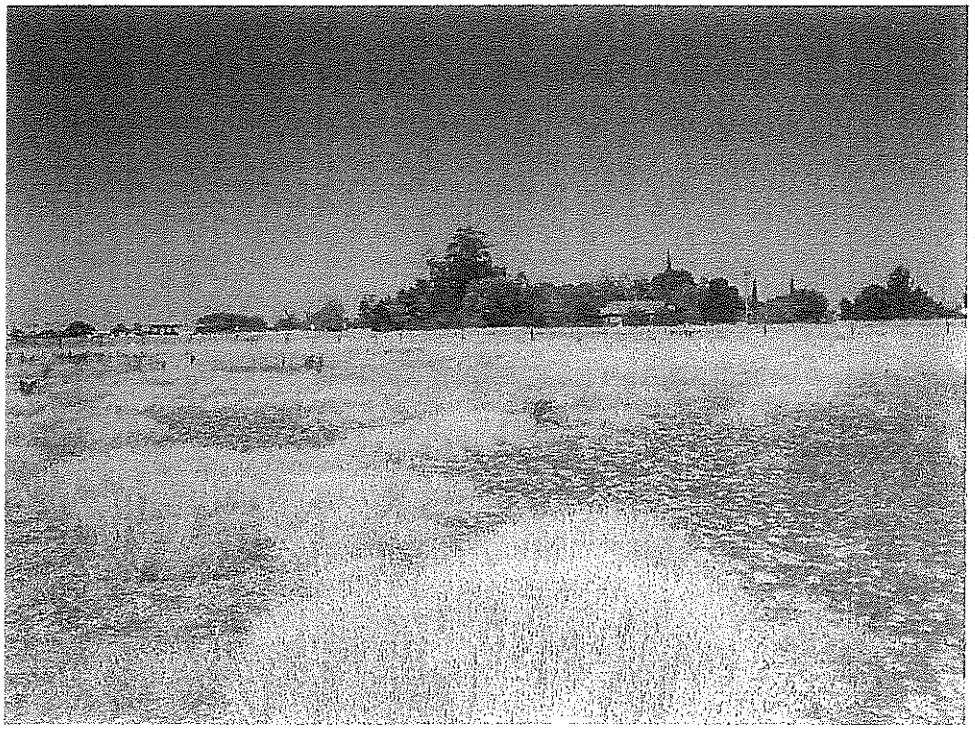
Elder Creek Estates W-2

Elder Creek Estates W-1

Elder Creek Estates W-3



Elder Creek Estates W-5



Elder Creek Estates W-4

Elder Creek Estates W-6

Elder Creek Estates W-7

WET-SEASON SAMPLING
FOR
FEDERALLY LISTED LARGE BRANCHIOPODS
AT THE
ELDER CREEK ESTATES
SACRAMENTO COUNTY, CALIFORNIA

Prepared for: LK DEVELOPMENT ONE, INC.
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Granite Bay, CA 95746
Contact: Tim Kwan
(916) 783-7878

Prepared by: HELM BIOLOGICAL CONSULTING
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Contact: Brent Helm
(916) 781-6776

RECEIVED
JUL 23 2007
DEPARTMENT OF ENVIRONMENTAL REVIEW AND ASSESSMENT

June 2005

HELM
BIOLOGICAL CONSULTING
8110 Granite Oaks Drive, Granite Bay, CA 95746

WET-SEASON SAMPLING FOR FEDERALLY LISTED LARGE BRANCHIOPODS AT THE ELDER CREEK ESTATES SACRAMENTO COUNTY, CALIFORNIA

INTRODUCTION

Helm Biological Consulting was contracted by LK Development One, Inc. to conduct wet-season sampling for federally listed large branchiopods (e.g., vernal pool fairy shrimp [*Branchinecta lynchi*] and vernal pool tadpole shrimp [*Lepidurus packardi*]) at the Elder Creek Estates.

The Elder Creek Estates consists of a 90-acre parcel located south of Florin Road and just east of Elk Grove-Florin Road, in the City of Elk Grove, Sacramento County, California (Northwest ½ of Section 6, Township 7 North, and Range 6 East of the Elk Grove 7.5 Minute U.S. Geological Survey Topographic Quadrangle map) (Figure 1).

This report discusses the methods and results of the wet-season sampling for the presence of large branchiopods at the Elder Creek Estates.

METHODS

Dr. Brent Helm conducted wet-season sampling under permit TE-795930-3 of Section 10 (a)(1)(A) of the federal Endangered Species Act, 16 U.S.C. 1531 *et seq.*, and its implementing regulations. Methods generally followed U.S. Fish and Wildlife Service (USFWS) *Interim Survey Guidelines to Permittees for Recovery Permits under Section 10 (a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods* (1996) and are described below. All areas that potentially could support federally listed large branchiopods were sampled. Potential habitat for large branchiopods is defined as

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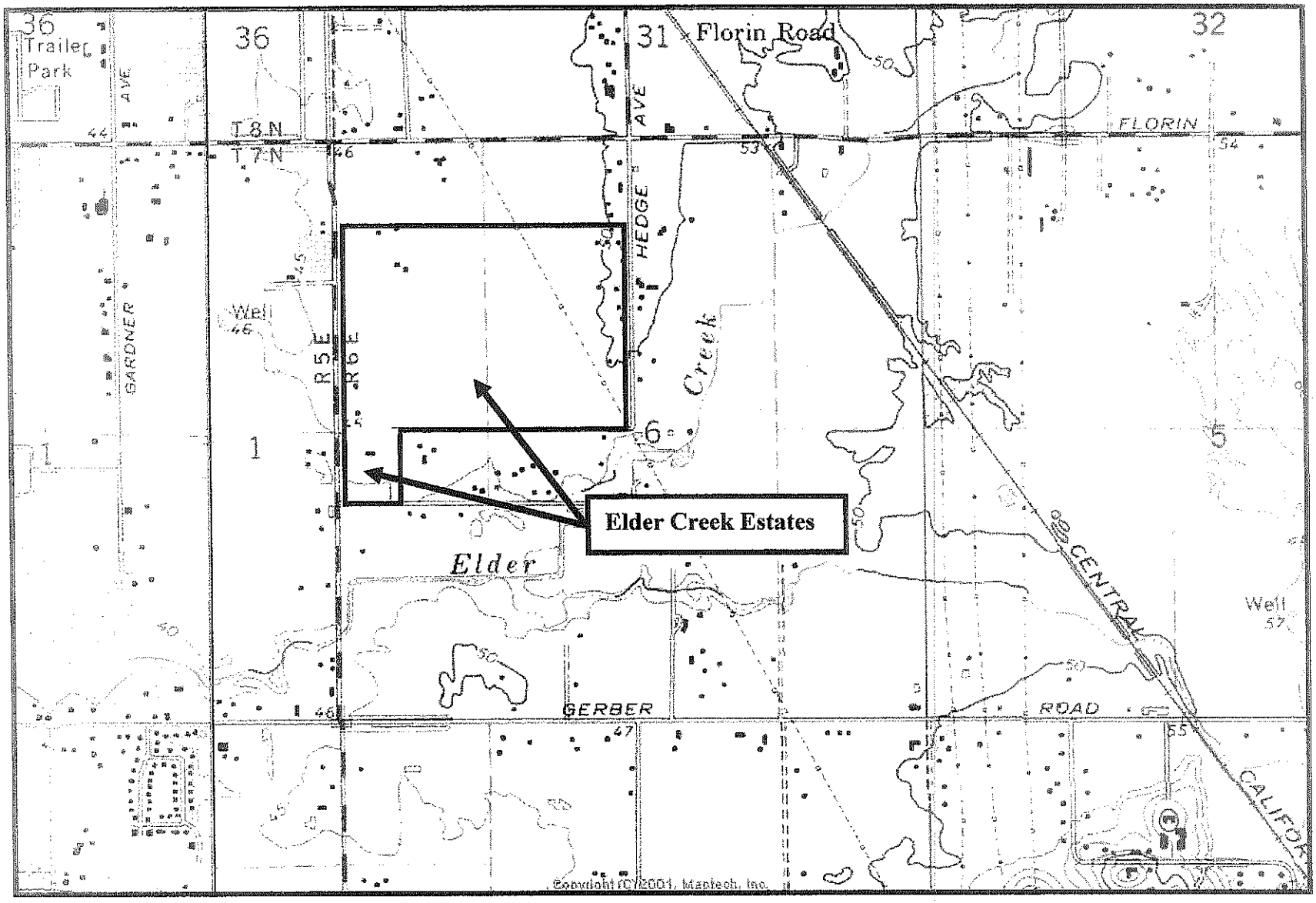

Figure 1. Site vicinity (Source: US Geological Survey Elk Grove 7.5 minute Quadrangle map)

any seasonal inundated depression that on average ponds water two (2) inches or greater in depth for 30 or more consecutive days. Potential habitat characteristics of large branchiopods are based on the life history of Central Valley endemics (Eriksen and Belk 1999; Helm 1998, 1999; Helm and Volmar 2002). Habitats that flow water (e.g., creeks, streams, ephemeral drainages) or semi-to-permanently inundated areas were not considered suitable habitat for federally listed large branchiopods.

Sampling was conducted on December 17 and 31, 2004; January 5, 20, and 27, 2005; February 11, and 25, 2005; March 6 and 22, 2005; and April 4 and 18, 2005.

Wet-season sampling entailed dip netting all potential habitats on site for active large branchiopods. All potential habitats were sampled at roughly two-week intervals (or less), after they were inundated with a minimum of one inch of water. All macroscopic organisms captured within the dipnet were identified to the lowest taxonomic group justifiable (in the field), recorded in field data forms, and then released back into the habitat from which they were collected.

RESULTS

All seasonally inundated basins occurring on site were sampled using wet-season survey techniques for the presence of large branchiopods (Exhibit A). No evidence of large branchiopods (i.e., active adults or *Lepidurus* sp. carapaces) was observed within the basins sampled. Appendix A contains representative photographs of the basins on site.

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Eriksen, C. H., and D. Belk. 1999. Fairy shrimps of California's puddles, pools, and playas. Mad River Press, Inc. Eureka, CA. 196 pp.

Helm, B. P. 1999. Feeding ecology of *Linderiella occidentalis* (Dodds) (Crustacea: Anostraca). Doctoral thesis. University of California, Davis. 158 pp.

Helm, B. P. 1998. Biogeography of eight large branchiopods endemic to California.

Pages 124-139 *in* Witham, C. W., E. T. Bauder, D. Belk, W.R. Ferren Jr., and R. Ornduff. (eds.). Ecology, conservation, and management of vernal pool ecosystems –proceeding from a 1996 conference. California Native Plant Society, Sacramento, CA. 285 pp.

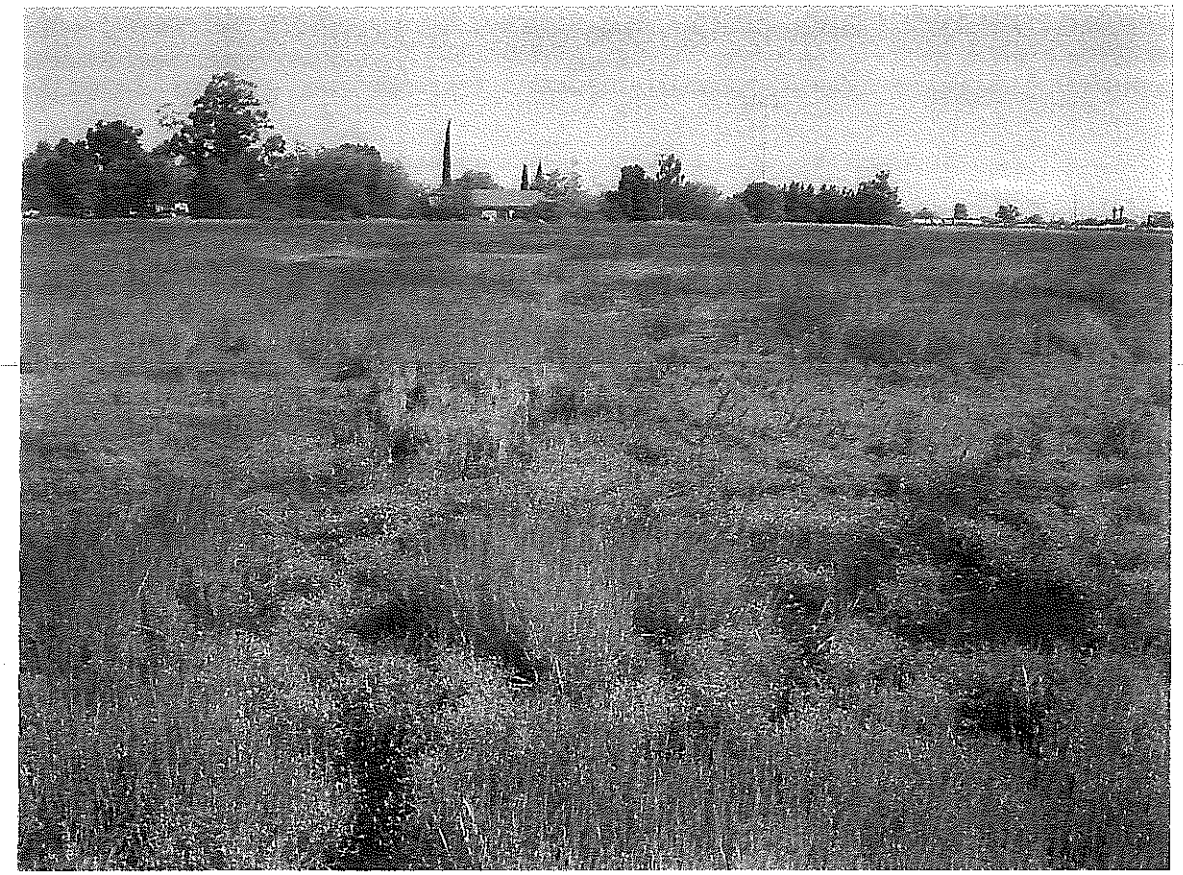
Helm, B. P., and J. E. Vollmar. 2002. Vernal pool large brachiopods. Pages 151-190 *in* John E. Vollmar (ed.). Wildlife and rare plant ecology of eastern Merced County's vernal pool grasslands. Sentinel Printers, Inc. CA. 446 pp.

APPENDIX A. REPRESENTATIVE PHOTOGRAPHS

Photograph of a California kingsnake (*Lampropeltis getulus californiae*).

Photograph of seasonal wetland 3.

Photograph of seasonal wetland 4.



Photograph of seasonal wetland 3.

Photograph of seasonal wetland 3.

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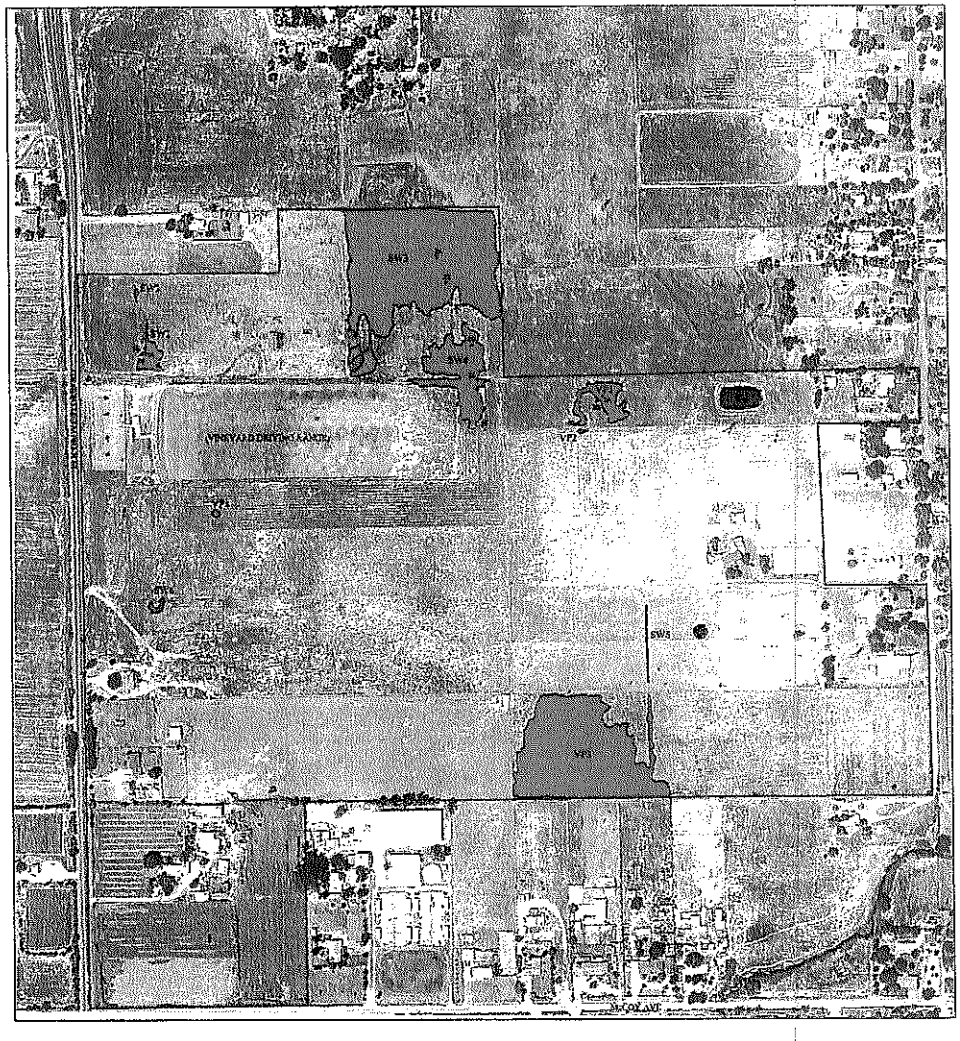
JURISDICTIONAL DELINEATION MAP
KWAN-ELDER CREEK ESTATES
(Sacramento County, California)



N

Legend

- Vernal Pools/VP1-VP4 (2.88 Acres)
- Seasonal Wetlands/SW1-SW6 (4.6 Acres)
- Excavated Basins/P1-P2 (Non-Jurisdictional)
- Data Points
- Study Area Boundary

GIBSON AND SKORDAL, LLC
WETLANDS CONSULTANTS

Prepared: August 2004
Base Map: Aerial Photography Flown in May 2002

Exhibit A.

Page: 1

11/24/2008 9:12:27 AM

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name:

Project Name: Elder Creek Estates

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2008 TOTALS (lbs/day unmitigated)	20.63	126.14	64.07	0.03	478.51	6.91	485.42	99.94	6.36	106.30	11,456.85
2009 TOTALS (lbs/day unmitigated)	1,494.76	119.19	167.34	0.16	478.51	6.51	485.02	99.94	5.99	105.93	18,340.59

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	47.08	10.37	28.18	0.00	0.09	0.09	12,919.90

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	65.36	62.89	765.27	0.59	93.28	18.06	58,652.00

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SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	112.44	73.26	793.45	0.59	93.37	18.15	71,571.90

7

SIERRA NEVADA ARBORISTS

LK DEV. ONE, LLC

ELDER CREEK ESTATES
(County of Sacramento, California)

INITIAL ARBORIST REPORT
AND
INVENTORY SUMMARY

RECEIVED
SEP 01 2004
DEPARTMENT OF
REVIEW AN

Submitted by:

Edwin E. Stirtz, Consulting Arborist
ISA Certified Arborist WE-0510A
Member, American Society of Consulting Arborists
SIERRA NEVADA ARBORISTS

June 2, 2004

503 Anthony Court ◆ Roseville, CA 95678 ◆ 916-784-7940 ◆ 916-784-1901 Fax

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DEFINITIONS AND RATINGS 12-14

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This consultant's report, dated June 2, 2004, is for the exclusive and confidential use of LK Dev. One, LLC concerning its Elder Creek Estates project located in the County of Sacramento, 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 2, 2004

Mr. Tim Kwan
LK DEV. ONE, LLC
9601 Jorney Court
Granite Bay, California 95746

Re: ***Initial Arborist Report and Inventory Summary:***
Elder Creek Estates -- County of Sacramento, California

Dear Mr. Kwan:

On May 25, 2004, Sierra Nevada Arborists visited the site of LK Dev. One, LLC's Elder Creek Estates project located in the County of Sacramento, California. The purpose of this site visit was to conduct a field inspection to identify, inventory and evaluate all trees within the project boundaries which measure 4 inches and greater in diameter at breast height ("DBH"), specifically including identification of any native oaks, California Sycamore, Northern California Black Walnut, Oregon Ash, Goodding's Black Willow, California Box Elder and White Alder, as well as any other significant trees which measure 19 inches DBH and larger. The trees which met the defined criteria were identified in the field with a round, metal-stamped number tag beginning with Tree No. 1 which was affixed to the tree's trunk. For your reference, the numbers utilized in this report correspond to the tree tag affixed to the tree in the field, and those numbers were rough-plotted on the aerial map which was provided for reference by Bruce Walters of MacKay & Somps Engineering.

INVENTORY SUMMARY

As you will see, 166 trees totaling 2,140 aggregate diameter inches have been documented within the Inventory Summary Spreadsheet. Our site visit found that the vast majority of these trees are ***non-native species*** which are not protected by the County of Sacramento Tree Preservation and Protection Ordinance; however, these trees have been memorialized within this report due to their size (i.e., all trees which measure 4"+ DBH) to accurately document the trees' species, diameter and dripline measurements for mapping purposes. For ease of reference, these trees have been separately highlighted in blue within the Inventory Summary Spreadsheet. Our site visit found 35 trees totaling 887 aggregate diameter inches which met the criteria of the Preservation Ordinance due to their species and/or size. Composition of these 35 trees include 9 California Black Walnut and 2 Valley Oak, as well as 6 Blue Gum Eucalyptus, 5 Aleppo Pine, 2 Red Iron Bark Eucalyptus, 2 Plum, 2 Silver Maple, 2 Edible Fig, 1 Modesto Ash, 1 Pyracantha, 1 Olive, 1 Arizona Cypress and 1 American Elm due to their size (i.e., aggregate diameter measurement of 19 inches and larger).

Recommended Removals

At this time we have not recommended the removal of any trees from the project boundaries. It should be noted, however, that several trees within the project boundaries possess structural defects and/or characteristics which warrant further evaluation and/or annual

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monitoring to assess the trees' ongoing structural integrity. For reference, these trees have been separately highlighted in yellow within the Inventory Summary Spreadsheet. At this juncture these trees have not been recommended for removal since development plans have not yet been finalized. We do draw your attention to these trees, however, and note that ***precaution should be taken if development will occur within the fall zone of these trees.*** If retained, these trees should be monitored on an annual basis by an ISA Certified Arborist to assess the trees' ongoing structural integrity and potential for hazard in a developed environment.

Construction Impact Assessment

Please note that while this is a detailed review of the trees within the current project boundaries impact assessments cannot be definitively determined until development plans have been finalized. As you know, trees are living organisms whose condition may change at any time. Therefore, a complete assessment of construction impacts and specific mitigation recommendations cannot be made until those development plans have been refined and finalized. At that time an ISA Certified Arborist should review the improvement plans to provide an analysis of construction impacts, including identification of trees which may require removal for home construction and other contemplated development activities. This will be particularly important if home construction activities will fall within or near the fall zone of a tree which has been noted as having structural defects and/or questionable long-term longevity. The review should also include an assessment of impacts which will be sustained by those trees which will be preserved within the project boundaries, along with associated mitigation recommendations In the meantime, our report has provided recommendations for pre-construction maintenance, as well as General Preservation Recommendations which should be utilized as a guideline for the protection of trees which may be preserved within the development area.

GENERAL COMMENTS AND ARBORIST'S DISCLAIMER

As you know, a tree permit and/or authorization to develop should be obtained from the County of Sacramento approving contemplated development activities, including the removal of protected trees, within the project area. All terms and conditions of the tree permit are the sole and exclusive responsibility of the developer. It should also be noted that prior to final inspection the County *may* require written verification from an ISA Certified Arborist certifying the approved removal activities and/or implementation of the mitigation measures outlined for the preserved trees on the site. Sierra Nevada Arborists cannot provide written Certification of Compliance unless we have been provided with a copy of the approved site development plans and applicable permits, and are on site to monitor and observe regulated activities during the course of construction. Therefore, it will be necessary for the developer to notify Sierra Nevada Arborists well in advance (48-hours prior notice) of any regulated activities which are scheduled to occur on site so that those activities can be properly monitored and documented for compliance certification.

Lastly, at this juncture we believe implementation of the general recommendations outlined within this report will attempt to afford the trees the best possibility for survival. However, these recommendations and their implementation should not be viewed as a guarantee or warranty against the trees' ultimate demise and/or failure in the future, and are being provided solely for the purpose of obtaining development authorization from the County of Sacramento. Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of the trees and ***attempt to reduce the risk of living near trees***. Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Since trees are living organisms, conditions are often hidden within the tree and below ground, and their condition may change at any time. Arborists cannot guarantee that a tree will be healthy and/or safe under all circumstances, or for a specific period of time. Likewise remedial treatments cannot be guaranteed. Trees can be managed but they cannot be controlled. To develop and live near trees is to accept some degree of risk and the only way to eliminate all risk associated with trees is to eliminate all of the trees. ***An entity who develops land and/or builds homes with a tree in the vicinity should be aware of this Arborists' Disclaimer and be further advised that the developer and their future homeowners assume the risk that a tree could at any time suffer a branch and/or limb failure, blow over in a storm and/or fail for no apparent reason which may cause bodily injury or property damage.*** Sierra Nevada Arborists cannot predict acts of nature, including without limitation storms of sufficient strength which can take down even a healthy tree. The information contained within this report is believed to be true to the best of the author's knowledge and experience as of the date it was prepared; however, certain conditions may exist which only a comprehensive, scientific, investigation might reveal which should be performed by other consulting professionals. Neither this author nor Sierra Nevada Arborists has assumed any responsibility for liability associated with the preserved trees on or adjacent to the Elder Creek Estates project site, their future demise and/or any damage which may result therefrom.

Thank you for allowing Sierra Nevada Arborists to assist you with this initial phase of 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
Member, American Society of Consulting Arborists

Enclosures
cc: Mr. Bruce Walters, MacKay & Somps (w/enclosures)

LK DEV. ONE LLC
Elder Creek Estates Project
County of Sacramento, California
ARBORIST INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						REMOVALS (inches)	NOTABLE CHARACTERISTICS	MAINTENANCE RECOMMENDATIONS
						RT CR	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1	Brazilian Pepper	*(Schinus terebinthifolius)*	1,1,2	4	4	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
2	Fruiting Mulberry	*(Morus alba)*	1,1,2,2,3,6	15	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
3	Pin Oak	*(Quercus palustris)*		7	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
4	Pin Oak	*(Quercus palustris)*		5	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
5	Pin Oak	*(Quercus palustris)*		5	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
6	Pin Oak	*(Quercus palustris)*		5	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
7	Aleppo Pine	*(Pinus halepensis)*	6,6,7,8	27	16	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
8	Aleppo Pine	*(Pinus halepensis)*	8,10	18	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
9	Ponderosa Pine	*(Pinus ponderosa)*		9	4	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
10	Aleppo Pine	*(Pinus halepensis)*	8,9	17	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
11	Aleppo Pine	*(Pinus halepensis)*	13,14	27	24	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
12	Aleppo Pine	*(Pinus halepensis)*	15,19	34	26	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
13	Aleppo Pine	*(Pinus halepensis)*	5,8,9	22	13	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
14	Apple Tree	*(Malus sp.)*	1,2,3,4	10	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
15	Ponderosa Pine	*(Pinus ponderosa)*		15	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
16	Aleppo Pine	*(Pinus halepensis)*	10,16	26	21	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
17	Olive Tree	*(Olea europaea)*	3,4,5,5	17	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
18	Olive Tree	*(Olea europaea)*	4,5	9	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
19	Olive Tree	*(Olea europaea)*	2,3,3,6	14	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
20	Olive Tree	*(Olea europaea)*	5,6,7	18	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
21	Olive Tree	*(Olea europaea)*		10	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY							Measured at 3' above grade	
22	Olive Tree	*(Olea europaea)*		12	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
23	American Elm	*(Ulmus americana)*		4	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
24	American Elm	*(Ulmus americana)*	3,4,5	12	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
25	American Elm	*(Ulmus americana)*	4,5	9	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
26	American Elm	*(Ulmus americana)*	4,4	8	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
27	American Elm	*(Ulmus americana)*		4	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
28	American Elm	*(Ulmus americana)*	2,3,10	15	18	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
29	Olive Tree	*(Olea europaea)*		8	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
30	American Elm	*(Ulmus americana)*		5	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
31	American Elm	*(Ulmus americana)*		4	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
32	Olive Tree	*(Olea europaea)*		9	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
33	American Elm	*(Ulmus americana)*	3,3,4,7	17	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
34	American Elm	*(Ulmus americana)*		4	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
35	American Elm	*(Ulmus americana)*		5	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
36	American Elm	*(Ulmus americana)*	3,4,5	12	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
37	Olive Tree	*(Olea europaea)*		7	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
38	American Elm	*(Ulmus americana)*	3,3,4,7	17	18	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
39	American Elm	*(Ulmus americana)*	4,4,5	13	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
40	American Elm	*(Ulmus americana)*		4	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
41	Olive Tree	*(Olea europaea)*	3,3	6	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
42	American Elm	*(Ulmus americana)*		7	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
43	American Elm	*(Ulmus americana)*		5	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
44	American Elm	*(Ulmus americana)*		5	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
45	Olive Tree	*(Olea europaea)*	3,4	7	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
46	Olive Tree	*(Olea europaea)*		8	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
47	Olive Tree	*(Olea europaea)*	3,4,4	11	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
48	Plum Tree	*(Prunus sp.)*	1,1,1,3	6	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
49	Olive Tree	*(Olea europaea)*	5,5,8	18	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
50	Plum Tree	*(Prunus sp.)*	3,4,5	12	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
51	Olive Tree	*(Olea europaea)*	1,2,2,2	7	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
52	Olive Tree	*(Olea europaea)*	2,2,2	6	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								

LK DEV. ONE LLC
Elder Creek Estates Project
County of Sacramento, California
ARBORIST INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						REMOVALS (inches)	NOTABLE CHARACTERISTICS	MAINTENANCE RECOMMENDATIONS
						RT CR	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
53	Olive Tree	*(Olea europaea)*	7,8	15	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
54	Olive Tree	*(Olea europaea)*	2,2,2,3,3	12	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
55	Brazilian Pepper	*(Schinus terebinthifolius)*	1,1,1,2	5	5	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
56	Brazilian Pepper	*(Schinus terebinthifolius)*	1,1,1,1,2	6	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
57	Olive Tree	*(Olea europaea)*	2,2,3,3,3,4	17	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
58	Olive Tree	*(Olea europaea)*	1,1,1,1	4	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
59	Olive Tree	*(Olea europaea)*	2,2,7	11	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
60	Olive Tree	*(Olea europaea)*		5	4	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
61	Olive Tree	*(Olea europaea)*	5,5,6	16	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
62	Olive Tree	*(Olea europaea)*	4,4,5,6	19	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
63	Olive Tree	*(Olea europaea)*		9	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
64	California Black Walnut	*(Juglans hindsii)*		7	9	Poor	Poor	Poor to fair	Fair	Poor	Fair		Callusing basal/lower trunk wound, west side; moderate to significant decay; above average amount of deadwood	***Recommend annual inspection by an ISA Certified Arborist; structural integrity and/or longevity are questionable***
65	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	9,13,22	44	20	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Weak primary crotches; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
66	Edible Fig	*(Ficus carica)*	5,8	13	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
67	Apple Tree	*(Malus sp.)*	2,2,2	6	5	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
68	Hollywood Juniper			7	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
69	Plum Tree	*(Prunus sp.)*	1,1,4	6	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
70	Olive Tree	*(Olea europaea)*	4,5,6	15	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
71	Olive Tree	*(Olea europaea)*		5	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
72	Olive Tree	*(Olea europaea)*		11	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
73	Olive Tree	*(Olea europaea)*	5,5	10	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
74	Olive Tree	*(Olea europaea)*	3,3,4,4	14	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
75	California Black Walnut	*(Juglans hindsii)*		16	8	Poor	Poor	Poor to fair	Fair	Poor	Fair		Callusing basal/lower trunk wound, north side; moderate to significant decay; above average amount of deadwood	***Recommend annual inspection by an ISA Certified Arborist; structural integrity and/or longevity are questionable***
76	California Black Walnut	*(Juglans hindsii)*	5,8	13	16	Poor to fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing buttress root wounds from cattle damage, east side; callusing lower trunk wound, east side, 2' above grade; minor decay; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
77	Plum Tree	*(Prunus sp.)*	3,4,6,6,9	28	16	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing lower trunk wounds, various locations; minor decay; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
78	Plum Tree	*(Prunus sp.)*		10	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
79	Plum Tree	*(Prunus sp.)*	3,3,4,4,6,6,6,9	41	22	Poor to fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing basal/lower trunk wounds, various locations; minor decay; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
80	Plum Tree	*(Prunus sp.)*	2,2,4	8	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
81	California Black Walnut	*(Juglans hindsii)*		13	12	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
82	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	3,7	10	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
83	Silk Tree	*(Albizia julibrissin)*		9	18	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
84	Silk Tree	*(Albizia julibrissin)*		8	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
85	Silk Tree	*(Albizia julibrissin)*		9	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
86	Silver Maple	*(Acer saccharinum)*		27	30	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
87	English Walnut	*(Juglans regia)*		16	20	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
88	Non-native evergreen shrub		4,7	11	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
89	Modesto Ash	*(Fraxinus velutina)*		31	33	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Weak primary crotches; slightly above average amount of deadwood; pruning wounds, various locations	Clean out crown; prune to reduce weight; ***recommend annual inspection by an ISA Certified Arborist***
90	Cherry Tree	*(Prunus sp.)*		15	18	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
91	Crepe Myrtle	*(Lagerstroemia indica)*	1,1,1,1,1,2,2	9	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
92	Lemon Tree	*(Citrus sp.)*	4,5	9	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								

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ARBORIST INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						REMOVALS (inches)	NOTABLE CHARACTERISTICS	MAINTENANCE RECOMMENDATIONS
						RT CR	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
93	Edible Fig	*(Ficus carica)*	9,14	23	16	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing trunk wounds, various locations; minor to moderate decay; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
94	California Black Walnut	*(Juglans hindsii)*	5,8,17	30	20	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
95	Silver Maple	*(Acer saccharinum)*		10	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
96	California Black Walnut	*(Juglans hindsii)*		23	21	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Measured at 3' above grade; callusing lower trunk wounds, various locations; minor to moderate decay; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
97	Pyracantha		5,7,10	22	14	Fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair		Callusing lower trunk wounds, various locations; minor to moderate decay; above average amount of deadwood; somewhat sparse foliage	Clean out crown; subsurface liquid fertilization injection
98	Olive Tree	*(Olea europaea)*	7,8,9	24	18	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
99	Olive Tree	*(Olea europaea)*		7	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
100	Apricot Tree	*(Prunus sp.)*	5,6	11	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
101	Edible Fig	*(Ficus carica)*	10,12	22	17	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing lower trunk wounds, various locations; minor to moderate decay; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
102	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		80	50	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Located offsite to east, but overhangs property line; weak primary crotches; above average amount of deadwood	Prune to reduce weight; clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
103	Pyracantha			4	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
104	Italian Cypress	*(Cupressus sempervirens)*		4	2	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
105	Italian Cypress	*(Cupressus sempervirens)*		4	2	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
106	Italian Cypress	*(Cupressus sempervirens)*		4	2	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
107	Italian Cypress	*(Cupressus sempervirens)*		4	2	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
108	Italian Cypress	*(Cupressus sempervirens)*		4	2	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
109	Italian Cypress	*(Cupressus sempervirens)*		4	2	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
110	Italian Cypress	*(Cupressus sempervirens)*		4	2	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
111	Italian Cypress	*(Cupressus sempervirens)*		4	2	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
112	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		8	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
113	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	5,6	11	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
114	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	5,6,6	17	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
115	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		7	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
116	Almond Tree	*(Prunus sp.)*	2,3,3	8	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
117	Almond Tree	*(Prunus sp.)*	2,3,3,3	11	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
118	Mexican Fan Palm	*(Washingtonia robusta)*		18	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
119	Southern Magnolia	*(Magnolia grandiflora)*	2,2	4	5	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
120	Plum Tree	*(Prunus sp.)*	4,6,7	17	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
121	Liquid Ambar	*(Ambar styracifula)*		6	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
122	Liquid Ambar	*(Ambar styracifula)*		6	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
123	Liquid Ambar	*(Ambar styracifula)*		7	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
124	Liquid Ambar	*(Ambar styracifula)*		4	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
125	Fruitless Mulberry	*(Morus alba)*		11	20	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY							Measured at 3' above grade	
126	Fruitless Mulberry	*(Morus alba)*		12	21	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
127	Sugar Maple			4	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
128	Fruitless Mulberry	*(Morus alba)*		11	23	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
129	Silver Maple	*(Acer saccharinum)*		4	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
130	Fruitless Mulberry	*(Morus alba)*		13	18	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
131	Raywood Ash	*(Fraxinus oxycarpa)*		14	20	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
132	Modesto Ash	*(Fraxinus velutina)*		10	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
133	Modesto Ash	*(Fraxinus velutina)*		13	18	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
134	Red Iron Bark Eucalyptus	*(Eucalyptus sideroxylon)*		9	22	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
135	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	4,4,4,5,5,6,6	34	15	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing lower trunk wounds, various locations; minor decay; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***

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ARBORIST INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						REMOVALS (inches)	NOTABLE CHARACTERISTICS	MAINTENANCE RECOMMENDATIONS
						RT CR	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
136	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	4,7	11	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
137	Arizona Cypress	*(Cupressus arizonica)*	3,4,6	13	21	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
138	Arizona Cypress	*(Cupressus arizonica)*		6	18	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
139	Red Iron Bark Eucalyptus	*(Eucalyptus sideroxylon)*		7	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
140	Red Iron Bark Eucalyptus	*(Eucalyptus sideroxylon)*	11,17	28	24	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Weak primary crotches; slightly above average amount of deadwood; some small limb failures	Clean out crown; prune to reduce weight; ***recommend annual inspection by an ISA Certified Arborist***
141	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		10	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
142	Red Iron Bark Eucalyptus	*(Eucalyptus sideroxylon)*	4,6,7	17	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
143	Red Iron Bark Eucalyptus	*(Eucalyptus sideroxylon)*		16	22	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
144	Red Iron Bark Eucalyptus	*(Eucalyptus sideroxylon)*	8,8,10	26	20	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Weak primary crotches; above average amount of deadwood	Clean out crown; prune to reduce weight; ***recommend annual inspection by an ISA Certified Arborist***
145	Red Willow	*(Salix laevigata)*	1,1,1,2,2,2	9	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
146	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	13,16	29	33	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing lower trunk wounds, various locations; minor decay; weak primary crotches; slightly above average amount of deadwood	Clean out crown; prune to reduce weight; ***recommend annual inspection by an ISA Certified Arborist***
147	Blue Gum Eucalyptus	*(Eucalyptus globulus)*		25	31	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing lower trunk wounds, various locations, to 10' above grade; minor decay; weak primary crotches; slightly above average amount of deadwood	Clean out crown; prune to reduce weight; ***recommend annual inspection by an ISA Certified Arborist***
148	Arizona Cypress	*(Cupressus arizonica)*	4,8	12	19	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
149	Arizona Cypress	*(Cupressus arizonica)*	9,12	21	21	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Weak primary crotch; above average amount of deadwood	Clean out crown; prune to reduce weight; ***recommend annual inspection by an ISA Certified Arborist***
150	American Elm	*(Ulmus americana)*		21	27	Fair	Fair	Poor to fair	Fair	Poor to fair	Fair		Some old topping cuts on primary branches with resulting sprout growth	Clean out crown; perform corrective pruning
151	Silk Tree	*(Albizia julibrissin)*		9	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
152	California Black Walnut	*(Juglans hindsii)*	2,3,3,4,4	16	13	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing wounds on primary stems and lower scaffold limbs with minor decay; slightly above average amount of deadwood	Clean out crown
153	Silver Maple	*(Acer saccharinum)*	4,6,8,8	26	20	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
154	European White Birch	*(Betula pendula)*	1,2,3	6	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
155	Silver Maple	*(Acer saccharinum)*		6	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
156	London Plane	*(Platanus acerfolia)*		14	21	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
157	Edible Fig	*(Ficus carica)*	2,2,3,4	11	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
158	Fruitless Mulberry	*(Morus alba)*		11	23	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
159	Blue Gum Eucalyptus	*(Eucalyptus globulus)*	4,7,9,9,10	39	20	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Weak primary crotches	Clean out crown; prune to reduce weight; ***recommend annual inspection by an ISA Certified Arborist***
160	California Black Walnut	*(Juglans hindsii)*		22	26	Poor to fair	Poor	Poor to fair	Fair	Poor	Fair		Callusing basal/lower trunk wound to 12' above grade, east side; minor to moderate decay; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
161	English Walnut	*(Juglans regia)*		15	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
162	Fruitless Mulberry	*(Morus alba)*		11	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
163	Fruitless Mulberry	*(Morus alba)*		15	26	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
164	Valley Oak	*(Quercus lobata)*		4	5	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
165	Valley Oak	*(Quercus lobata)*		9	12	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
166	California Black Walnut	*(Juglans hindsii)*		7	10	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown

TOTAL INVENTORIED TREES = 166 Trees (2140 aggregate diameter inches)
TOTAL RECOMMENDED TREE REMOVALS = 0 Trees
PRECAUTIONARY TREES HIGHLIGHTED FOR REFERENCE

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.

STREET AND UTILITY MITIGATIVE MEASURES

Generally, impacts from street construction alone are less of an impact than those occurring with dry and wet utility construction. Often it is very difficult or impossible to effectively preserve a tree with more than 30% of its critical root zone area falling within the PUE/street.

Dry Utilities.

Since dry utilities are typically located behind the curb and gutter and/or sidewalks, where applicable, they fall within the closest proximity to trees preserved outside of the roadway. The dry utilities tend to be shallow, within the top 5 feet of the soil profile. Unfortunately, in this region that is also typically where tree roots are found. Where possible, dry utilities should be routed on the opposite side of the street from tree locations. This would require more street crossings than normally planned; however, impacts to trees would be greatly lessened. In some circumstances, hand digging the utilities through critical root zone areas may be an option. Since the dry utility profile is usually 3-4 in depth and includes multiple conduits or plumbing due to the various utilities, boring beneath the critical root zone area is not usually effective.

Wet Utilities.

The greatest conflicts with wet utilities typically arise from deep sanitary sewers or storm drains. Soil conditions and safety concerns often require than trench openings at ground level be quite large. Therefore, the storm and sewer locations must be carefully considered. In some circumstances where a particularly valuable tree may be impacted by wet utilities boring may be an option. Since water main construction tends to be more shallow than storm drains or sewers, and flow lines are not as critical, boring can often be most effective in preserving tree roots.

Streets/Hardscape.

Should the street construction sections be 18" or less, the percentage of encroachment into the critical root zone area may be able to exceed 20%. If this is possible, determinations cannot be made until an accurate evaluation of the root system profiles on the site has been completed. It is impossible to preserve roots within the street section profile. Further, the construction of the street alters the gaseous exchange and oxygen to the tree's root system. In some circumstances aeration systems may mitigate a small portion of these impacts.

Hardscape (concrete slabs, walkways, etc.) should be minimized within the critical root zone area. Grade cuts in excess of 12" should be avoided. In some circumstances aeration systems may be required to reduce root system stress.

CONCLUSION

In an effort to minimize tree removals in the early phases of a project a category for potential tree removals should be established. This category would include those trees which are located in areas that would expose them to moderate or significant encroachments and/or construction impacts. As construction occurs and construction staking is installed, assessment of impacts are much more accurate than those based simply on plan review. At that time, determinations by the Project Arborist and Agency Representatives may result in preservation of trees which may have previously appeared as requiring removal on the plans.

DEFINITIONS AND RATINGS

Within this report you will find the following information defined as follows:

Tree Number:	Corresponds to aluminum tag attached to the tree.
Species 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.

Structure and Vigor Ratings:

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.

Encroachment Ratings:

MINOR - No anticipated long-term negative effects

MODERATE – Potential long-term negative effects

SIGNIFICANT – Probable long-term negative effects

Maintenance Recommendations:

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.

SUBSURFACE LIQUID FERTILIZATION INJECTION/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.

Page: 1

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Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name:

Project Name: Vineyard Market Square -- all commercial - 040209

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2010 TOTALS (lbs/day unmitigated)	5.08	37.12	22.44	0.00	3.21	2.29	5.50	0.67	2.10	2.78	3,550.83
2011 TOTALS (lbs/day unmitigated)	15.37	43.55	27.27	0.00	3.22	2.71	5.93	0.68	2.49	3.17	4,567.10

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.21	0.15	1.66	0.00	0.01	0.01	162.90

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	3.62	4.29	48.59	0.05	7.60	1.46	4,757.39

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SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	3.83	4.44	50.25	0.05	7.61	1.47	4,920.29

Biological Resource Assessment

For

Vineyard Market Square

(aka Badella Property)

Sacramento County, California

Superseded Date:
14 August 2007

Original Date:
11 July 2005

Prepared For:
Petrovich Development Company

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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Vineyard Market Square
(AKA Badella Property)

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Attachment B – Potentially Occurring Special-Status Species
Attachment C – CNDDB Data Report

INTRODUCTION

At the request of the Petrovich Development Company, we have conducted a biological resource assessment of the Vineyard Market Square (aka Badella Property) site in Sacramento County, California. This assessment includes a wetland delineation and preliminary special-status species assessment. The subject property is located at the southeast corner of the Gerber Road and Elk Grove-Florin Road intersection (Figure 1. *Project Site and Vicinity*). Undeveloped pastureland, rural residences, golf course and residential development surround the subject property. The site corresponds to a portion of Section 6, Township 7 North, and Range 7 East of the "Elk Grove, California" 7.5-minute quadrangle (U.S. Department of the Interior, Geological Survey, photorevised 1979).

The purpose of this biological resource assessment is to identify waters of the United States (U.S.) that would be subject to Section 404 and 401 of the Clean Water Act, to identify special-status plants and animals on-site, and to assess the potential for occurrence of special-status plant and animal species within the site.

METHODOLOGY

The field investigation was conducted on 7 June 2004, during which time ECORP biologist Keith Kwan walked meandering transects through the site. The site was visually inspected for the presence of waters of the U.S., special-status species, and the potential habitat for regionally occurring special-status species. This field assessment for special-status species was cursory and does not represent determinate-level surveys conducted according to agency approved protocols.

A follow-up field visit with the U.S. Army Corps of Engineers (Corps) was conducted on 21 March 2006. This assessment has been updated to reflect the verified wetland delineation and the change in status of potential species.

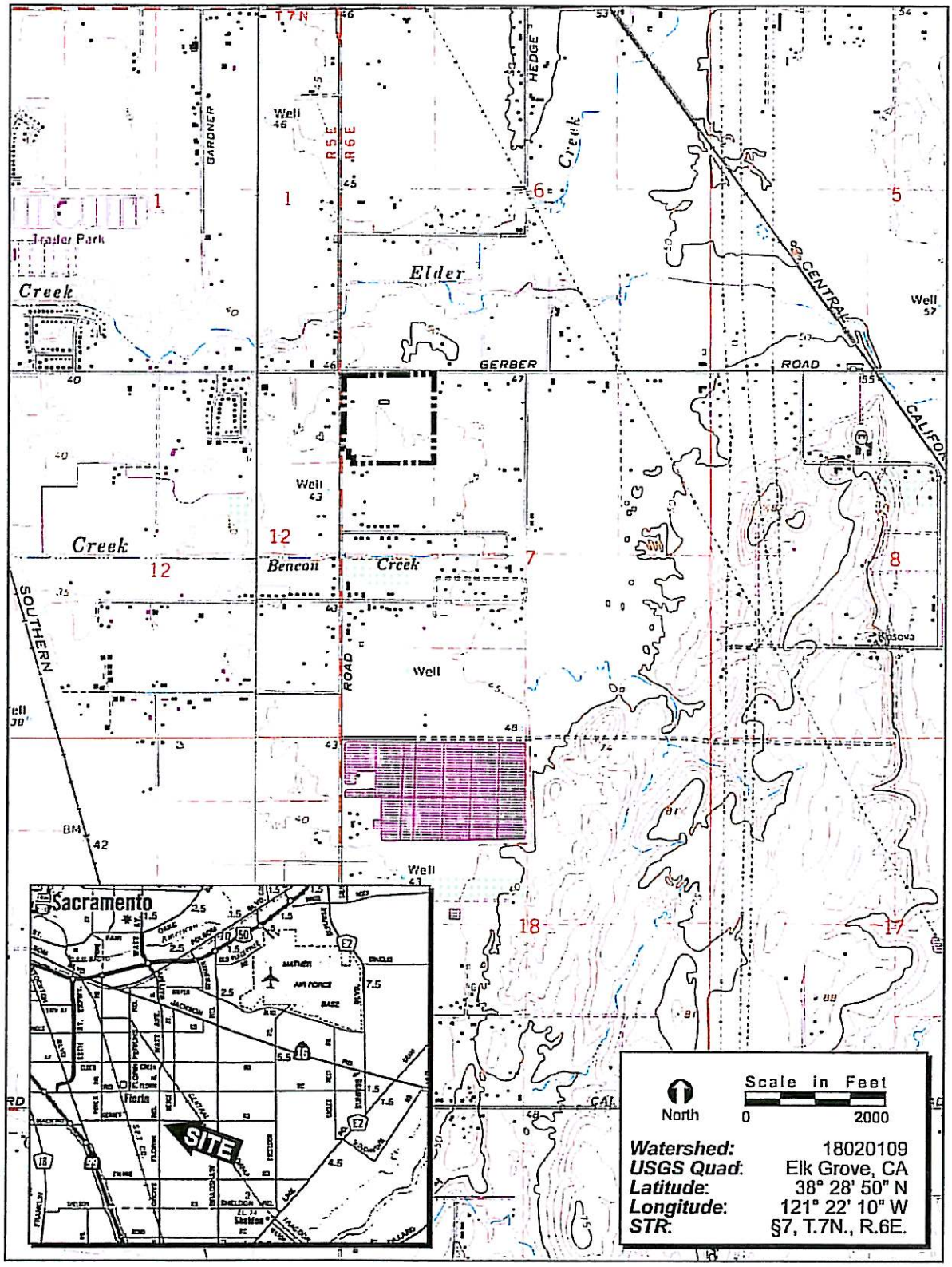

FIGURE 1. Project Site and Vicinity

2004-156 Badella Property

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Waters of the U.S.

The wetland delineation was conducted in 7 June 2004, in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and prepared in accordance with the *Minimum Standards for Acceptance of Preliminary Wetland Delineations* (U.S. Army Corps of Engineers 2001). According to these methods, wetlands are defined by a combination of hydric soil, hydrophytic vegetation, and hydrologic criteria. Plant species were identified to assess whether the hydrophytic vegetation criterion was met. In addition to the vegetation, obvious indicators of wetland hydrology were recorded. These indicators included inundation, soil saturation, oxidized root channels, etc. Soil pits were dug to approximately 16 inches, or until refusal, and the soil examined for hydric soil indicators. Typical hydric soil indicators include mottles (spots of contrasting color), gleying (bluish or greenish coloration), or dark gray coloration (chroma of 1 or less in un-mottled soils, 2 or less in mottled soils).

A color aerial photograph (photo date: November 2002; scale: 1"=200') 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. Wetland boundaries were assessed through data point collection, review of aerial photographs, and visual inspection. Wetland boundaries that could not easily be interpreted from aerial photography were walked using a Trimble™ GPS Pathfinder Pro XR receiver with a TSCe data collector to comply with the sub-meter accuracy requirement. Each data point coordinate location is depicted on the wetland delineation map.

This field survey was conducted during the dry season, and all ephemeral features were dry. Most plants on-site have flowered and set seed.

Special-Status Species

The preliminary 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.

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.

This assessment of potentially occurring special-status plant and wildlife species is based upon available resources, as described above, and a reconnaissance-level field survey.

RESULTS AND DISCUSSION

Existing Site Conditions

The survey area is comprised of leveled to semi-flat terrain, and is situated at an elevation of approximately 45 feet above mean sea level. According to the *Soil Survey of Sacramento Count, California* (U.S. Department of Agriculture, Soil Conservation Service 1993), two soil units have been mapped for the site (Figure 2. *NRCS Soil Types*). These are: (213) San Joaquin silt loam, leveled, 0 to 1 percent slopes and (214) San Joaquin silt loam, 0 to 3 percent slopes. Neither has been listed as a hydric soil (U.S. Department of Agriculture, Soil Conservation Service 1987), but (214) contains hydric inclusions in depressions.

Annual grassland is the primary vegetation community on-site. A rural residence, farm buildings, and a bamboo orchard are situated at the northwest corner of the site. According to the current landowner, the site was historically farmed for hay crops but was fallow this past season. A large portion of the site has been leveled for crop production. During this field

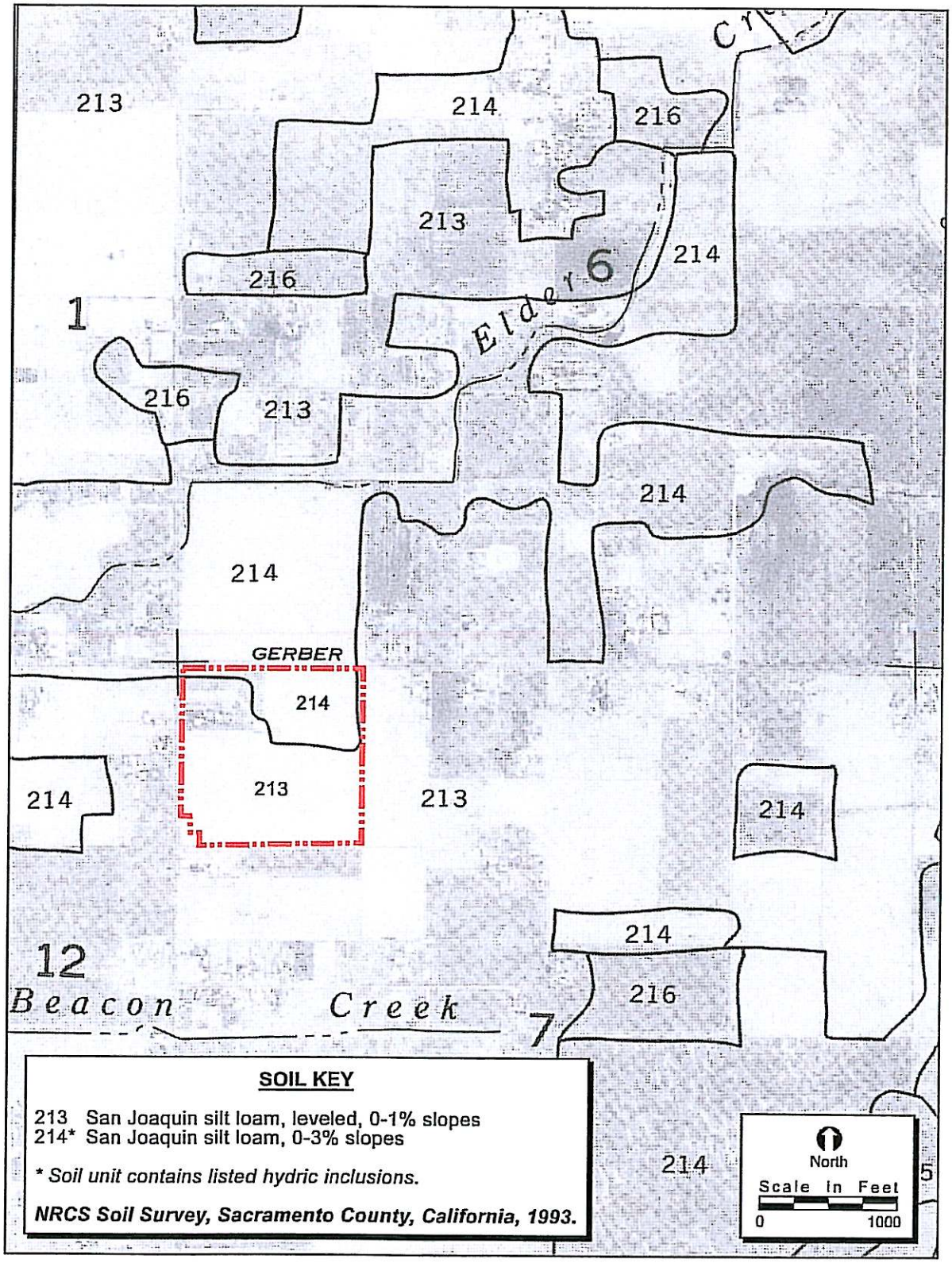

FIGURE 2. NRCS Soil Types

2004-156 Badella Property

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survey, the grassland was comprised of non-native weedy species such as soft brome (*Bromus hordeaceus*), ryegrass (*Lolium multiflorum*), wild oats (*Avena fatua*), vetch (*Vicia* spp.), and barley (*Hordeum murinum*).

Since the original field surveys conducted in 2004, the bamboo orchard, residence, and farm buildings have been removed.

Waters of the U.S.

Within the grassland community, several topographic low areas exhibited wetland hydrology, hydrophytic vegetation, and/or hydric soil. These ephemeral areas were mapped as seasonal wetland and seasonal wetland swale. The ditch that is situated along the southern boundary was included as a water of the U.S. as it exhibits wetland characteristics. Waters of the U.S. mapped and verified by the Corps in October 2006 (Attachment A) include seasonal wetlands (0.927 acre), seasonal wetland swale (0.011 acre), and other waters of the U.S. comprised entirely of the ditch (0.053 acre) (Figure 3. *Wetland Delineation*).

Wetlands

Seasonal wetland areas are ephemerally wet areas where runoff accumulates within low-lying areas and the seasonal wetland swale is linear in nature and expedites site drainage. The vegetative composition of the seasonal wetlands and seasonal wetland swale on-site is primarily comprised of non-native wetland generalist plants. These include ryegrass, Mediterranean barley (*Hordeum marinum*), and curly dock (*Rumex crispus*). A total of 0.415 acre of seasonal wetland and 0.011 acre of seasonal wetland swale have been mapped within the site.

Other Waters

A ditch (0.053 acre) is situated along the southern boundary of the site. The ditch served as the primary site drainage feature during the historic farming operations. Currently, the hydrology of this ditch is similar to that of an ephemeral drainage feature. It carries runoff

CLASSIFICATION	EXISTING ACREAGE
Seasonal Wetland	0.927
Seasonal Wetland Swale	0.011
Ditch	0.053
TOTAL:	0.911

N

SCALE IN FEET
0 125 150
SCALE: 1" = 250'

FIGURE 3. Wetland Delineation

2004-156 Vineyard Market Square

ECORP Consulting, Inc.
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during and immediately after storm events but does not persist and is not influenced by groundwater. The ditch averages from one to two feet wide and exhibits a bed and bank condition.

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 Vineyard Market Square (aka Badella) property. This list is presented in Attachment B. Species include: seven plant species, four aquatic invertebrates, two amphibians, six potential nesting special-status birds, and four non-nesting birds.

According to the California Natural Diversity Database, there are no previously documented occurrences of special-status species within the survey area. However, there are a number of special-status species that have been documented to occur within the Elk Grove, CA 7.5-minute USGS quadrangle (Attachment C).

Plants

Special-status plants that may occur on-site include those that are associated with vernal pools and seasonal wetlands. These 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*, CNPS List 1B), Greene's legenere (*Legenere limosa*, 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). The ditch mapped on-site may represent suitable habitat for Sanford's arrowhead (*Sagittaria sanfordii*, 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 legenere, and Ahart's dwarf rush are not listed and protected pursuant to either state

or federal Acts. However, these species may be considered by local jurisdictions during the CEQA review process.

A determinate survey for special-status plants was conducted on 12 July 2005. No special-status plant species were observed on-site.

Invertebrates

The seasonal wetland basins on-site can provide habitat for the federally-listed vernal pool fairy shrimp (*Branchinecta lynchi*, federal-threatened) and vernal pool tadpole shrimp (*Lepidurus packardi*, federal-endangered), and as such, are often considered by the U.S. Fish and Wildlife Service (USFWS) to represent potentially occupied habitat. Other non-listed special-status invertebrates that may occur on-site include the midvalley fairy shrimp (*Branchinecta mesovalensis*, CNDDB species) and California linderiella (*Linderiella occidentalis*, CNDDB species).

Amphibians

The seasonal wetlands, ditch 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). There are no documented occurrences of California tiger salamander (*Ambystoma californiense*, federal-threatened) within the site or in the vicinity, but the USFWS considers the site to be within the "assumed range" (Central Valley Region) of the species. Their occurrence on-site is unlikely; however, the USFWS may require a habitat assessment and/or determinate surveys for the species.

Birds

The potentially occurring special-status birds on-site include nesting raptors, nesting songbirds, and foraging, wintering or migrant birds. The nesting raptors include both tree nesting and ground nesting species.

The potential for raptors nesting in trees is unlikely due to the limited number of available trees and the close proximity of those trees to residences. However, several raptor species have been observed nesting within close proximity of human habitation. The tree nesting species are white-tailed kite (*Elanus leucurus*, Fish and Game Code fully protected), Cooper's hawk (*Accipiter cooperii*, CDFG species of special concern), and Swainson's hawk (*Buteo swainsoni*, California-threatened and USFWS-bird of conservation concern).

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 USFWS-bird of conservation concern). The grassland community represents potentially suitable nesting habitat for these species. Several ground squirrel holes, which may be utilized by burrowing owls, were observed within the grassland, but no burrowing owls were observed during this reconnaissance-level survey.

One special-status songbird may nest on-site, the loggerhead shrike (*Lanius ludovicianus*, CDFG species of special concern and USFWS-bird of conservation concern). Loggerhead shrikes nest within small trees and shrubs that are near open grasslands, which are used for foraging. No loggerhead shrikes were observed on-site during this initial site assessment.

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. However, grassland 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 conservation concern), golden eagle (*Aquila chrysaetos*, Fish and Game Code §3511-fully protected species, CDFG-species of special concern, and USFWS-bird of conservation concern), Merlin (*Falco columbarius*, CDFG-species of special concern). Tricolored blackbirds (*Agelaius tricolor*, CDFG species of special concern and USFWS-bird of conservation concern) may forage on-site, but there is no suitable nesting habitat.

Mammals

The grassland and wetlands on-site may rarely provided foraging habitat for special-status bats, including Yuma myotis (*Myotis yumanensis*, CNDDB species), Townsend's big-eared bat (*Corynorhinus townsendii townsendii*, CDFG-species of concern), and pallid bat (*Antrozous pallidus*, CDFG-species of concern).

CONCLUSION

Within the grassland community, several topographic low areas exhibited wetland hydrology, hydrophytic vegetation, and/or hydric soil. These ephemeral areas were mapped as seasonal wetland and seasonal wetland swale. The ditch that is situated along the southern boundary was included as a water of the U.S. as it exhibits wetland characteristics. Waters of the U.S. verified by the Corps include seasonal wetlands (0.415 acre), seasonal wetland swale (0.011 acre), and other waters of the U.S. comprised entirely of the ditch (0.053 acre).

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 legenere, slender Orcutt grass, Sacramento Orcutt grass, and Sanford's arrowhead. The seasonal wetlands and seasonal wetland swale may be suitable habitat of vernal pool fairy shrimp, midvalley fairy shrimp, vernal pool tadpole shrimp, California linderiella, and Western spadefoot toad. While the occurrence of California tiger salamander is unlikely, the USFWS may require a habitat assessment and/or determinate surveys. The trees on-site represent potential nesting habitat for white-tailed kite, Cooper's hawk, and Swainson's hawk. Ground-nesting raptors that may nest include Northern harrier and burrowing owl, and the small trees on-site may provide suitable nesting habitat for the loggerhead shrike. A variety of other special-status birds may occasionally forage, but are not expected to nest on-site includes ferruginous hawk, golden eagle, Merlin, and tricolored blackbird.

LIST OF ATTACHMENTS

Attachment A – Wetland Delineation Verification Letter

Attachment B – Potentially Occurring Special-Status Species

Attachment C – CNDDB Data Report

ATTACHMENT A

Wetland Delineation Verification Letter

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

REPLY TO
ATTENTION OF

October [illegible] 2006

Regulatory Branch (200400474)

Phillip Harvey
Petrovich Development Company
5046 Sunrise Boulevard, Suite 100
Fair Oaks, California 95628-4945

Dear Mr. Harvey:

We are responding to your consultant's request for an approved jurisdictional determination for the Vineyard Market Square site (Badella Property). This approximately 36.9-acre site is located at the intersection of Elk Grove-Florin and Gerber Roads, in Section 6, Township 7 North, Range 7 East, MDB&M, Sacramento County, California.

Based on available information, we concur with the estimate of waters of the United States, as depicted on the **April 2006 Vineyard Market Square Wetland Delineation** drawing prepared by **ECORP Consulting, Inc.** Approximately **0.991** acre of waters of the United States, including wetlands, are present within the survey area. These waters are regulated under Section 404 of the Clean Water Act since the seasonal wetlands and on-site ditch flow to Elder Creek through a roadside ditch along the eastern side of Elk Grove-Florin Road. Elder Creek is tributary to Morrison Creek, a tributary to the Sacramento River, a navigable water of the U.S.

This verification is valid for five years from the date of this letter, unless new information warrants revision of the determination before the expiration date. This letter contains an approved jurisdictional determination for your subject site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the South Pacific Division Office at the following address: Doug Pomeroy, Administrative Appeal Review Officer, Army Corps of Engineers, South Pacific Division, CESPD-PDS-O, 333 Market Street, Room 923, San Francisco, California 94105-2195, Telephone: 415-977-8035 FAX: 415-977-8129.

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within 60 days of the NAP. Should you decide to submit an RFA form, it must be received at the above address by December 2, 2006. It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this letter.

You should provide a copy of this letter and notice to all other affected parties, including any individual who has an identifiable and substantial legal interest in the property.

This determination has been conducted to identify the limits of Corps of Engineers' Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

Please refer to identification number 200400474 in any correspondence concerning this project. If you have any questions, please contact Mr. David Leput at our Sacramento Office, 1325 J Street, Room 1480, Sacramento, California 95814-2922, email *david.w.leput@usace.army.mil*, or telephone 916-557-5327. You may also use our website: *www.spk.usace.army.mil/regulatory.html*.

Sincerely,

ORIGINAL SIGNED

Will Ness
Chief, Sacramento Office

Enclosure

Copy furnished without enclosure:

Keith Kwan, ECORP Consulting, Incorporated, 2260 Douglas Boulevard, Suite 160, Roseville, California 95661-4209
William Marshall, Storm Water and Water Quality Certification Unit, Central Valley Regional Water Quality Control Board, 11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114
U.S. Fish and Wildlife Service, Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, California 95825-3901
Vincent King, Planner I, Planning and Community Development Department, County of Sacramento, 827 7th Street, Room 230, Sacramento, California 95814-2406

ATTACHMENT B

Potentially Occurring Special-Status Species

Vineyard Market Square (aka Badella) Property - Potentially Occurring Special-Status Species

	Common Name	Scientific Name	Federal Status	State Status	Other Status	Habitat Description	Approximate Survey Dates
Plants							
	Dwarf downingia	*Downingia pusilla*	-	-	2	vernal pool/wetlands	March-May
	Boggs Lake hedge-hyssop	*Gratiola heterosepala*	-	CE	1B	vernal pools	April-August
	Ahart's dwarf rush	*Juncus leiospermus* var. *ahartii*	-	-	1B	vernal pools	March-May
	Greene's legenere	*Legenere limosa*	-	-	1B	vernal pools	April-June
	Slender orcutt grass	*Orcuttia tenuis*	FT	CE	1B	vernal pools	May-October
	Sacramento orcutt grass	*Orcuttia viscida*	FE	CE	1B	vernal pools	April-July
	Sanford's arrowhead	*Sagittaria sanfordii*	-	-	1B	marsh, creeks, ditches	May-October
Invertebrates							
	Vernal pool fairy shrimp	*Branchinecta lynchi*	FT	-	-	vernal pools/wetlands	November-April
	Midvalley fairy shrimp	*Branchinecta mesovallensis*	-	-	CNDDB	vernal pools/wetlands	November-April
	Vernal pool tadpole shrimp	*Lepidurus packardi*	FE	-	-	vernal pools/wetlands	November-April
	California linderiella	*Linderiella occidentalis*	-	-	CNDDB	vernal pools/wetlands	November-April
Amphibians							
	California tiger salamander (Central California DPS)	*Ambystoma californiense*	FT	-	CSC	vernal pools, wetlands/adjacent grassland	March-May
	Western spadefoot toad	*Spea hammondii*	-	-	CSC, CCR	vernal pools, wetlands/adjacent grassland	March-May
Birds							
	White-tailed kite (nesting)	*Elanus leucurus*	-	-	CFP	woodland, grassland	April-June
	Northern harrier (nesting)	*Circus cyaneus*	-	-	CSC	marsh, grassland	June-July
	Cooper's hawk (nesting)	*Accipiter cooperii*	-	-	CSC	woodland	April-June
	Swainson's hawk (nesting)	*Buteo swainsoni*	-	CT	-	grassland, riparian	March-July
	Ferruginous hawk (wintering)	*Buteo regalis*	-	-	BCC, CNDDB	grassland	November-February
	Golden eagle (nesting and wintering)	*Aquila chrysaetos*	-	-	CFP, CSC,BCC	grassland	November-February
	Merlin (wintering)	*Falco columbarius*	-	-	CSC	woodland, grassland	September-April
	Burrowing owl (burrow sites)	*Athene cunicularia*	-	-	CSC, BCC	grassland	April-July
	Loggerhead shrike	*Lanius ludovicianus*	-	-	CSC, BCC	grassland, woodland	April-May

Vineyard Market Square (aka Badella) Property - Potentially Occurring Special-Status Species (Continued)

	Common Name	Scientific Name	Federal Status	State Status	Other Status	Habitat Description	Approximate Survey Dates
	Tricolored blackbird	*Agelaius tricolor*	-	-	CSC, BCC	marsh,riparian, grassland	April-June
Mammals							
	Yuma myotis	*Myotis yumanensis*	-	-	CNDDB	Riparian woodland, caves, mines, buildings, bridges, rock crevices, trees	April-September
	Townsend's big-eared bat	*Corynorhinus townsendii townsendii*	-	-	CSC	caves, mines, buildings, rock crevices, trees	April-September
	Pallid bat	*Antrozous pallidus*	-	-	CSC	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.
FPT - Formally Proposed for federal listing as Threatened.
FC - Candidate for federal listing as Threatened or Endangered.
BCC - U. S. Fish and Wildlife Service Bird of Conservation Concern
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.
1B - California Native Plant Society/Rare or Endangered in California and elsewhere
2 - California Native Plant Society/Rare or Endangered in California, more common elsewhere
CNDDB - Species that is tracked by CDFG's Natural Diversity Database, but does not have any of the above special-status designations otherwise.

ATTACHMENT C

CNDDB Data Report

Accipiter cooperii

Cooper's hawk

Element Code: ABNKC12040

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G5	CDFG Status: SC
State: None	State: S3	

Habitat Associations

General: 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 EO Index: 31009

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1997-05-28
Site: 1997-05-28

Record Last Updated: 1997-07-07

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.46360° / -121.33042°
UTM: Zone-10 N4258575 E645661
Radius: 80 meters
Elevation: 65 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 07N
Range: 06E
Section: 16 Qtr: NW
Meridian: M

Location: SW OF THE INTERSECTION OF CARMENCITA ROAD AND LAGUNA CREEK, 4 MILES NNE OF ELK GROVE.

Location Detail: 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.

General: 2 ADULTS AND AT LEAST 1 JUVENILE OBSERVED AT NEST ON 28 MAY 1997.

Owner/Manager: PVT

Actinemys marmorata marmorata

northwestern pond turtle — Element Code: ARAAD02031

Status	NDDB Element Ranks	Other Lists
Federal: None	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 EO Index: 46135

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2001-07-11
Site: 2001-07-11
Record Last Updated: 2001-10-12

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.41897° / -121.36913°
UTM: Zone-10 N4253561 E642371
Radius: 80 meters
Elevation: 35 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 07N
Range: 06E
Section: 31 Qtr: NW
Meridian: M

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

Location Detail: 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 & TRAILS EXPERIENCE HEAVY USE BY HUMANS.

General: 1 ADULT OBSERVED.

Owner/Manager: ELK GROVE COMM SERVICES DIST

Agelaius tricolor

tricolored blackbird — Element Code: ABPBXB0020

Status — Federal: None; State: None

NDDB Element Ranks — Global: G2G3; State: S2

Other Lists — CDFG Status: SC

Habitat Associations

General: HIGHLY COLONIAL SPECIES, MOST NUMBEROUS 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.

Occurrence No. 6 — Map Index: 11515 — EO Index: 7319

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Fluctuating

Dates Last Seen — Element: 1994-XX-XX; Site: 1994-XX-XX; Record Last Updated: 2007-01-11

Quad Summary: Elk Grove (3812143/496A), Florin (3812144/496B)
County Summary: Sacramento

Lat/Long: 38.44757° / -121.37821°
UTM: Zone-10 N4256721 E641523
Area:
Elevation: 35 ft

Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON

Township: 07N; Range: 05E; Section: 24; Qtr: NE; Meridian: M

Location: "CALVINE" COLONY SITE; ALONG EAST AND WEST SIDE OF SPRR TRACKS, 0.2-0.6 MILES SSE OF CALVINE ROAD, SE OF SACRAMENTO.

Location Detail: BIRDS ARE FOUND NESTING IN BLACKBERRIES AND FORAGING ALONG STRAWBERRY CREEK AND IN ADJACENT GRASSLANDS, UP TO 2 MILES FROM COLONY.

Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES, ADJACENT TO GRASSLAND.

Threat: THREATENED BY ENCROACHING DEVELOPMENT. REALIGNMENT OF STRAWBERRY CREEK DAMAGED THIS SITE.

General: 320 NESTED IN 1981. IN 1991, BIRDS NESTED IN BLACKBERRIES ALONG STRAWBERRY CREEK; BUSHES ELIMINATED BY RELOCATION OF CREEK. 250 ADS PRESENT IN MAY 1992; NO BIRDS BY 16 JUN 1992. 1,000+ ADS NESTED IN 1993. 250 NESTED IN 1994.

Owner/Manager: UNKNOWN

Occurrence No. 13 — Map Index: 11708 — EO Index: 24789

Occ Rank: None
Origin: Natural/Native occurrence
Presence: Possibly Extirpated
Trend: Unknown

Dates Last Seen — Element: 1981-XX-XX; Site: 1992-06-16; Record Last Updated: 1992-07-02

Quad Summary: Elk Grove (3812143/496A), Carmichael (3812153/512D)
County Summary: Sacramento

Lat/Long: 38.49740° / -121.26967°
UTM: Zone-10 N4262423 E650891
Radius: 1/5 mile
Elevation: 100 ft

Mapping Precision: NON-SPECIFIC
Symbol Type: POINT

Township: 08N; Range: 06E; Section: 36; Qtr: S; Meridian: M

Location: JUST NORTH OF FLORIN ROAD, 0.5 MILE WEST OF EAGLES NEST ROAD, ~8 MILES NE OF ELK GROVE.

General: NESTING COLONY OF 3000 ADULTS OBSERVED IN 1981. SITE VISIT ON 16 JUN 1992; NO BIRDS FOUND.

Owner/Manager: PVT

Occurrence No. 156 — Map Index: 11521 — EO Index: 24687

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen — Element: XXXX-XX-XX; Site: XXXX-XX-XX; Record Last Updated: 1989-08-10

Quad Summary: Florin (3812144/496B), Galt (3812133/496D), Bruceville (3812134/496C), Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.37963° / -121.37439°
UTM: Zone-10 N4249188 E641989
Radius: 1 mile
Elevation: 40 ft

Mapping Precision: NON-SPECIFIC
Symbol Type: POINT

Township: 06N; Range: 05E; Section: 13; Qtr: NE; Meridian: M

Location: 0.5 MILE WEST OF HWY 99, NEAR GRANT LINE ROAD EXIT, APPROXIMATELY 2 MILES SSW OF ELK GROVE

Ecological: NESTING SUBSTRATE CONSISTS OF CATTAILS AND BULRUSH.

General: OBSERVED NESTING BETWEEN 1969 AND 1974.

Owner/Manager: UNKNOWN

Agelaius tricolor

tricolored blackbird

Element Code: ABPBXB0020

Status
Federal: None
State: None

NDDB Element Ranks
Global: G2G3
State: S2

Other Lists
CDFG Status: SC

Habitat Associations
General: HIGHLY COLONIAL SPECIES, MOST NUMBEROUS 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.

Occurrence No. 157 Map Index: 11747 EO Index: 4369
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1972-05-XX
Site: 1972-05-XX
Record Last Updated: 1994-12-12

Quad Summary: Sloughhouse (3812142/495B), Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.49519° / -121.25388°
UTM: Zone-10 N4262204 E652273
Radius: 1/5 mile
Elevation: 110 ft
Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT
Township: 07N
Range: 07E
Section: 06 Qtr: NW
Meridian: M

Location: SOUTH SIDE OF FLORIN ROAD, 0.4 MILE EAST OF EAGLES NEST ROAD, 5 MILES NNE OF SHELDON.
Ecological: NESTING SUBSTRATE IS CATTAILS.
General: 2000 INDIVIDUALS OBSERVED NESTING IN MAY 1972.
Owner/Manager: UNKNOWN

Occurrence No. 158 Map Index: 11720 EO Index: 24681
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1972-XX-XX
Site: 1972-XX-XX
Record Last Updated: 2002-08-09

Quad Summary: Elk Grove (3812143/496A), Buffalo Creek (3812152/511C), Carmichael (3812153/512D)
County Summary: Sacramento

Lat/Long: 38.51379° / -121.26440°
UTM: Zone-10 N4264251 E651317
Radius: 1 mile
Elevation: 140 ft
Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT
Township: 08N
Range: 06E
Section: 25 Qtr: SE
Meridian: M

Location: NEAR JUNCTION OF JACKSON RD (HWY 16) AND EAGLES NEST RD, APPROX ONE MILE SOUTH OF MATHER REGIONAL PARK.
Ecological: NESTING IN CATTAILS AND TULES.
General: OBSERVED NESTS CONTAINING 1 TO 4 EGGS. OLD NESTS ALSO PRESENT.
Owner/Manager: UNKNOWN

Occurrence No. 177 Map Index: 17176 EO Index: 12053
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Fluctuating

Dates Last Seen
Element: 2000-04-22
Site: 2000-04-22
Record Last Updated: 2004-05-13

Quad Summary: Elk Grove (3812143/496A), Carmichael (3812153/512D)
County Summary: Sacramento

Lat/Long: 38.49887° / -121.31581°
UTM: Zone-10 N4262512 E646864
Area:
Elevation: 75 ft
Mapping PrecisionNON-SPECIFIC
Symbol Type:POLYGON
Township: 08N
Range: 06E
Section: 34 Qtr: SW
Meridian: M

Location: "KNOX" COLONY SITE; ALONG BOTH SIDES OF KNOX ROAD, NORTH OF FLORIN ROAD, 7 MILES NNE OF ELK GROVE.
Location Detail: NESTING OCCURS ON THE EAST AND WEST SIDES OF KNOX ROAD, OCCUPYING APPROXIMATELY 1/4 ACRE OF LAND. BIRDS FORAGE IN GRASSLAND, UP TO 3 MILES FROM THE COLONY SITE, TO THE SOUTH AND EAST.
Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES ALONG A RESIDENTIAL ROAD; SURROUNDED BY PASTURELAND.
Threat: POSSIBLY THREATENED BY DEVELOPMENT OF THE SURROUNDING AREA.
General: 1990: 1000 PAIRS OBS NESTING; SEVERAL HUNDRED NAKED YOUNG FOUND DEAD ON ROAD, 20 MAY 1990. 1992: 4000 ADULTS OBS NESTING. 2400 OBS IN 1993; 15K OBS IN 1994; 1000 OBS IN 1997. 4000 OBS IN 1999. 560 OBS IN 2000.
Owner/Manager: UNKNOWN

Agelaius tricolor

tricolored blackbird

Element Code: ABPBXB0020

Status
Federal: None
State: None

NDDB Element Ranks
Global: G2G3
State: S2

Other Lists
CDFG Status: SC

Habitat Associations
General: HIGHLY COLONIAL SPECIES, MOST NUMBEROUS 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.

Occurrence No. 232 Map Index: 21808 EO Index: 4365

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1995-04-22
Site: 1995-04-22
Record Last Updated: 2004-05-13

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.43843° / -121.34968°
UTM: Zone-10 N4255751 E644031
Area:
Elevation: 50 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POLYGON

Township: 07N
Range: 06E
Section: 20 Qtr: SW
Meridian: M

Location: "SHELDON" COLONY SITE; LAGUNA CREEK, NORTH & SOUTH OF SHELDON ROAD, 0.25 MILE EAST OF WATERMAN ROAD, NORTH OF ELK GROVE.

Location Detail: NEST SITE IS LOCATED ON THE EAST SHORE OF LAGUNA CREEK, NORTH AND SOUTH OF THE SHELDON ROAD BRIDGE; BIRDS FORAGE IN ADJACENT FIELDS, UP TO 2-3 MILES SOUTH AND EAST OF COLONY.

Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES, AND SOME WILD ROSE, ALONG LAGUNA CREEK.

Threat: FORAGING HABITAT THREATENED BY RESIDENTIAL DEVELOPMENT.

General: SITE MONITORED MAY-JUNE 1992 AND 1994. 500 ADULTS OBSERVED NESTING IN 1992; 500 ADULTS OBSERVED NESTING IN 1994. 100 OBSERVED NESTING BY BURKE IN 1995.

Owner/Manager: PVT

Occurrence No. 297 Map Index: 30644 EO Index: 4363

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1994-04-23
Site: 1994-04-23
Record Last Updated: 1994-12-12

Quad Summary: Sloughhouse (3812142/495B), Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.46541° / -121.24942°
UTM: Zone-10 N4258906 E652725
Radius: 1/5 mile
Elevation: 80 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 07N
Range: 07E
Section: 18 Qtr: XX
Meridian: M

Location: SOUTH SIDE OF SLOUGHHOUSE ROAD, 0.6 MILE EAST OF GRANT LINE ROAD, 3.5 MILES SW OF SLOUGHHOUSE.

Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRY, OCCUPYING ~1 ACRE.

Threat: POSSIBLE THREATS INCLUDE PROXIMITY TO ROAD/HOUSES AND FERAL CATS.

General: ~40 BIRDS OBSERVED NESTING, WITH ~110 BIRDS FLYING (GROUPS OF 20-40) IN AND OUT OF SITE TO FORAGE

Owner/Manager: UNKNOWN

Occurrence No. 298 Map Index: 30620 EO Index: 4368

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1996-05-19
Site: 1996-05-19
Record Last Updated: 2004-05-13

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.48401° / -121.26481°
UTM: Zone-10 N4260945 E651343
Radius: 1/10 mile
Elevation: 90 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 07N
Range: 06E
Section: 01 Qtr: SE
Meridian: M

Location: "EAGLES NEST" COLONY SITE; LAGUNA CREEK, 0.25 WEST OF EAGLES NEST ROAD, 0.8 MILE SOUTH OF FLORIN ROAD, NE OF ELK GROVE

Location Detail: BIRDS FORAGE IN ADJACENT FALLOW AND CULTIVATED FIELDS, UP TO 2-3 MILES RADIUS FROM THE COLONY SITE.

Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES AND WILLOWS; SURROUNDED BY GRASSLAND AND MOIST FIELDS PROVIDING FACULTATIVE WETLAND VEGETATION.

General: NESTING HERE PRIOR TO 1994. ON 23 APRIL 1994, 410 BIRDS OBSERVED AT THE NEST SITE, WITH ADDITIONAL 110 FORAGING NEARBY. SITE MONITORED APRIL-JUNE 1994; 1000 ADULTS OBSERVED NESTING. 275 BIRDS OBSERVED NESTING BY MANOLIS ON 19 MAY 1996.

Owner/Manager: UNKNOWN

Agelaius tricolor

tricolored blackbird — Element Code: ABPBXB0020

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G2G3	CDFG Status: SC
State: None	State: S2	

Habitat Associations

General: HIGHLY COLONIAL SPECIES, MOST NUMBEROUS 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.

Occurrence No. 299 Map Index: 30621 EO Index: 3755

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Fluctuating

Dates Last Seen
Element: 1999-05-11
Site: 1999-05-11
Record Last Updated: 2004-05-13

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.39811° / -121.25616°
UTM: Zone-10 N4251427 E652278
Area:
Elevation: 75 ft

Mapping Precision NON-SPECIFIC
Symbol Type: POLYGON

Township: 06N
Range: 07E
Section: 06 Qtr: SW
Meridian: M

Location: "DAVIS" COLONY SITE; SOUTH OF THE INTERSECTION OF WILTON ROAD AND DILLARD ROAD, 5 MILES EAST OF ELK GROVE.

Location Detail: COLONY SITE IS LOCATED ~150 METERS DIRECTLY SOUTH OF THE FIRE STATION. BIRDS FORAGE IN ADJACENT FALLOW FIELDS AND GRAZED PASTURES. COLONY OCCUPIES <1 ACRE.

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: COLONY SITE WAS MONITORED APRIL-JUNE 1993 AND 1994; 1600 ADULTS OBSERVED NESTING IN 1993, 1000 IN 1994. SITE WAS VISITED IN 1997, BUT FOUND NO BIRDS NESTING. 350 OBSERVED NESTING BY HAMILTON & COOK 11 MAY 1999.

Owner/Manager: UNKNOWN

Occurrence No. 300 Map Index: 30623 EO Index: 4367

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1996-05-19
Site: 1996-05-19
Record Last Updated: 2004-05-13

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.45671° / -121.33959°
UTM: Zone-10 N4257796 E644875
Radius: 1/5 mile
Elevation: 55 ft

Mapping Precision NON-SPECIFIC
Symbol Type: POINT

Township: 07N
Range: 06E
Section: 17 Qtr: SE
Meridian: M

Location: "BRADSHAW" COLONY SITE; 0.25 MILE WEST OF BRADSHAW ROAD AND 0.15 NORTH OF CALVINE ROAD, 3 MILE NNE OF ELK GROVE

Location Detail: BIRDS FORAGE IN GRASSLAND UP TO 2 MILES RADIUS FROM THE COLONY SITE.

Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES; SURROUNDED BY LIGHTLY GRAZED GRASSLAND.

General: 350 ADULTS OBSERVED NESTING IN APRIL-JUNE 1993-94; SUCCESSFUL BOTH YEARS. 100 OBSERVED NESTING BY MANOLIS 19 MAY 1996.

Owner/Manager: UNKNOWN

Occurrence No. 301 Map Index: 33742 EO Index: 30616

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1994-05-XX
Site: 1994-05-XX
Record Last Updated: 1997-10-23

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.39871° / -121.34017°
UTM: Zone-10 N4251358 E644940
Radius: 1/5 mile
Elevation: 50 ft

Mapping Precision NON-SPECIFIC
Symbol Type: POINT

Township: 06N
Range: 06E
Section: 05 Qtr: SE
Meridian: M

Location: "GRANTLINE 1" COLONY SITE. ALONG ELK GROVE CREEK, 0.3 MILE NORTH OF GRANTLINE ROAD, SE OF ELK GROVE.

Location Detail: BLACKBERRIES COVER ABOUT 50 ACRES; COLONY OCCUPIES ~5-10 ACRES. BIRDS FORAGE ON AN ADJACENT DAIRY FARM AND SURROUNDING GRASSLANDS 2-3 MILES FROM THE COLONY.

Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES IN AN AREA COVERING ~50 ACRES; SURROUNDED BY GRAZED GRASSLAND.

General: ON 23 APR 1994, 6000-7500 BIRDS WERE OBSERVED NESTING; AN ESTIMATED 6750 ADULTS WERE OBSERVED NESTING IN MAY 1994.

Owner/Manager: UNKNOWN

Agelaius tricolor

tricolored blackbird — Element Code: ABPBXB0020

Status
Federal: None
State: None

NDDB Element Ranks
Global: G2G3
State: S2

Other Lists
CDFG Status: SC

Habitat Associations
General: HIGHLY COLONIAL SPECIES, MOST NUMBEROUS 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.

Occurrence No. 319 Map Index: 33417 EO Index: 29209
Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1996-06-03
Site: 1996-06-03
Record Last Updated: 1996-06-10

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.40113° / -121.25879°
UTM: Zone-10 N4251758 E652042
Radius: 80 meters
Elevation: 80 ft
Mapping PrecisionSPECIFIC
Symbol Type:POINT
Township: 06N
Range: 07E
Section: 06 Qtr: SW
Meridian: M

Location: JUST WEST OF THE INTERSECTION OF WILTON ROAD AND DILLARD ROAD, 5 MILES EAST OF ELK GROVE.
Ecological: NESTING SUBSTRATE IS BLACKBERRIES; SURROUNDING HABITAT CONSISTS OF AGRICULTURE, GRAZED PASTURE, AND RURAL
Threat: THREATENED BY DEVELOPMENT.
General: ESTIMATED 1000 ADULTS OBSERVED NESTING ON 3 JUNE 1996.
Owner/Manager: PVT

Occurrence No. 321 Map Index: 33423 EO Index: 11900
Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1996-06-10
Site: 1996-06-10
Record Last Updated: 1996-06-19

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.38018° / -121.27968°
UTM: Zone-10 N4249399 E650261
Area: 16.2 acres
Elevation: 60 ft
Mapping PrecisionSPECIFIC
Symbol Type:POLYGON
Township: 06N
Range: 06E
Section: 11 Qtr: SE
Meridian: M

Location: ALONG WALMORT ROAD, 0.6 MILE EAST OF DILLARD ROAD, SACRAMENTO.
Ecological: HABITAT CONSISTS OF BLACKBERRY BRAMBLES GROWING ALONG A ROADSIDE DITCH; SURROUNDING AREA CONSISTS OF RURAL RESIDENTIAL/AGRICULTURE.
Threat: THREATENED BY DEVELOPMENT.
General: ESTIMATED 1500 ADULTS OBSERVED NESTING ON 10 JUNE 1996.
Owner/Manager: PVT

Occurrence No. 347 Map Index: 37329 EO Index: 32331
Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1999-05-11
Site: 1999-05-11
Record Last Updated: 2004-05-13

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.49460° / -121.35593°
UTM: Zone-10 N4261974 E643374
Radius: 80 meters
Elevation: 50 ft
Mapping PrecisionSPECIFIC
Symbol Type:POINT
Township: 07N
Range: 06E
Section: 06 Qtr: NE
Meridian: M

Location: "HORSE" COLONY SITE; ELDER CREEK, EAST OF CENTRAL CALIF TRACTION RR, 0.1 MILE SOUTH OF FLORIN ROAD, NORTH OF ELK GROVE
Location Detail: BIRDS FORAGE IN SURROUNDING GRASSLAND TO THE SOUTH AND EAST, UP TO 2-3 MILES FROM COLONY SITE.
Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES; SURROUNDED BY GRASSLAND, TO THE SOUTH AND EAST.
General: OWNER CLAIMS THAT TRICOLOREDS HAVE NESTED AT THIS SITE ANNUALLY PRIOR TO 1993. SITE MONITORED MAY-JUNE 1993; 2000 ADULTS OBSERVED NESTING. UNKNOWN NUMBER OBSERVED NESTING 11 MAY 1999 BY COOK & HAMILTON.
Owner/Manager: UNKNOWN

Agelaius tricolor

tricolored blackbird

Element Code: ABPBXB0020

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G2G3	CDFG Status: SC
State: None	State: S2	

Habitat Associations

General: HIGHLY COLONIAL SPECIES, MOST NUMBEROUS 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.

Occurrence No. 351 Map Index: 37738 EO Index: 32746

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1996-05-19
Site: 1996-05-19

Record Last Updated: 2004-05-13

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.39448° / -121.33709°
UTM: Zone-10 N4250894 E645218
Area: 13.4 acres
Elevation: 50 ft

Mapping PrecisionSPECIFIC
Symbol Type:POLYGON

Township: 06N
Range: 06E
Section: 5 Qtr: XX
Meridian: X

Location: ELK GROVE CREEK, ON THE SOUTH SIDE OF GRANTLINE ROAD, SE OF ELK GROVE

Location Detail: BIRDS FORAGE IN PASTURE/GRASSLAND UP TO 2 MILES RADIUS FROM THE COLONY SITE.

Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES; SURROUNDED BY PASTURE.

General: "GRANTLINE 2" COLONY SITE. 1500 ADULTS OBSERVED NESTING DURING MAY 1992; NUMEROUS FLEDGLINGS PRESENT. 2000 OBSERVED NESTING BY MANOLIS 19 MAY 1996.

Owner/Manager: PVT

Branchinecta lynchi

vernal pool fairy shrimp — Element Code: ICBRA03030

Status	NDDB Element Ranks	Other Lists
Federal: Threatened	Global: G3	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 **EO Index:** 1418

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1997-02-11
Site: 1997-03-14
Record Last Updated: 1997-08-27

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.44658° / -121.35553°
UTM: Zone-10 N4256646 E643504
Area: 29.1 acres
Elevation: 60 ft
Mapping Precision: SPECIFIC
Symbol Type: POLYGON
Township: 07N
Range: 06E
Section: 19 Qtr: NE
Meridian: M

Location: 0.5 MILE SOUTH OF CALVINE ROAD AND IMMEDIATELY WEST OF WATERMAN ROAD, 2 MILES NORTH OF ELK GROVE.

Location Detail: 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 1/6 & 2/11.

Owner/Manager: PVT-WINNCREST HOMES

Occurrence No. 160 **Map Index:** 30622 **EO Index:** 30615

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1993-03-02
Site: 1993-03-02
Record Last Updated: 1997-03-20

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.38950° / -121.34574°
UTM: Zone-10 N4250327 E644472
Radius: 3/5 mile
Elevation: 50 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Township: 06N
Range: 06E
Section: 08 Qtr: XX
Meridian: M

Location: VICINITY OF GRANT LINE ROAD. ABOUT 1.5 MILES SE OF ELK GROVE.

Location Detail: SEASONAL WETLANDS LOCATED SOMEWHERE IN SECTION 8.

Ecological: NATURAL SEASONAL WETLANDS.

General: B. LYNCHI OBSERVED IN 1 OF 8 FEATURES INSPECTED ON 2/2/93 & 3/2/93. SUGNET RECORD #'S 46 & 47.

Owner/Manager: UNKNOWN

Occurrence No. 162 **Map Index:** 33686 **EO Index:** 30621

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2006-03-14
Site: 2006-03-14
Record Last Updated: 2006-10-26

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.48894° / -121.34410°
UTM: Zone-10 N4261365 E644417
Area:
Elevation: 60 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 07N
Range: 06E
Section: 5 Qtr: XX
Meridian: M

Location: NORTH OF GERBER ROAD, SOUTH OF FLORIN ROAD, EAST OF ELK GROVE-FLORIN ROAD. ABOUT 5 MILES NORTH OF ELK GROVE.

Location Detail: SEASONAL WETLANDS, VERNAL POOLS, & ROADSIDE DITCHES SOMEWHERE IN SECTIONS 4, 5 & 6.

Ecological: NATURAL SEASONAL WETLANDS, NATURAL VERNAL POOLS, MANMADE ROADSIDE DITCHES AND MANMADE "OTHER".

General: B. LYNCHI OBS IN 1 OF 3 SEASONAL WETLANDS & 1 OF 48 VERNAL POOLS INSPECTED IN SECTION 4. ALSO OBS. IN UNDESCRIBED MADMADE FEATURE IN SECTION 5. SUGNET RECORD #'S 58, 59 & 60. BRENT HELM OBS. 10 IN VP7 IN NW QTR. OF SE QTR. OF SECTION 4.

Owner/Manager: UNKNOWN

Branchinecta lynchi

vernal pool fairy shrimp — Element Code: ICBRA03030

Status	NDDB Element Ranks	Other Lists
Federal: Threatened	Global: G3	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. 163 Map Index: 33687 EO Index: 30619

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1993-03-02
Site: 1993-03-02
Record Last Updated: 1997-03-20

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.45287° / -121.33463°
UTM: Zone-10 N4257377 E645315
Area:
Elevation: 65 ft

Mapping Precision NON-SPECIFIC
Symbol Type: POLYGON

Township: 07N
Range: 06E
Section: 16 Qtr: XX
Meridian: M

Location: EAST OF ELK GROVE-FLORIN RD, WEST OF EXCELSIOR RD; & NORTH OF SHELDON RD. NNE OF ELK GROVE.

Location Detail: VERNAL POOLS LOCATED SOMEWHERE IN SECTIONS 15, 16, 17 & 19.

Ecological: NATURAL VERNAL POOLS.

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 EO Index: 30617

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1993-03-02
Site: 1993-03-02
Record Last Updated: 1997-03-07

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.41635° / -121.34397°
UTM: Zone-10 N4253310 E644573
Radius: 3/5 mile
Elevation: 50 ft

Mapping Precision NON-SPECIFIC
Symbol Type: POINT

Township: 07N
Range: 06E
Section: 32 Qtr: XX
Meridian: M

Location: NORTH OF ELK GROVE BLVD, SOUTH OF BOND RD, EAST OF WATERMAN RD, & WEST OF BRADSHAW RD. EAST OF ELK GROVE.

Location Detail: VERNAL POOLS AND SEASONAL WETLANDS LOCATED SOMEWHERE IN SECTION 32.

Ecological: NATURAL VERNAL POOLS AND NATURAL SEASONAL WETLANDS.

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 EO Index: 31804

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1991-04-06
Site: 1991-04-06
Record Last Updated: 1997-09-22

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.48521° / -121.28388°
UTM: Zone-10 N4261047 E649677
Area:
Elevation: 100 ft

Mapping Precision NON-SPECIFIC
Symbol Type: POLYGON

Township: 07N
Range: 06E
Section: 02 Qtr: SE
Meridian: M

Location: "MULTI-CULTURE PARK" (FORMERLY, FLORIN PARK), SOUTH OF (OLD) MATHER AIR FORCE BASE.

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

vernal pool fairy shrimp

Element Code: ICBRA03030

Status
Federal: Threatened
State: None

NDDB Element Ranks
Global: G3
State: S2S3

Other Lists
CDFG Status:

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. 190 Map Index: 36874 EO Index: 31871

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2000-03-15
Site: 2000-03-15
Record Last Updated: 2000-08-10

Quad Summary: Sloughhouse (3812142/495B), Elk Grove (3812143/496A), Carmichael (3812153/512D), Buffalo Creek (3812152/511C)
County Summary: Sacramento

Lat/Long: 38.50388° / -121.25393°
UTM: Zone-10 N4263168 E652250
Area:
Elevation: 125 ft

Mapping Precision NON-SPECIFIC
Symbol Type: POLYGON

Township: 08N
Range: 07E
Section: 31 Qtr: XX
Meridian: M

Location: VICINITY OF THE INTERSECTION OF EAGLES NEST ROAD AND HWY 16 (JACKSON ROAD), SOUTH OF MATHER AIR FORCE BASE.

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 EO Index: 42057

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1998-01-28
Site: 1998-01-28
Record Last Updated: 1999-12-27

Quad Summary: Elk Grove (3812143/496A), Carmichael (3812153/512D)
County Summary: Sacramento

Lat/Long: 38.49943° / -121.28461°
UTM: Zone-10 N4262624 E649584
Area: 161.9 acres
Elevation: 115 ft

Mapping Precision SPECIFIC
Symbol Type: POLYGON

Township: 08N
Range: 06E
Section: 35 Qtr: SE
Meridian: M

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.

Location Detail: ARROYO SECO MITIGATION BANK SITE (PREVIOUSLY DESCRIBED AS: VERNAL POOLS SOMEWHERE IN SECTION 35).

Ecological: NATURAL VERNAL POOLS IN A VERNAL POOL COMMUNITY

General: 100'S OBSERVED IN MITIGATION BANK, SURVEYED 28 JAN 1998.

Owner/Manager: PVT

Occurrence No. 343 Map Index: 46127 EO Index: 48530

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2002-01-21
Site: 2004-XX-XX
Record Last Updated: 2004-08-19

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.46329° / -121.33734°
UTM: Zone-10 N4258529 E645058
Area:
Elevation: 65 ft

Mapping Precision NON-SPECIFIC
Symbol Type: POLYGON

Township: 07N
Range: 06E
Section: 17 Qtr: NE
Meridian: M

Location: CHURCHILL DOWNS WETLAND PRESERVE (PART); 4 MILES NNE OF ELK GROVE.

Location Detail: 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 & 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.

General: 10'S OBSERVED IN POOL 12 AND 1000'S OBSERVED IN POOL 15 ON 21 JAN 2002. NONE OBSERVED IN JAN & MAR 2003 SURVEYS. SPECIES NOT OBS IN 2004.

Owner/Manager: PVT

Branchinecta lynchi

vernal pool fairy shrimp — Element Code: ICBRA03030

Status	NDDB Element Ranks	Other Lists
Federal: Threatened	Global: G3	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. 344 Map Index: 46534 EO Index: 48536

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2004-03-04
Site: 2004-03-04
Record Last Updated: 2004-08-19

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.47306° / -121.36003°
UTM: Zone-10 N4259578 E643059
Area:
Elevation: 50 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 07N
Range: 06E
Section: 07
Meridian: M
Qtr: SE

Location: CHURCHILL DOWNS WETLAND PRESERVE (PART); 4.5 MILES NORTH OF ELK GROVE.

Location Detail: 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.

General: 10'S OBSERVED IN POOL NUMBER 9 ON 21 JAN 2002. NONE OBSERVED IN JAN & MAR 2003 SURVEYS. 10'S OBS IN POOLS 4 AND 5 ON 4 MAR 2004.

Owner/Manager: PVT

Occurrence No. 414 Map Index: 64356 EO Index: 64435

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2005-02-20
Site: 2005-02-20
Record Last Updated: 2006-03-27

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.49738° / -121.27299°
UTM: Zone-10 N4262416 E650602
Radius: 80 meters
Elevation: 120 ft
Mapping Precision: SPECIFIC
Symbol Type: POINT
Township: 08N
Range: 06E
Section: 36
Meridian: M
Qtr: SW

Location: SACRAMENTO PRAIRIE VERNAL POOL PRESERVE.

Location Detail: JUST NORTH OF FLORIN ROAD, 0.6 MI WEST OF EAGLES NEST ROAD, APPROXIMATELY 8 MI NE OF ELK GROVE.

Ecological: VERNAL POOLS.

Threat: THE GRASS GLYCERIA DECLINATA IS BECOMING PROBLEMATIC IN THE GENERAL AREA. SURROUNDING AREA CATTLE GRAZED.

General: "LOTS" OF INDIVIDUALS OBSERVED. FOUND IN THREE POOLS; ONE POOL ALSO CONTAINED LINDERIELLA OCCIDENTALIS.

Owner/Manager: PVT-SACRAMENTO VLY CONSERVANCY

Occurrence No. 532 Map Index: 69255 EO Index: 70036

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2007-02-27
Site: 2007-02-27
Record Last Updated: 2007-05-14

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.47610° / -121.28362°
UTM: Zone-10 N4260036 E649719
Area: 17.0 acres
Elevation: 95 ft
Mapping Precision: SPECIFIC
Symbol Type: POLYGON
Township: 07N
Range: 06E
Section: 11
Meridian: M
Qtr: NW

Location: 0.9 MILE SE OF THE INTERSECTION OF GERBER ROAD AND EXCELSIOR ROAD, NORTH OF SHELDON.

Location Detail: KLOTZ VP 121 AND 155

Ecological: HABITAT CONSISTS OF A VERNAL POOL SURROUNDED BY VERNAL POOLS, VERNAL SWALES, AND GRAZED GRASSLAND. LEPIDURUS PACKARDI AND LINDERIELLA OCCIDENTALIS ALSO FOUND AT THIS SITE.

General: ADULT FAIRY SHRIMP NUMBERING IN THE 10'S (VP 121) TO THE 100'S (VP 155) OBSERVED ON 27 FEB 2007.

Owner/Manager: ENV STEWARDSHIP FOUNDATION

Branchinecta mesovallensis

midvalley fairy shrimp — Element Code: ICBRA03150

Status
Federal: None
State: None

NDDB Element Ranks
Global: G2
State: S2

Other Lists
CDFG Status:

Habitat Associations
General: VERNAL POOLS IN THE CENTRAL VALLEY.
Micro:

Occurrence No. 29 — Map Index: 48318 — EO Index: 48318

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1991-19-03
Site: 1991-19-03
Record Last Updated: 2002-07-25

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.45341° / -121.33570°
UTM: Zone-10 N4257435 E645221
Radius: 1/10 mile
Elevation: 60 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 07N
Range: 06E
Section: 17 Qtr: SE
Meridian: M

Location: BELMONT ESTATES (OGDEN RANCH) NORTHWEST OF THE INTERSECTION OF BRADSHAW ROAD AND CALVINE ROAD.

Ecological: VERNAL POOLS.

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

Occurrence No. 55 — Map Index: 51354 — EO Index: 51354

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1995-XX-XX
Site: 1995-XX-XX
Record Last Updated: 2003-05-21

Quad Summary: Sloughhouse (3812142/495B), Elk Grove (3812143/496A), Buffalo Creek (3812152/511C), Carmichael (3812153/512D)
County Summary: Sacramento

Lat/Long: 38.50163° / -121.24825°
UTM: Zone-10 N4262928 E652750
Area:
Elevation: 110 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POLYGON

Township: 08N
Range: 07E
Section: 31 Qtr: XX
Meridian: M

Location: SOUTH OF JACKSON ROAD, EAST OF EAGLES NEST ROAD AND NW OF LAGUNA CREEK; APPROX 3 MILES SE OF THE OLD MATHER AFB

Location Detail: GRECH PROPERTY

Ecological: HABITAT CONSISTS OF HARDPAN VERNAL POOLS AND SEASONAL WETLANDS WITHIN NON-NATIVE ANNUAL GRASSLAND.

General: SPECIES OBSERVED IN UNKNOWN NUMBER OF 80 SAMPLED POOLS DURING FEB - MAY 1995.

Owner/Manager: PVT

Buteo swainsoni

Swainson's hawk — Element Code: ABNKC19070

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G5	CDFG Status:
State: Threatened	State: S2	

Habitat Associations

General: BREEDS IN GRASSLANDS WITH WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH

Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 131 Map Index: 11672 EO Index: 2595

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Stable

Dates Last Seen
Element: 1994-XX-XX
Site: 1994-XX-XX
Record Last Updated: 1995-07-24

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.42027° / -121.28662°
UTM: Zone-10 N4253836 E649572
Radius: 80 meters
Elevation: 60 ft
Mapping PrecisionSPECIFIC
Symbol Type:POINT
Township: 07N
Range: 06E
Section: 35 Qtr: XX
Meridian: M

Location: DEER CREEK, AT THE INTERSECTION OF WILTON ROAD, 0.5 MILE NW OF COSUMNES RIVER.

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 EO Index: 2586

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Stable

Dates Last Seen
Element: 1994-XX-XX
Site: 1994-XX-XX
Record Last Updated: 1995-07-24

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.37985° / -121.31790°
UTM: Zone-10 N4249300 E646923
Radius: 80 meters
Elevation: 45 ft
Mapping PrecisionSPECIFIC
Symbol Type:POINT
Township: 06N
Range: 06E
Section: 10 Qtr: XX
Meridian: M

Location: COSUMNES RIVER, RM-13.4(R), 2 MILES EAST OF THE INTERSECTION OF GRANT LINE ROAD & HWY 99, COSUMNES RIVER PRESERVE.

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 EO Index: 2589

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Stable

Dates Last Seen
Element: 1995-06-13
Site: 1995-06-13
Record Last Updated: 1999-10-07

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.36330° / -121.30892°
UTM: Zone-10 N4249698 E647701
Radius: 80 meters
Elevation: 60 ft
Mapping PrecisionSPECIFIC
Symbol Type:POINT
Township: 06N
Range: 06E
Section: 10 Qtr: XX
Meridian: M

Location: NORTH BANK OF COSUMNES RIVER, AT RM-14.9, ESE OF ELK GROVE.

Location Detail: 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.

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

Buteo swainsoni

Swainson's hawk

Element Code: ABNKC19070

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G5	CDFG Status:
State: Threatened	State: S2	

Habitat Associations

General: BREEDS IN GRASSLANDS WITH WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH

Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 185 Map Index: 11725 EO Index: 27114

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1984-05-22
Site: 1985-05-24
Record Last Updated: 1999-10-07

Quad Summary: Elk Grove (3812143/496A), Galt (3812133/496D)
County Summary: Sacramento

Lat/Long: 38.37601° / -121.25829°
UTM: Zone-10 N4248971 E652138
Radius: 1/5 mile
Elevation: 70 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 06N
Range: 07E
Section: 18 Qtr: NW
Meridian: M

Location: 0.25 MILE SE OF THE INTERSECTION OF DAVIS AND WALMORT ROADS

Ecological: HABITAT CONSISTS OF RIPARIAN SURROUNDED BY AGRICULTURAL FIELDS.

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 EO Index: 27109

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1984-05-17
Site: 1984-05-17
Record Last Updated: 1989-08-10

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.41518° / -121.29438°
UTM: Zone-10 N4253259 E648905
Radius: 1/5 mile
Elevation: 60 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 07N
Range: 06E
Section: 35 Qtr: SW
Meridian: M

Location: DEER CREEK, AT WILTON ROAD.

Location Detail: AREA UNSURVEYED. SOURCE DOCUMENT SAYS SECTION 35.

Ecological: NEST TREE IS AN OAK.

General: DFG SWHA #SA024. 1 ADULT OBSERVED ON NEST.

Owner/Manager: PVT

Occurrence No. 191 Map Index: 11728 EO Index: 27111

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1979-06-29
Site: 1982-06-28
Record Last Updated: 1989-08-10

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.45768° / -121.25995°
UTM: Zone-10 N4258031 E651822
Radius: 1/5 mile
Elevation: 90 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 07N
Range: 07E
Section: 18 Qtr: SW
Meridian: M

Location: 0.5 MILE EAST OF GRANT LINE ROAD, ELK GROVE

Location Detail: LOCATED ABOUT HALF-WAY BETWEEN CALVINE ROAD AND SLOUGHHOUSE ROAD.

General: DFG SWHA #SA002. 2 ADULTS AND YOUNG OBS 1979. NO ACTIVITY IN 1980 OR 1982.

Owner/Manager: PVT

Buteo swainsoni

Swainson's hawk

Element Code: ABNKC19070

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G5	CDFG Status:
State: Threatened	State: S2	

Habitat Associations

General: BREEDS IN GRASSLANDS WITH WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH

Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 262 Map Index: 11626 EO Index: 27048

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1987-XX-XX
Site: 1987-XX-XX
Record Last Updated: 1999-10-07

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.39740° / -121.31245°
UTM: Zone-10 N4251257 E647364
Radius: 1/5 mile
Elevation: 60 ft

Mapping Precision NON-SPECIFIC
Symbol Type: POINT

Township: 06N
Range: 06E
Section: 03 Qtr: SW
Meridian: M

Location: DEER CREEK, 1 MILE SE OF GRANT LINE ROAD

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 EO Index: 2590

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1994-XX-XX
Site: 1994-XX-XX
Record Last Updated: 1995-06-16

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.38737° / -121.29941°
UTM: Zone-10 N4250165 E648523
Radius: 80 meters
Elevation: 50 ft

Mapping Precision SPECIFIC
Symbol Type: POINT

Township: 06N
Range: 06E
Section: 10 Qtr: XX
Meridian: M

Location: COSUMNES RIVER, RM-14.6(L), 2.5 MILES SW OF THE INTERSECTION OF WILTON ROAD AND DILLARD ROAD, EAST OF ELK GROVE.

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 EO Index: 2588

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1994-XX-XX
Site: 1994-XX-XX
Record Last Updated: 1995-06-16

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.38268° / -121.31456°
UTM: Zone-10 N4249620 E647209
Radius: 80 meters
Elevation: 45 ft

Mapping Precision SPECIFIC
Symbol Type: POINT

Township: 06N
Range: 06E
Section: 10 Qtr: XX
Meridian: M

Location: COSUMNES RIVER, RM-13.6(R), 3 MILES SE OF ELK GROVE.

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

Buteo swainsoni

Swainson's hawk — Element Code: ABNKC19070

Status
Federal: None
State: Threatened

NDDB Element Ranks
Global: G5
State: S2

Other Lists
CDFG Status:

Habitat Associations
General: BREEDS IN GRASSLANDS WITH WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH
Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 664 Map Index: 33210 EO Index: 2585

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1994-XX-XX
Site: 1994-XX-XX
Record Last Updated: 1995-06-16

Quad Summary: Galt (3812133/496D), Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.37539° / -121.32147°
UTM: Zone-10 N4248800 E646620
Radius: 80 meters
Elevation: 45 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 08N
Range: 06E
Section: 16 Qtr: XX
Meridian: M

Location: COSUMNES RIVER, RM-13.0(L), 2.5 MILES SE OF ELK GROVE.
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 EO Index: 2592

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1994-XX-XX
Site: 1994-XX-XX
Record Last Updated: 1995-06-16

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.41651° / -121.27619°
UTM: Zone-10 N4253436 E650491
Radius: 80 meters
Elevation: 70 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 07N
Range: 06E
Section: 36 Qtr: XX
Meridian: M

Location: COSUMNES RIVER, RM-17.5(L), 0.5 MILE NW OF WILTON.
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 EO Index: 2594

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1995-06-13
Site: 1995-06-13
Record Last Updated: 1995-06-21

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.42279° / -121.25701°
UTM: Zone-10 N4254164 E652152
Radius: 80 meters
Elevation: 70 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 07N
Range: 07E
Section: 31 Qtr: XX
Meridian: M

Location: SOUTH BANK OF COSUMNES RIVER, AT BEITZEL ROAD, ~5 MILES EAST OF ELK GROVE.
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

Buteo swainsoni

Swainson's hawk — Element Code: ABNKC19070

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G5	CDFG Status:
State: Threatened	State: S2	

Habitat Associations

General: BREEDS IN GRASSLANDS WITH WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH

Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 673 Map Index: 33225 EO Index: 2593

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1995-06-13
Site: 1995-06-13
Record Last Updated: 1995-06-21

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.41817° / -121.27876°
UTM: Zone-10 N4253616 E650263
Radius: 80 meters
Elevation: 60 ft
Mapping PrecisionSPECIFIC
Symbol Type:POINT
Township: 07N
Range: 06E
Section: 36 Qtr: XX
Meridian: M

Location: NORTH BANK OF COSUMNES RIVER, 0.1 MILE EAST OF WILTON ROAD, ~4 MILES EAST OF ELK GROVE.

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 EO Index: 2591

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1995-06-13
Site: 1995-06-13
Record Last Updated: 1995-07-24

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.40494° / -121.28921°
UTM: Zone-10 N4252131 E649378
Radius: 80 meters
Elevation: 55 ft
Mapping PrecisionSPECIFIC
Symbol Type:POINT
Township: 06N
Range: 06E
Section: 2 Qtr: XX
Meridian: M

Location: SOUTH BANK OF COSUMNES RIVER, ~1 MILE DOWNSTREAM FROM WILTON ROAD, ~4 MILES EAST OF ELK GROVE.

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 EO Index: 41774

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1987-XX-XX
Site: 1987-XX-XX
Record Last Updated: 1999-10-21

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.38526° / -121.31804°
UTM: Zone-10 N4249901 E646900
Radius: 1/5 mile
Elevation: 35 ft
Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT
Township: 06N
Range: 06E
Section: 09 Qtr: SE
Meridian: M

Location: DEER CREEK, 2.5 MILES EAST OF HIGHWAY 99, SE OF ELK GROVE.

Ecological: NEST TREE IS AN OAK; SURROUNDED BY A MIX OF RIPARIAN, AGRICULTURAL FIELDS, AND PASTURE.

General: DFG SWHA #SA056. 2 ADULTS OBSERVED NESTING IN 1987.

Owner/Manager: PVT

Buteo swainsoni

Swainson's hawk

Element Code: ABNKC19070

Status
Federal: None
State: Threatened

NDDB Element Ranks
Global: G5
State: S2

Other Lists
CDFG Status:

Habitat Associations
General: BREEDS IN GRASSLANDS WITH WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH
Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 761 Map Index: 41775 EO Index: 41775
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1987-XX-XX
Site: 1987-XX-XX
Record Last Updated: 1999-10-21

Quad Summary: Galt (3812133/496D), Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.37285° / -121.32704°
UTM: Zone-10 N4248509 E646139
Radius: 1/5 mile
Elevation: 35 ft
Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT
Township: 06N
Range: 06E
Section: 16 Qtr: NW
Meridian: M

Location: DEER CREEK, 1.7 MILES EAST OF HIGHWAY 99, SE OF ELK GROVE.
Ecological: NEST TREE IS AN OAK; SURROUNDED BY A MIX OF RIPARIAN, AGRICULTURAL FIELDS, AND PASTURE.
General: DFG SWHA #SA057. 2 LIGHT-MORPH ADULTS OBSERVED NESTING IN 1987.
Owner/Manager: PVT

Occurrence No. 1057 Map Index: 50844 EO Index: 50844
Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2001-04-12
Site: 2001-04-12
Record Last Updated: 2003-04-02

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.41543° / -121.27902°
UTM: Zone-10 N4253311 E650246
Radius: 80 meters
Elevation: 80 ft
Mapping PrecisionSPECIFIC
Symbol Type:POINT
Township: 07N
Range: 06E
Section: 36 Qtr: XX
Meridian: M

Location: SOUTH SIDE OF WILTON ROAD, 0.5 MILE NW OF WILTON
Location Detail: NEST TREE LOCATED AT 10928 WILTON ROAD.
Ecological: NEST TREE IS SURROUNDED BY PASTURE, RANCHETTES, HAYFIELDS AND ADJACENT RIPARIAN.
General: ON 12 APR 2001, 2 ADULTS OBSERVED NESTING. 1 ADULT OBSERVED BRINGING PREY TO THE NEST, THEN A SPRIG OF FRESH COTTONWOOD LEAVES.
Owner/Manager: PVT

Occurrence No. 1678 Map Index: 68597 EO Index: 68981
Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2006-05-02
Site: 2006-05-02
Record Last Updated: 2007-03-20

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.45522° / -121.34259°
UTM: Zone-10 N4257626 E644616
Radius: 80 meters
Elevation: 58 ft
Mapping PrecisionSPECIFIC
Symbol Type:POINT
Township: 07N
Range: 06E
Section: 17 Qtr: SE
Meridian: M

Location: ALONG LAGUNA CREEK, 0.2 MILE NNE OF THE CROSSING OF CALVINE ROAD OVER LAGUNA CREEK, ELK GROVE.
Location Detail: NEST TREE IS TO BE PRESERVED DURING THE CONSTRUCTION OF A NEW NEW SCHOOL, BUT FORAGING AREA WILL BE LOST.
Ecological: NEST TREE IS A VALLEY OAK (30" DBH) LOCATED ADJACENT TO LAGUNA CREEK; SURROUNDED BY GRASSLAND/DRY FARMLAND, DOMINATED BY TAENIATHERUM CAPUT-MEDUSAE.
Threat: THREATENED BY LOSS OF FORAGING HABITAT TO DEVELOPMENT (CONSTRUCTION OF A NEW SCHOOL).
General: NEST WITH 2 ADULTS AND 1 JUVENILE OBSERVED ON 2 MAY 2006; NEST TREE WAS MONITORED FROM MAR-AUG 2006.
Owner/Manager: PVT

Buteo swainsoni

Swainson's hawk

Element Code: ABNKC19070

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G5	CDFG Status:
State: Threatened	State: S2	

Habitat Associations

General: BREEDS IN GRASSLANDS WITH WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH

Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 1679 Map Index: 68943 EO Index: 69577

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2007-04-10
Site: 2007-04-10

Record Last Updated: 2007-04-16

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.38610° / -121.37193°
UTM: Zone-10 N4249910 E642191
Radius: 80 meters
Elevation: 45 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 06N
Range: 05E
Section: 12 Qtr: SE
Meridian: M

Location: JUST NW OF THE INTERSECTION OF HIGHWAY 99 AND GRANT LINE ROAD, ALONG WEST STOCKTON BOULEVARD, ELK GROVE.

Location Detail: NEST TREE WAS LOCATED WITHIN A LINE OF OAKS AND EUCALYPTUS TREES BETWEEN WEST STOCKTON BOULEVARD AND HIGHWAY 99.

Ecological: NEST TREE WAS A BLUE-GUM EUCALYPTUS; ANNUAL GRASSLAND LIES TO THE WEST.

General: 2 DARK-MORPH SWHA'S OBSERVED BUILDING A LARGE STICK NEST ON 6 APR 2007; PAIR WAS AGAIN OBSERVED AT THE NEST SITE ON 10 APR 2007.

Owner/Manager: CITY OF ELK GROVE

Desmocerus californicus dimorphus

valley elderberry longhorn beetle

Element Code: IICOL48011

Status
Federal: Threatened
State: None

NDDB Element Ranks
Global: G3T2
State: S2

Other Lists
CDFG Status:

Habitat Associations
General: OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA, IN ASSOCIATION WITH BLUE ELDERBERRY (SAMBUCUS MEXICANA).
Micro: PREFERS TO LAY EGGS IN ELDERBERRRIES 2-8 INCHES IN DIAMETER; SOME PREFERENCE SHOWN FOR "STRESSED" ELDERBERRIES.

Occurrence No. 163 Map Index: 39509 EO Index: 34511

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1984-XX-XX
Site: 1984-XX-XX

Record Last Updated: 1998-08-24

Quad Summary: Sloughhouse (3812142/495B), Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.41688° / -121.27246°
UTM: Zone-10 N4253483 E650815
Area:
Elevation: 60 ft

Mapping Precision NON-SPECIFIC
Symbol Type: POLYGON

Township: 07N
Range: 06E
Section: 36 Qtr: XX
Meridian: X

Location: ALONG COSUMNES RIVER, NEAR WILTON.
Location Detail: STREAM MAPPED, FOR ~4 RIVER MILES AROUND WILTON.
General: EXIT HOLES OBSERVED DURING MAY AND JUNE SURVEYS, 1984, NO ADULTS OBSERVED.
Owner/Manager: UNKNOWN

Downingia pusilla

dwarf downingia

Element Code: PDCAM060C0

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G3	CNPS List: 2.2
State: None	State: S3.1	

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 EO Index: 5238

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2002-04-02
Site: 2002-04-02
Record Last Updated: 2004-03-11

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.43306° / -121.35144°
UTM: Zone-10 N4255152 E643888
Radius: 80 meters
Elevation: 55 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 07N
Range: 06E
Section: 29 Qtr: NW
Meridian: M

Location: SOUTHEAST CORNER OF SHELDON AND WATERMAN ROADS, ELK GROVE.

Location Detail: TWO SMALL COLONIES MAPPED AS ONE POLYGON 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. THREATENED WITH DEVELOPMENT.

General: ABOUT 200 PLANTS OBSERVED IN 1991. APPROXIMATELY 62 INDIVIDUALS OBSERVED IN 2002.

Owner/Manager: PVT

Occurrence No. 55 Map Index: 26057 EO Index: 5237

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1991-04-XX
Site: 1991-04-XX
Record Last Updated: 1995-10-24

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.42712° / -121.35410°
UTM: Zone-10 N4254489 E643667
Area: 12.9 acres
Elevation: 60 ft

Mapping PrecisionSPECIFIC
Symbol Type:POLYGON

Township: 07N
Range: 06E
Section: 30 Qtr: SE
Meridian: M

Location: NORTHWEST CORNER OF BOND ROAD AND WATERMAN ROAD, ELK GROVE.

Location Detail: 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

Elanus leucurus

white-tailed kite

Element Code: ABNKC06010

Status
Federal: None
State: None

NDDB Element Ranks
Global: G5
State: S3

Other Lists
CDFG Status:

Habitat Associations
General: ROLLING FOOTHILLS AND VALLEY MARGINS WITH 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 EO Index: 6353

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1990-06-03
Site: 1990-06-03

Record Last Updated: 1994-02-04

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.48675° / -121.36528°
UTM: Zone-10 N4261089 E642574
Radius: 80 meters
Elevation: 50 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 07N
Range: 06E
Section: 06 Qtr: SW
Meridian: M

Location: SOUTH SIDE OF MCCOY AVENUE, 0.4 MILE EAST OF ELK GROVE-FLORIN ROAD, SOUTH OF SACRAMENTO.
Ecological: NEST TREE IS LOCATED ON RURAL RESIDENTIAL PROPERTY.
General: 2 ADULTS OBSERVED NESTING IN 1990.
Owner/Manager: PVT

Gratiola heterosepala

Boggs Lake hedge-hyssop — Element Code: PDSCR0R060

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G3	CNPS List: 1B.2
State: Endangered	State: S3.1	

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 EO Index: 21341

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1991-05-13
Site: 1991-05-13
Record Last Updated: 1995-10-30

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.43183° / -121.36241°
UTM: Zone-10 N4254999 E642933
Radius: 80 meters
Elevation: 45 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 07N
Range: 06E
Section: 30 Qtr: N
Meridian: M

Location: 0.75 MI NW OF INTERSECTION OF BOND AND WATERMAN RDS.

Ecological: ASSOCIATED WITH ERYNGIUM VASEYI, ELEOCHARIS MACROSTACHYA, DOWNINGIA ORNATISSIMA. MOST PLANTS IN NEARLY BARREN PORTIONS OF POOL. ANOTHER RARE PLANT ALSO HERE: LEGENERE LIMOSA.

General: 20 PLANTS IN 1991. SITE OWNED BY CAMRAY DEVELOPMENT.

Owner/Manager: PVT

Occurrence No. 34 Map Index: 23930 EO Index: 7475

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Decreasing

Dates Last Seen
Element: 1991-05-09
Site: 1991-05-09
Record Last Updated: 1993-08-04

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.45796° / -121.35336°
UTM: Zone-10 N4257912 E643671
Radius: 80 meters
Elevation: 75 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 07N
Range: 06E
Section: 17 Qtr: SW
Meridian: M

Location: 0.35 MI N OF INTERSECTION OF CALVINE AND WATERMAN ROADS.

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 EO Index: 7476

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2002-04-28
Site: 2002-04-28
Record Last Updated: 2005-09-30

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.47467° / -121.35958°
UTM: Zone-10 N4259757 E643095
Radius: 80 meters
Elevation: 50 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 07N
Range: 06E
Section: 07 Qtr: SE
Meridian: M

Location: ELLIOTT CONSERVANCY, 0.7 MILE EAST OF THE INTERSECTION OF BEACON CREEK AND ELK GROVE-FLORIN RD.

Location Detail: MAPPED IN NW1/4 OF SE1/4 SEC 7.

Ecological: LOW, BARREN AREAS OF LARGE VERNAL POOL. ASSOC WITH CRASSULA AQUATICA, PSILOCARPHUS BREVISSIMUS, DOWNINGIA BICORNUTA, GRATIOLA EBRACTEATA, LASTHENIA GLABERRIMA, AND PLAGIOBOTHRYS STIPITATUS MICRANTHA.

General: 50 PLANTS OBSERVED IN 2002. 1986 AND 1987 OBSERVATIONS MENTIONED PLANTS OBSERVED IN THREE VERNAL POOLS BUT GAVE VAGUE LOCATION INFO FOR THE POOLS. OTHER POOLS IN THIS AREA MAY CONTAIN G. HETEROSEPALA.

Owner/Manager: PVT

Gratiola heterosepala

Boggs Lake hedge-hyssop — Element Code: PDSCR0R060

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G3	CNPS List: 1B.2
State: Endangered	State: S3.1	

Habitat Associations

General: MARSHES AND SWAMPS (FRESHWATER), VERNAL POOLS.

Micro: CLAY SOILS; USUALLY IN VERNAL POOLS, SOMETIMES ON LAKE MARGINS. 5-2400M.

Occurrence No. 81 Map Index: 39745 EO Index: 34747

Occ Rank: None
Origin: Natural/Native occurrence
Presence: Extirpated
Trend: Unknown

Dates Last Seen
Element: 1998-06-05
Site: 2002-06-30
Record Last Updated: 2003-02-25

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.46486° / -121.29484°
UTM: Zone-10 N4258771 E648763
Area:
Elevation: 100 ft

Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON

Township: 07N
Range: 06E
Section: 14 Qtr: NW
Meridian: M

Location: ON EAST SIDE OF EXSELSIOR ROAD, WEST OF DIERKS ROAD. ABOUT 0.7-1.0 MI NORTH OF CALVINE ROAD. DIERKS RANCH.

Location Detail: 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

Great Valley Valley Oak Riparian Forest

Element Code: CTT61430CA

Status
Federal: None
State: None

NDDB Element Ranks
Global: G1
State: S1.1

Other Lists

Habitat Associations
General:
Micro:

Occurrence No. 13 Map Index: 11610 EO Index: 15617

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1985-07-16
Site: 1985-07-16
Record Last Updated: 1998-07-23

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.38342° / -121.32015°
UTM: Zone-10 N4249693 E646719
Area: 209.6 acres
Elevation: 45 ft

Mapping PrecisionSPECIFIC
Symbol Type:POLYGON

Township: 06N
Range: 06E
Section: 9 Qtr: XX
Meridian: M

Location: ALONG DEER CR ABOUT 1 AIR MI NE OF CONFL W/COSUMNES RIVER. BETW GRANT LINE & DILLARD RDS.

Location Detail: BNDRY INCL SOME GRAZING-MAINTAINED SAVANNAH W/VALLEY OAKS 80-100 FT TALL, SOME W/>6 FT DBH.

Ecological: 80-90% CLOSED CANOPY; VALLEY OAK DOMINANT, WALNUTS SUBDOMINANT. DENSE BOX ELDER, SAMBUCUS; LIANAS IMPENETRABLE.

Threat: SCS STREAM CLEARING THREATENS PART.

General: DFG TRYING TO REFOREST. RAPTOR AND LONGHORN BEETLE HABITAT. DFG HAS A 34 ACRE CONSERVATION EASEMENT HERE. THIS WAS OCC #013 OF CTT61430CA

Owner/Manager: PVT

Legenere limosa

legenere

Element Code: PDCAM0C010

Status
Federal: None
State: None

NDDB Element Ranks
Global: G2
State: S2.2

Other Lists
CNPS List: 1B.1

Habitat Associations
General: VERNAL POOLS. MANY HISTORICAL OCCURRENCES ARE EXTIRPATED.
Micro: IN BEDS OF VERNAL POOLS. 1-880M.

Occurrence No. 27 Map Index: 30207 EO Index: 8195

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1991-04-XX
Site: 1991-04-XX
Record Last Updated: 2006-12-27

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.42844° / -121.36009°
UTM: Zone-10 N4254626 E643142
Area: 35.0 acres
Elevation: 50 ft
Mapping PrecisionSPECIFIC
Symbol Type:POLYGON
Township: 07N
Range: 06E
Section: 30 Qtr: E
Meridian: M

Location: NORTHWEST CORNER OF BOND ROAD AND WATERMAN ROAD, ELK GROVE.

Location Detail: 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 AS OF 1991.

General: THOUSANDS 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 EO Index: 4847

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1988-03-26
Site: 1988-03-26
Record Last Updated: 1995-11-14

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.48269° / -121.26417°
UTM: Zone-10 N4260767 E649657
Area: 18.6 acres
Elevation: 90 ft
Mapping PrecisionSPECIFIC
Symbol Type:POLYGON
Township: 07N
Range: 06E
Section: 02 Qtr: SE
Meridian: M

Location: SOUTH FLORIN COUNTY PARK, ABOUT 1 MILE SOUTH OF FLORIN ROAD AND 0.7 MILE EAST OF EXCELSIOR ROAD, NORTHEAST OF ELK GROVE.

Location Detail: 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

Legenere limosa

legenere

Element Code: PDCAM0C010

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G2	CNPS List: 1B.1
State: None	State: S2.2	

Habitat Associations

General: VERNAL POOLS. MANY HISTORICAL OCCURRENCES ARE EXTIRPATED.

Micro: IN BEDS OF VERNAL POOLS. 1-880M.

Occurrence No. 29 Map Index: 30204 EO Index: 4848

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1988-03-26
Site: 1988-03-26
Record Last Updated: 1995-11-14

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.49232° / -121.28485°
UTM: Zone-10 N4261835 E649578
Area: 9.7 acres
Elevation: 110 ft

Mapping PrecisionSPECIFIC
Symbol Type:POLYGON

Township: 07N
Range: 06E
Section: 02 Qtr: NE
Meridian: M

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.

Location Detail: 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

Occurrence No. 30 Map Index: 30206 EO Index: 4853

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2002-04-02
Site: 2002-04-02
Record Last Updated: 2005-10-03

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.43204° / -121.34775°
UTM: Zone-10 N4255045 E644212
Area: 1.5 acres
Elevation: 50 ft

Mapping PrecisionSPECIFIC
Symbol Type:POLYGON

Township: 07N
Range: 06E
Section: 29 Qtr: NW
Meridian: M

Location: SOUTHEAST CORNER OF THE INTERSECTION OF SHELDON ROAD AND WATERMAN ROAD, ELK GROVE.

Location Detail: FOUR COLONIES IN THE SOUTH 1/2 OF THE NW 1/4 OF SECTION 29. IN POOLS VP15, VP20, VP23, AND SWALE SW2.

Ecological: LARGE SEASONAL WETLAND AND VERNAL POOL WITHIN A DAIRY PASTURE. DOMINANTS INCLUDE LASTHENIA GLABERRIMA, ALLOCARYA BRACTEATUS, ELEOCHARIS MACROSTACHYA, RANUNCULUS BONARIENSIS VAR. TRISEPALUS, AND PLAGIOBOTHRYS STIPITATUS VAR. MICRANTHUS.

Threat: HEAVILY DAMAGED BY CATTLE GRAZING; HOME DEVELOPMENT IN AREA.

General: APPROX 315 PLANTS OBSERVED IN 1991 IN THE THREE WESTERN COLONIES. 2200 OBSERVED IN 2002 IN ALL FOUR COLONIES COMBINED.

Owner/Manager: PVT

Legenere limosa

legenere

Element Code: PDCAM0C010

Status
Federal: None
State: None

NDDB Element Ranks
Global: G2
State: S2.2

Other Lists
CNPS List: 1B.1

Habitat Associations
General: VERNAL POOLS. MANY HISTORICAL OCCURRENCES ARE EXTIRPATED.
Micro: IN BEDS OF VERNAL POOLS. 1-880M.

Occurrence No. 60 Map Index: 50727 EO Index: 50727

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2002-05-23
Site: 2002-05-23
Record Last Updated: 2003-03-25

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.47358° / -121.35771°
UTM: Zone-10 N4259639 E643260
Radius: 60 meters
Elevation: 100 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 07N
Range: 06E
Section: 07 Qtr: SE
Meridian: M

Location: CHURCHILL DOWNS PRESERVE, 0.9 AIRMI SOUTHWEST OF GERBER ROAD AT THE CENTRAL CALIFORNIA RAILROAD TRACKS, EAST OF FLORIN.

Location Detail: 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, PLAGIOBOTHRYS 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

Occurrence No. 62 Map Index: 62779 EO Index: 62833

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2002-XX-XX
Site: 2002-XX-XX
Record Last Updated: 2005-10-04

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.37744° / -121.36183°
UTM: Zone-10 N4248954 E643090
Radius: 80 meters
Elevation: 40 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 06N
Range: 06E
Section: 18 Qtr: NE
Meridian: M

Location: NE CORNER OF THE INTERSECTION OF HWY 99 AND GRANT LINE RD, ELK GROVE.

Location Detail: POOL IN THE AREA BOUNDED ON THE NORTH BY THE NORTHBOUND GRANT LINE RD OFFRAMP, ON THE EAST BY E STOCKTON BLVD, ON THE SOUTH BY GRANT LINE, AND ON THE WEST BY HWY 99.

Ecological: VERNAL POOL.

Threat: ROADWAY INTERCHANGE CONSTRUCTION PROJECT TO OCCUR AT THIS INTERSECTION.

General: ~1000 PLANTS OBSERVED IN 2002.

Owner/Manager: UNKNOWN

Lepidurus packardi

vernal pool tadpole shrimp — Element Code: ICBRA10010

Status	NDDB Element Ranks	Other Lists
Federal: Endangered	Global: G3	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 EO Index: 11938

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1992-04-02
Site: 1992-04-02
Record Last Updated: 1996-08-06

Quad Summary: Elk Grove (3812143/496A), Carmichael (3812153/512D)
County Summary: Sacramento

Lat/Long: 38.49808° / -121.29492°
UTM: Zone-10 N4262458 E648688
Radius: 1/5 mile
Elevation: 110 ft

Mapping Precision NON-SPECIFIC
Symbol Type: POINT

Township: 08N
Range: 06E
Section: 35 Qtr: SW
Meridian: M

Location: NEAR NORTHEAST CORNER OF EXCELSIOR ROAD AND FLORIN ROAD.

Ecological: VERNAL POOL.

General: KOFORD OBSERVED TADPOLE SHRIMP DURING SURVEY IN SPRING OF 1992.

Owner/Manager: UNKNOWN

Occurrence No. 85 Map Index: 36381 EO Index: 31378

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1997-02-12
Site: 1997-02-12
Record Last Updated: 1997-08-07

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.46479° / -121.32439°
UTM: Zone-10 N4258716 E646185
Radius: 80 meters
Elevation: 65 ft

Mapping Precision SPECIFIC
Symbol Type: POINT

Township: 07N
Range: 06E
Section: 16 Qtr: NE
Meridian: M

Location: SOUTH OF LAGUNA CREEK, 0.5 MILE WEST OF VINEYARD BLVD, 4 MILES NE OF ELK GROVE.

Location Detail: 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.

General: 7 ADULTS OBSERVED (6 DEAD, 1 ALIVE) ON 12 FEB 1997.

Owner/Manager: SAC COUNTY-PARKS & REC

Occurrence No. 86 Map Index: 30622 EO Index: 30614

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1993-03-12
Site: 1993-03-12
Record Last Updated: 1997-03-20

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.38950° / -121.34574°
UTM: Zone-10 N4250327 E644472
Radius: 3/5 mile
Elevation: 50 ft

Mapping Precision NON-SPECIFIC
Symbol Type: POINT

Township: 06N
Range: 06E
Section: 08 Qtr: XX
Meridian: M

Location: VICINITY OF GRANT LINE ROAD. ABOUT 1.5 MILES SE OF ELK GROVE.

Location Detail: ROADSIDE DITCH LOCATED SOMEWHERE IN SECTION 8.

Ecological: MANMADE ROADSIDE DITCH.

General: LEPIDURUS PACKARDI OBSERVED IN THE 1 FEATURE INSPECTED. SUGNET RECORD #129.

Owner/Manager: UNKNOWN

Lepidurus packardi

vernal pool tadpole shrimp

Element Code: ICBRA10010

Status	NDDB Element Ranks	Other Lists
Federal: Endangered	Global: G3	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. 90 Map Index: 33686 EO Index: 30620

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1993-02-16
Site: 1993-02-16
Record Last Updated: 1997-03-20

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.48894° / -121.34410°
UTM: Zone-10 N4261365 E644417
Area:
Elevation: 60 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 07N
Range: 06E
Section: 5
Meridian: M
Qtr: XX

Location: NORTH OF GERBER ROAD, SOUTH OF FLORIN ROAD, EAST OF ELK GROVE-FLORIN ROAD. ABOUT 5 MILES NORTH OF ELK GROVE.

Location Detail: SEASONAL WETLANDS, VERNAL POOLS & ROADSIDE DITCHES SOMEWHERE IN SECTIONS 4, 5 & 6.

Ecological: NATURAL SEASONAL WETLANDS, NATURAL VERNAL POOLS AND MANMADE ROADSIDE DITCHES.

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 EO Index: 30618

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1997-02-12
Site: 1997-02-12
Record Last Updated: 1999-10-14

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.45287° / -121.33463°
UTM: Zone-10 N4257377 E645315
Area:
Elevation: 65 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 07N
Range: 06E
Section: 16
Meridian: M
Qtr: XX

Location: EAST OF ELK GROVE-FLORIN RD, WEST OF EXCELSIOR RD, NORTH OF SHELDON RD. NNE OF ELK GROVE.

Location Detail: 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: DEVELOPMENT, 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 EO Index: 30611

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1998-01-28
Site: 1998-01-28
Record Last Updated: 1999-12-27

Quad Summary: Elk Grove (3812143/496A), Carmichael (3812153/512D)
County Summary: Sacramento

Lat/Long: 38.49943° / -121.28461°
UTM: Zone-10 N4262624 E649584
Area: 161.9 acres
Elevation: 115 ft
Mapping Precision: SPECIFIC
Symbol Type: POLYGON
Township: 08N
Range: 06E
Section: 35
Meridian: M
Qtr: SE

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.

Location Detail: ARROYO SECO MITIGATION BANK SITE (PREVIOUSLY DESCRIBED AS: VERNAL POOLS SOMEWHERE IN SECTION 35).

Ecological: NATURAL VERNAL POOLS IN A VERNAL POOL COMMUNITY

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

Lepidurus packardi

vernal pool tadpole shrimp — Element Code: ICBRA10010

Status	NDDB Element Ranks	Other Lists
Federal: Endangered	Global: G3	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. 113 Map Index: 36874 EO Index: 31890

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2000-03-15
Site: 2000-03-15
Record Last Updated: 2004-11-17

Quad Summary: Sloughhouse (3812142/495B), Elk Grove (3812143/496A), Carmichael (3812153/512D), Buffalo Creek (3812152/511C)
County Summary: Sacramento

Lat/Long: 38.50388° / -121.25393°
UTM: Zone-10 N4263168 E652250
Area:
Elevation: 125 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 08N
Range: 07E
Section: 31 Qtr: XX
Meridian: M

Location: VICINITY OF THE INTERSECTION OF EAGLES NEST ROAD AND HWY 16 (JACKSON ROAD); SOUTH OF MATHER AIR FORCE BASE.

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. 10+ ADULTS FOUND 15 MAR 2000.

Owner/Manager: PVT

Occurrence No. 165 Map Index: 46127 EO Index: 46127

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2004-02-12
Site: 2004-02-12
Record Last Updated: 2004-08-19

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.46329° / -121.33734°
UTM: Zone-10 N4258529 E645058
Area:
Elevation: 65 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 07N
Range: 06E
Section: 17 Qtr: NE
Meridian: M

Location: CHURCHILL DOWNS WETLAND PRESERVE (PART); 4 MILES NNE OF ELK GROVE.

Location Detail: 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.

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. NONE OBS IN JAN & MAR 2003 SURVEYS. 10'S OBS IN 1 POOL ON 12 FEB 2004.

Owner/Manager: PVT

Occurrence No. 173 Map Index: 48534 EO Index: 48534

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2002-01-21
Site: 2004-XX-
Record Last Updated: 2004-08-19

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.47306° / -121.36003°
UTM: Zone-10 N4259578 E643059
Area:
Elevation: 50 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 07N
Range: 06E
Section: 07 Qtr: SE
Meridian: M

Location: CHURCHILL DOWNS WETLAND PRESERVE (PART); 4.5 MILES NORTH OF ELK GROVE.

Location Detail: 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 VERNAL POOLS WITHIN A GRASSLAND. LINDERIELLA OCCIDENTALIS AND BRANCHINECT LYNCHI ALSO IN VICINITY.

General: 1000'S OBSERVED IN POOL 8 AND 10'S OBSERVED IN POOL 34 ON 21 JAN 2002. NONE OBSERVED IN JAN AND MARCH 2003 SURVEYS. SPECIES NOT OBS DURING 2004.

Owner/Manager: PVT

Lepidurus packardi

vernal pool tadpole shrimp

Element Code: ICBRA10010

Status
Federal: Endangered
State: None

NDDB Element Ranks
Global: G3
State: S2S3

Other Lists
CDFG Status:

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. 238 Map Index: 64352 EO Index: 64432

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2005-02-20
Site: 2005-02-20
Record Last Updated: 2006-07-14

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.49819° / -121.27286°
UTM: Zone-10 N4262505 E650611
Area: 6.6 acres
Elevation: 120 ft

Mapping PrecisionSPECIFIC
Symbol Type:POLYGON

Township: 08N
Range: 06E
Section: 36 Qtr: SW
Meridian: M

Location: SACRAMENTO PRAIRIE VERNAL POOL PRESERVE.
Location Detail: KASSIS & SYLVA PARCELS. JUST NORTH OF FLORIN ROAD, 0.6 MI WEST OF EAGLES NEST ROAD, APPROXIMATELY 8 MI NE OF ELK GROVE.
Ecological: VERNAL POOLS WITHIN A CALIFORNIA ANNUAL GRASSLAND MATRIX.
Threat: THE GRASS GLYCERIA DECLINATA IS BECOMING PROBLEMATIC IN THE GENERAL AREA.
General: "LOTS" OF INDIVIDUALS FOUND IN 8 POOLS; LINDERIELLA OCCIDENTALIS ALSO FOUND IN 5 OF THOSE POOLS.
Owner/Manager: PVT-SACRAMENTO VLY CONSERVANCY

Occurrence No. 247 Map Index: 69256 EO Index: 70035

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2007-02-27
Site: 2007-02-27
Record Last Updated: 2007-05-14

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.47485° / -121.28388°
UTM: Zone-10 N4259898 E649698
Radius: 80 meters
Elevation: 95 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 07N
Range: 06E
Section: 11 Qtr: NW
Meridian: M

Location: 0.9 MILE SE OF THE INTERSECTION OF GERBER ROAD AND EXCELSIOR ROAD, NORTH OF SHELDON.
Location Detail: KLOTZ VP 121
Ecological: HABITAT CONSISTS OF A VERNAL POOL SURROUNDED BY VERNAL POOLS, VERNAL SWALES, AND GRAZED GRASSLAND. BRANCHINECTA LYNCHI AND LINDERIELLA OCCIDENTALIS ALSO FOUND AT THIS SITE.
General: JUVENILE TADPOLE SHRIMP NUMBERING IN THE 10'S OBSERVED ON 27 FEB 2007.
Owner/Manager: ENV STEWARDSHIP FOUNDATION

Linderiella occidentalis

California linderiella — Element Code: ICBRA06010

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G3	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 EO Index: 12050

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1992-04-02
Site: 1992-04-02
Record Last Updated: 1996-08-06

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.49605° / -121.36443°
UTM: Zone-10 N4262122 E642630
Radius: 80 meters
Elevation: 48 ft
Mapping Precision: SPECIFIC
Symbol Type: POINT
Township: 07N
Range: 06E
Section: 06
Meridian: M
Qtr: NW

Location: 0.1 MILES WEST OF HEDGE AVENUE AND SOUTH OF FLORIN ROAD IN A 35 FOOT LONG PUDDLE.

Ecological: 35 FOOT LONG PUDDLE.

General: KOFORD OBSERVED LINDERIELLA IN PUDDLE DURING SURVEY IN SPRING OF 1992.

Owner/Manager: UNKNOWN

Occurrence No. 132 Map Index: 34801 EO Index: 11973

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1992-04-02
Site: 1992-04-02
Record Last Updated: 1996-08-06

Quad Summary: Elk Grove (3812143/496A), Carmichael (3812153/512D)
County Summary: Sacramento

Lat/Long: 38.49628° / -121.33490°
UTM: Zone-10 N4262194 E645205
Radius: 4/5 mile
Elevation: 64 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Township: 07N
Range: 06E
Section: 05
Meridian: M
Qtr: NE

Location: ROADSIDE DITCHES NEAR FLORIN ROAD AND BRADSHAW ROAD, BESIDE FLORIN ROAD.

Location Detail: TWO SITES, 0.6 MILES APART.

Ecological: ROADSIDE DITCHES.

General: KOFORD OBSERVED LINDERIELLA IN DITCHES DURING SURVEY IN SPRING OF 1992.

Owner/Manager: UNKNOWN

Occurrence No. 182 Map Index: 42726 EO Index: 42726

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1993-03-31
Site: 1993-03-31
Record Last Updated: 2000-04-11

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.47701° / -121.34071°
UTM: Zone-10 N4260046 E644736
Area:
Elevation: 60 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 07N
Range: 06E
Section: 08
Meridian: M
Qtr: XX

Location: ALONG CENTRAL CALIFORNIA TRACTION RAILROAD, NORTH OF CALVINE RD, SOUTH OF FLORIN RD, & WEST OF VINEYARD RD.

Location Detail: 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

Linderiella occidentalis

California linderiella — Element Code: ICBRA06010

Status
Federal: None
State: None

NDDB Element Ranks
Global: G3
State: S2S3

Other Lists
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. 183 Map Index: 42727 EO Index: 42727
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1993-04-01
Site: 1993-04-01
Record Last Updated: 2000-04-11

Quad Summary: Elk Grove (3812143/496A), Carmichael (3812153/512D)
County Summary: Sacramento

Lat/Long: 38.49830° / -121.36023°
UTM: Zone-10 N4262378 E642992
Area:
Elevation: 40 ft
Mapping Precision NON-SPECIFIC
Symbol Type: POLYGON
Township: 08N
Range: 06E
Section: 31
Qtr: SE
Meridian: M

Location: ALONG CENTRAL CALIFORNIA TRACTION RAILROAD, BETWEEN HEDGE AVE & FLORIN ROAD, SACRAMENTO.

Location Detail: 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 MAINTENENCE.

Threat: RAILROAD MAINTENENCE & GRADING OF RAILROAD.

General: MODERATE DENSITY OF REPRODUCTIVE ADULTS OBSERVED; ALSO OBSERVED WESTERN TOAD TADPOLES, 1993.

Owner/Manager: PVT

Occurrence No. 214 Map Index: 48534 EO Index: 51506
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2004-01-15
Site: 2004-01-15
Record Last Updated: 2004-08-19

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.47306° / -121.36003°
UTM: Zone-10 N4259578 E643059
Area:
Elevation: 50 ft
Mapping Precision NON-SPECIFIC
Symbol Type: POLYGON
Township: 07N
Range: 06E
Section: 07
Qtr: SE
Meridian: M

Location: CHURCHILL DOWNS WETLAND PRESERVE (PART); 4.5 MILES NORTH OF ELK GROVE.

Location Detail: 0.5 MILE SOUTH OF GERBER RD, 1.2 MILES NORTH OF CALVINE AND 0.5 MILE EAST OF FLORIN RD.

Ecological: HABITAT CONSISTS OF NATURAL AND CREATED VERNAL POOLS WITHIN A GRASSLAND.

General: 10'S TO 1,000'S OBSERVED IN 16 OF 35 NATURAL VERNAL POOLS (DIVIDED BETWEEN THIS SITE & OCC 215) 21 JAN, 7 MAR 2003. ALSO OBSERVED IN 2002. NO OTHER BRANCHIOPOD SPECIES OBS IN 2003. 10'S OBS IN 2 POOLS, 1000'S OBS IN 2 POOLS ON 15 JAN 2004.

Owner/Manager: PVT

Occurrence No. 215 Map Index: 46127 EO Index: 51507
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2004-01-15
Site: 2004-01-15
Record Last Updated: 2004-08-19

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.46329° / -121.33734°
UTM: Zone-10 N4258529 E645058
Area:
Elevation: 65 ft
Mapping Precision NON-SPECIFIC
Symbol Type: POLYGON
Township: 07N
Range: 06E
Section: 17
Qtr: NE
Meridian: M

Location: CHURCHILL DOWNS WETLAND PRESERVE (PART); 4 MILES NNE OF ELK GROVE.

Location Detail: 1 MILE SOUTH GERBER RD, 0.5 MILE NORTH CALVINE RD & EXTENDING FROM 0.4 MILE WEST BRADSHAW RD.

Ecological: SITE IS VERNAL POOL PRESERVE - GRASSLAND. SURROUNDING LAND CONSISTS OF HOMES.

General: 10'S TO 1,000'S OBSERVED IN 16 OF 35 NATURAL VERNAL POOLS (DIVIDED BETWEEN THIS SITE & OCC 214) 21 JAN AND 7 MAR 2003. ALSO OBSERVED IN 2002. NO OTHER BRANCHIOPOD SPECIES OBS IN 2003. 10'S OBS IN 1 POOL, 100'S OBS IN 3 POOLS ON 15 JAN 2004

Owner/Manager: PVT

Linderiella occidentalis

California lindenella — Element Code: ICBRA06010

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G3	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. 255 **Map Index:** 64338 **EO Index:** 64417

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2004-XX-XX
Site: 2004-XX-XX
Record Last Updated: 2006-06-20

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.39910° / -121.33990°
UTM: Zone-10 N4251402 E644963
Area:
Elevation: 50 ft
Mapping Precision NON-SPECIFIC
Symbol Type: POLYGON
Township: 06N
Range: 06E
Section: 05 **Qtr:** SE
Meridian: M

Location: ALONG GRANTLINE ROAD, WEST OF INTERSECTION WITH BRADSHAW ROAD, SE OF ELK GROVE.

Location Detail: AREA MAPPED IS THE STUDY AREA AS THE LOCATION OF "BIG SWALE" WAS NOT SPECIFICALLY IDENTIFIED.

General: UNKNOWN NUMBER OF CYSTS FOUND DURING DRY SEASON SAMPLING OF "BIG SWALE" SITE AT "FAT PROPERTY."

Owner/Manager: PVT

Occurrence No. 260 **Map Index:** 64352 **EO Index:** 64431

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2005-02-29
Site: 2005-02-29
Record Last Updated: 2006-07-14

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.49819° / -121.27286°
UTM: Zone-10 N4262505 E650611
Area: 6.6 acres
Elevation: 120 ft
Mapping Precision SPECIFIC
Symbol Type: POLYGON
Township: 08N
Range: 06E
Section: 36 **Qtr:** SW
Meridian: M

Location: SACRAMENTO PRAIRIE VERNAL POOL PRESERVE.

Location Detail: JUST NORTH OF FLORIN ROAD, 0.6 MI WEST OF EAGLES NEST ROAD, APPROXIMATELY 8 MI NE OF ELK GROVE.

Ecological: VERNAL POOLS.

Threat: THE GRASS GLYCERIA DECLINATA IS BECOMING PROBLEMATIC IN THE GENERAL AREA.

General: "LOTS" OF INDIVIDUALS OBSERVED. FOUND IN 8 POOLS; LEPIDURUS PACKARDI WAS ALSO FOUND IN 5 OF THE POOLS.

Owner/Manager: PVT-SACRAMENTO VLY CONSERVANCY

Northern Hardpan Vernal Pool

Element Code: CTT44110CA

Status
Federal: None
State: None

NDDB Element Ranks
Global: G3
State: S3.1

Other Lists

Habitat Associations
General:
Micro:

Occurrence No. 31 | Map Index: 11687 | EO Index: 27494

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1983-XX-XX
Site: 1983-XX-XX
Record Last Updated: 1998-07-15

Quad Summary: Elk Grove (3812143/496A), Carmichael (3812153/512D)
County Summary: Sacramento

Lat/Long: 38.50407° / -121.28495°
UTM: Zone-10 N4263138 E649545
Radius: 1 mile
Elevation: 120 ft

Mapping Precision NON-SPECIFIC
Symbol Type: POINT

Township: 08N
Range: 06E
Section: 35 | Qtr: SE
Meridian: M

Location: LARGE AREA BOUNDED BY JACKSON RD, EAGLES NEST, CALVINE, AND EXCELSIOR RD.
Location Detail: VAST AREA OF SPARSE VERNAL POOLS. EXTENDS N TO JACKSON RD.
Ecological: ON REDDING-CORNING ASSOCIATION SOILS. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.
Threat: HOUSING DEVELOPMENT IN AREA. SOME CATTLE USE.
Owner/Manager: UNKNOWN

Occurrence No. 55 | Map Index: 11675 | EO Index: 26932

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1983-XX-XX
Site: 1983-XX-XX
Record Last Updated: 1998-07-15

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.47906° / -121.28884°
UTM: Zone-10 N4260357 E649257
Radius: 1 mile
Elevation: 90 ft

Mapping Precision NON-SPECIFIC
Symbol Type: POINT

Township: 07N
Range: 06E
Section: 11 | Qtr: NW
Meridian: M

Location: NE OF ELK GROVE ALONG BRADSHAW RD. 1-2.5 MI N OF CALVINE RD ALONG EXCELSIOR RD.
Location Detail: LARGE AREA OF SPARSE VERNAL POOLS AS SEEN IN 1983 AERIAL PHOTOGRAPHS. ORCUTTIA TENUIS KNOWN FROM THIS AREA.
Ecological: UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO
Threat: AREA GRAZED, HOUSING IN VICINITY, PER 1980 SITE VISIT.
Owner/Manager: UNKNOWN

Occurrence No. 56 | Map Index: 11641 | EO Index: 26982

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1980-05-13
Site: 1980-05-13
Record Last Updated: 1998-07-15

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.45518° / -121.30079°
UTM: Zone-10 N4257688 E648264
Radius: 1/5 mile
Elevation: 70 ft

Mapping Precision NON-SPECIFIC
Symbol Type: POINT

Township: 07N
Range: 06E
Section: 15 | Qtr: SE
Meridian: M

Location: NE OF ELKGROVE ALONG BRADSHAW RD. (ACT NW OF INT. OF CALVINE & EXCELSIOR RDS.)
Ecological: UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.
Threat: GRAZING IN VICINITY.
Owner/Manager: UNKNOWN

Northern Hardpan Vernal Pool

Element Code: CTT44110CA

Status
Federal: None
State: None

NDDB Element Ranks
Global: G3
State: S3.1

Other Lists

Habitat Associations
General:
Micro:

Occurrence No. 57 Map Index: 11566 EO Index: 26933

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Decreasing

Dates Last Seen
Element: 1987-06-17
Site: 1987-06-17
Record Last Updated: 1998-07-15

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.43101° / -121.35800°
UTM: Zone-10 N4254915 E643319
Radius: 1/5 mile
Elevation: 55 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 07N
Range: 06E
Section: 30 Qtr: E
Meridian: M

Location: NE OF ELKGROVE ALONG BRADSHAW RD (W OF WATERMAN RD. BETWEEN SHELDON & BOND RDS)

Ecological: PORTIONS RETAIN NATURAL TOPOGRAPHY W/GOOD SPECIES DIVERSITY. ON REDDING-CORNING ASSOC. SOILS. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.

Threat: AREA GRAZED, WESTERN PORTIONS ONCE USED AS SMALL RESERVOIRS W/CHECK DAMS; OTHER AREAS W/SMALL CHECKS, TERRACES.

General: PARCEL TO BE SOLD, 1987.

Owner/Manager: SAC COUNTY

Occurrence No. 58 Map Index: 11567 EO Index: 26930

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1983-XX-XX
Site: 1983-XX-XX
Record Last Updated: 1998-07-15

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.45962° / -121.33940°
UTM: Zone-10 N4258119 E644886
Radius: 1/5 mile
Elevation: 65 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 07N
Range: 06E
Section: 16 Qtr: E
Meridian: M

Location: NE OF ELK GROVE ALONG BRADSHAW RD.

Location Detail: >80 AC OF DENSE POOLS SEEN IN 1983 AERIAL PHOTOS. AREA OF SPARSE POOLS ALSO TO WEST IN 1/2 S17, E 1/2 S18.

Ecological: ON REDDING-CORNING ASSOCIATION SOILS. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.

Owner/Manager: UNKNOWN

Occurrence No. 68 Map Index: 11588 EO Index: 26872

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1983-XX-XX
Site: 1983-XX-XX
Record Last Updated: 1998-07-15

Quad Summary: Elk Grove (3812143/496A), Carmichael (3812153/512D)
County Summary: Sacramento

Lat/Long: 38.50461° / -121.33996°
UTM: Zone-10 N4263110 E644747
Radius: 1 mile
Elevation: 60 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 08N
Range: 06E
Section: 32 Qtr: NE
Meridian: M

Location: W OF BRADSHAW RD. S OF ELDER CR ROAD. ABOUT 3 MI SW OF MATHER AIR FORCE BASE.

Location Detail: TWO SMALL AREAS OF DENSE VERNAL POOLS AS SEEN IN 1983 AERIAL PHOTOS.

Ecological: UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO

Owner/Manager: UNKNOWN

Northern Hardpan Vernal Pool

Element Code: CTT44110CA

Status
Federal: None
State: None

NDDB Element Ranks
Global: G3
State: S3.1

Other Lists

Habitat Associations
General:
Micro:

Occurrence No. 89 Map Index: 11597 EO Index: 26869

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1983-XX-XX
Site: 1983-XX-XX
Record Last Updated: 1998-07-15

Quad Summary: Elk Grove (3812143/496A), Carmichael (3812153/512D)
County Summary: Sacramento

Lat/Long: 38.49045° / -121.32884°
UTM: Zone-10 N4261557 E645745
Radius: 1 mile
Elevation: 60 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 07N
Range: 06E
Section: 04 Qtr: XX
Meridian: M

Location: E & W OF BRADSHAW ROAD, N OF GERBER ROAD. ABOUT 5 MI N OF ELK GROVE.

Location Detail: EAST OF ROAD SPARSE VERNAL POOLS EXTEND FOR OVER 1 MILE. WEST OF ROAD SMALLER POOL AREA ON E SIDE OF CENTRAL CALIFORNIA TRECTION RAILROAD LINES.

Ecological: UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.

Owner/Manager: UNKNOWN

Occurrence No. 118 Map Index: 11670 EO Index: 16222

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1983-XX-XX
Site: 1983-XX-XX
Record Last Updated: 1998-07-15

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.38690° / -121.28690°
UTM: Zone-10 N4250133 E649616
Area: 167.6 acres
Elevation: 65 ft

Mapping PrecisionSPECIFIC
Symbol Type:POLYGON

Township: 06N
Range: 06E
Section: 11 Qtr: XX
Meridian: M

Location: EAST OF COSUMNES RIVER, NW OF DILLARD RD, SOUTH OF FREEMAN RD.

Location Detail: DENSE DISTRIBUTION OF VERNAL POOLS.

Ecological: SAN JOAQUIN ASSOCIATION SOILS. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO

Owner/Manager: UNKNOWN

Occurrence No. 119 Map Index: 11712 EO Index: 26512

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1983-XX-XX
Site: 1983-XX-XX
Record Last Updated: 1998-07-15

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.37768° / -121.26411°
UTM: Zone-10 N4249147 E651627
Radius: 1/5 mile
Elevation: 65 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 06N
Range: 06E
Section: 13 Qtr: XX
Meridian: M

Location: SOUTH OF WALMORT RD, EAST OF NORTH BADGER CR.

Location Detail: SMALL AREA OF DENSE VERNAL POOLS.

Ecological: SAN JOAQUIN ASSOCIATION SOILS. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.

Owner/Manager: UNKNOWN

Orcuttia tenuis

slender orcutt grass — Element Code: PMPOA4G050

Status
Federal: Threatened
State: Endangered

NDDB Element Ranks
Global: G3
State: S3.1

Other Lists
CNPS List: 1B.1

Habitat Associations
General: VERNAL POOLS.
Micro: 30-1735M.

Occurrence No. 16 — Map Index: 11658 — EO Index: 22364

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1993-06-03
Site: 1993-06-03
Record Last Updated: 2005-10-11

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.47660° / -121.29254°
UTM: Zone-10 N4260078 E648939
Radius: 80 meters
Elevation: 90 ft
Mapping Precision: SPECIFIC
Symbol Type: POINT
Township: 07N
Range: 06E
Section: 11
Qtr: NW
Meridian: M

Location: WEST SIDE OF LAGUNA CREEK, 0.2 MILE EAST OF EXCELSIOR ROAD. 1.6 MILES NORTH OF CALVINE ROAD.

Ecological: ELONGATE, NARROW VERNAL POOL SURROUNDED BY ANNUAL GRASSLAND. ASSOC 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

Occurrence No. 90 — Map Index: 62810 — EO Index: 62864

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2004-06-07
Site: 2004-06-07
Record Last Updated: 2005-10-13

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.47088° / -121.29371°
UTM: Zone-10 N4259441 E648849
Area: 1.0 acres
Elevation: 85 ft
Mapping Precision: SPECIFIC
Symbol Type: POLYGON
Township: 07N
Range: 06E
Section: 11
Qtr: SW
Meridian: M

Location: NE OF THE INTERSECTION OF EXCELSIOR RD AND DIERKS RD.

Location Detail: APPROXIMATELY 1100 FEET EAST OF EXCELSIOR RD AND 1000 FEET NORTH OF DIERKS RD.

Ecological: DEEP VERNAL POOL; WITHIN VERNAL POOL - SWALE - GRASSLAND COMPLEX. ASSOC WITH GLYCERIA DECLINATA, LASTHENIA GLABERRIMA, RANUNCULUS ALVEOLATUS, ELEOCHARIS MACROSTACHYA, ERYNGIUM VASEYI, PSILOCARPHUS BREVISSIMUS, AND LEPIDURUS PACKARDII.

Threat: CURRENT AND PAST CATTLE GRAZING. RESIDENTIAL DEVELOPMENT NEARBY, BUT NOT ON THIS PARCEL.

General: 500-1000 PLANTS OBSERVED IN 2004.

Owner/Manager: PVT

Orcuttia viscida

Sacramento orcutt grass

Element Code: PMPOA4G070

Status
Federal: Endangered
State: Endangered

NDDB Element Ranks
Global: G1
State: S1.1

Other Lists
CNPS List: 1B.1

Habitat Associations
General: VERNAL POOLS.
Micro: 30-100M.

Occurrence No. 20 Map Index: 34802 EO Index: 63059

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1998-07-30
Site: 1998-07-30
Record Last Updated: 2005-10-28

Quad Summary: Elk Grove (3812143/496A), Carmichael (3812153/512D)
County Summary: Sacramento

Lat/Long: 38.49808° / -121.29492°
UTM: Zone-10 N4262458 E648688
Radius: 1/5 mile
Elevation: 110 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 08N
Range: 06E
Section: 35 Qtr: SW
Meridian: M

Location: ON THE NORTH SIDE OF FLORIN RD, CIRCA 1/4 MILE EAST OF EXCELSIOR AVE.

Ecological: IN MUDFLOW VERNAL POOLS WITH ROCKY BOTTOMS.

General: ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 1998 COLLECTION BY HRUSA. NEEDS FIELDWORK.

Owner/Manager: UNKNOWN

Sagittaria sanfordii

Sanford's arrowhead — Element Code: PMALI040Q0

Status
Federal: None
State: None

NDDB Element Ranks
Global: G3
State: S3.2

Other Lists
CNPS List: 1B.2

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 — **EO Index:** 17243

Occ Rank: None
Origin: Natural/Native occurrence
Presence: Possibly Extirpated
Trend: Unknown

Dates Last Seen
Element: 1996-08-XX
Site: 1996-08-XX
Record Last Updated: 2003-06-06

Quad Summary: Elk Grove (3812143/496A), Florin (3812144/496B)
County Summary: Sacramento

Lat/Long: 38.45158° / -121.39310°
UTM: Zone-10 N4257143 E640216
Area:
Elevation: 40 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 07N
Range: 05E
Section: 13
Qtr: SE
Meridian: M

Location: STRAWBERRY CREEK. NORTHWEST & SOUTH OF CALVINE RD/ELK GROVE-FLORIN RD INTERSECTION, ELK GROVE.

Location Detail: 6 MAIN COLONIES. 1) "CHANNEL OFF OF STRAWBERRY CREEK" MAPPED NW OF CALVINE/ELK GROVE-FLORIN RD JCT 2-4) ALONG CREEK WEST OF ELK GROVE-FLORIN RD 5) ALONG ASSESSORS PARCEL #115013014, 6) JUST WEST OF SPRR, IN STOCK POND (TRANSP POP).

Ecological: COLONY NEAR BAY TOWN CRK IS CEMENT LINED CHANNEL. CENTER COLONIES ARE ALONG DRIED CREEK CHANNEL.

Threat: NW POP IN CANAL WAS TO BE CLEARED OF VEGETATION IN 1991 OR 1992, DEVELOPMENT PROPOSED FOR CENTER POP. HOW MUCH IS LEFT?

General: SACRAMENTO CO PUBLIC WORKS DEPT. TO TRANSPLANT COLONY 1 INTO A GIANT GARTER SNAKE SITE TO MITIGATE FOR CANAL CLEARING ACTIVITIES. POP IN SEC 24 REPLANTED AT SITE AFTER STRAWBERRY CR REALIGNMENT. FORMER EO #19 & #20 HERE.

Owner/Manager: SAC COUNTY PUBLIC WORKS, PVT

Occurrence No. 56 — **Map Index:** 50831 — **EO Index:** 50831

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1996-05-24
Site: 1996-05-24
Record Last Updated: 2003-05-23

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.45797° / -121.32306°
UTM: Zone-10 N4257961 E646315
Area:
Elevation: 65 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 07N
Range: 06E
Section: 16
Qtr: SE
Meridian: M

Location: SOUTH OF CALVINE ROAD, WEST OF CENTRAL CALIFORNIA TRACTION RAILROAD.

Location Detail: EXACT LOCATION UNKNOWN. MAPPED AS PROVIDED, IN THE NW 1/4 OF THE SE 1/4 OF SECTION 16.

Ecological: STOCK POND IN IRRIGATED PASTURE. NAVARRETIA ERIOCEPHALA IN PROPERTY TO NORTHWEST.

Threat: SITE PROPOSED FOR RESIDENTIAL DEVELOPMENT.

General: APPROXIMATELY 15 INDIVIDUALS OBSERVED IN 1996.

Owner/Manager: PVT

Occurrence No. 57 — **Map Index:** 50850 — **EO Index:** 50850

Occ Rank: None
Origin: Natural/Native occurrence
Presence: Possibly Extirpated
Trend: Unknown

Dates Last Seen
Element: 199X-XX-XX
Site: 199X-XX-XX
Record Last Updated: 2003-04-03

Quad Summary: Sloughhouse (3812142/495B), Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.47903° / -121.24791°
UTM: Zone-10 N4260421 E652826
Area:
Elevation:
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 07N
Range: 07E
Section: 07
Qtr: XX
Meridian: M

Location: ALONG GRANT LINE ROAD, SOUTH OF JCT OF GRANT LINE ROAD & SUNRISE BLVD.

Location Detail: EXACT LOCATION UNKNOWN, MAPPED ALONG GRANT LINE ROAD SOUTH OF INTERSECTION.

Ecological: IN DITCH ALONG ROADSIDE.

Threat: ROADSIDE OCCURRENCE.

General: SITE STUDIED BETWEEN 1991-1998, NO PLANTS REMAINED BY 1998. FIELDWORK NEEDED.

Owner/Manager: UNKNOWN

Sagittaria sanfordii

Sanford's arrowhead

Element Code: PMALI040Q0

Status
Federal: None
State: None

NDDB Element Ranks
Global: G3
State: S3.2

Other Lists
CNPS List: 1B.2

Habitat Associations
General: MARSHES AND SWAMPS.
Micro: IN STANDING OR SLOW-MOVING FRESHWATER PONDS, MARSHES, AND DITCHES. 0-610M.

Occurrence No. 58 Map Index: 62282 EO Index: 62319

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2002-08-05
Site: 2002-08-05

Record Last Updated: 2005-08-11

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.43408° / -121.35041°
UTM: Zone-10 N4255265 E643975
Area: 0.6 acres
Elevation: 50 ft

Mapping PrecisionSPECIFIC
Symbol Type:POLYGON

Township: 07N
Range: 06E
Section: 29
Meridian: M
Qtr: NW

Location: UPPER LAGUNA CREEK, ABOUT 0.3 MILES SSE OF INTERSECTION OF SHELDON ROAD AND WATERMAN ROAD.
Location Detail: IN SHALLOW BENDS OF UPPER LAGUNA CREEK. MAPPED IN THE SW 1/4 OF THE NW 1/4 OF SECTION 29.
Ecological: SHALLOW BENDS OF CREEK, GROWING EMERGENT IN STANDING WATER.
Threat: DEVELOPMENT.
General: 500 PLANTS IN THREE PATCHES SEEN IN 2002.
Owner/Manager: PVT

Thamnophis gigas

giant garter snake

Element Code: ARADB36150

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 EO Index: 47639

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2002-03-27
Site: 2002-03-27

Record Last Updated: 2002-04-11

Quad Summary: Elk Grove (3812143/496A)
County Summary: Sacramento

Lat/Long: 38.39342° / -121.35265°
UTM: Zone-10 N4250752 E643861
Radius: 80 meters
Elevation: 50 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 06N
Range: 06E
Section: 08 Qtr: NW
Meridian: M

Location: EAST SIDE OF WATERMAN ROAD, 0.8 MILE NORTH OF GRANT LINE ROAD, SE OF ELK GROVE

Location Detail: 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

Biological Resource Assessment

For

Vineyard Market Square

(aka Badella Property)

Sacramento County, California

Superseded Date:
14 August 2007

Original Date:
11 July 2005

Prepared For:
Petrovich Development Company

LIST OF ATTACHMENTS

Attachment A – Wetland Delineation Verification Letter

Attachment B – Potentially Occurring Special-Status Species

Attachment C – CNDDB Data Report

ATTACHMENT A

Wetland Delineation Verification Letter

ATTACHMENT B

Potentially Occurring Special-Status Species

ATTACHMENT C

CNDDB Data Report

CONNOR ARBORIST SERVICES

Post Office Box 277754
Sacramento, California 95827-7754
Phone (916) 726-1427 Fax (916) 484-1023

RECEIVED
AUG 17 2004
DEPARTMENT OF ENVIRONMENTAL REVIEW AND ASSESSMENT

5/18/04

Petrovich Development Company
Attention:Noreen Yeigh
5046 Sunrise Blvd, suite one
Fair Oaks, CA 95628-4945

Re: Vineyard Market Square (Control # 04-RZB-PMR-209)-preliminary arborist report

Dear Ms. Yeigh,

This report documents the existing trees on the property at the corner of Gerber Rd. and Elk Grove-Florin Rd. in Sacramento County. The site is generally level with native and non-native trees surrounding a former home site. A large stand of bamboo occupies the center of the property.

The trees were measured and rated for structure and health. Possible ratings range from good to fair to poor with gradations in between. It should be noted that "fair" is an average rating for all trees and that "natural" trees, grown without arboricultural care, tend to have slightly lower ratings. This report refers to tree tag numbers attached to the tree trunks generally at eye level on the south side of the trunk. Recommendations for optimum health and safety are included for each tree. Specific information on each of the trees is detailed in the following pages.

There is a mix of native and non-native trees on the property. The majority of the trees are native California black walnuts. There are two native oaks, a Valley oak and a Coast live oak. Non-native trees include palms, citrus, fig, persimmon and pecan.

Trees # 13 and 14 are California black walnuts and are recommended removals due to poor health and structure. Even with good arboricultural care, these trees are unlikely to improve enough in health or structure to be retained. These trees represent potential hazards if retained. Please see attached "Tree hazard evaluation forms" for more detailed information. I am also recommending the removal of tree# 24, a Fig tree, due to poor structure. Much of this tree has toppled and it presents a potential hazard.

Please feel free to call me if you have any questions or concerns regarding this report.

Sincerely,

Lani Houck

Lani Houck, I.S.A Certified Arborist #6494

Tree #: 1 California black walnut *Juglans hindsii*
DBH: 14"
Dripline radius: 14'
Structure: fair
Vigor: fair
Dripline environment: natural, dog chained to tree
Recommendations: prune

Tree #: 2 California black walnut *Juglans hindsii*
DBH: 6,6,6,5,5,5,4" at 3'
Dripline radius: 13'
Structure: fair, multi-trunked
Vigor: fair
Dripline environment: natural, under power lines
Recommendations: prune

Tree #: 3 (454) California black walnut *Juglans hindsii*
DBH: 17" at 2'
Dripline radius: 14'
Structure: fair, dead branch to north
Vigor: fair
Dripline environment: natural, at edge of drainage canal and paved road, disturbed soil
Recommendations: prune

Tree #: 4 California black walnut *Juglans hindsii*
DBH: 14" at 2.5'
Dripline radius: 14'
Structure: fair to poor, has been topped, decay in pruning wounds and trunk
Vigor: fair
Dripline environment: natural, near drainage canal and paved road, disturbed soil
Recommendations: prune

Tree #: 5 California black walnut *Juglans hindsii*
DBH: 11" at 3'
Dripline radius: 13'
Structure: fair
Vigor: fair
Dripline environment: natural
Recommendations: prune

Tree #: 6 California black walnut *Juglans hindsii*
DBH: 6" at 3'
Dripline radius: 12'
Structure: fair, canopy leans to the east due to crowding
Vigor: fair
Dripline environment: natural
Recommendations: prune

Tree #: 7 California black walnut *Juglans hindsii*
DBH: 9" at 1'
Dripline radius: 11'
Structure: fair, canopy leans to the west due to crowding
Vigor: fair
Dripline environment: natural
Recommendations: prune

Tree #: 8 California black walnut *Juglans hindsii*
DBH: 14" at 1'
Dripline radius: 10'
Structure: fair to poor, weak primary crotch
Vigor: fair, above average amount of deadwood
Dripline environment: natural
Recommendations: prune

Tree #: 9 California black walnut *Juglans hindsii*
DBH: 9" at 2'
Dripline radius: 12'
Structure: fair, canopy leans to the south due to crowding
Vigor: fair
Dripline environment: natural, debris
Recommendations: prune

Tree #: 10 California black walnut *Juglans hindsii*
DBH: 10" at 2'
Dripline radius: 10'
Structure: fair, trunk and canopy leans to the north due to crowding
Vigor: fair
Dripline environment: natural, debris
Recommendations: prune

Tree #: 11 Valley oak *Quercus lobata*
DBH: 6"
Dripline radius: 6'
Structure: good to fair
Vigor: good to fair
Dripline environment: natural, building and debris
Recommendations: prune

Tree #: 12 Coast live oak *Quercus agrifolia*
DBH: 17,15"
Dripline radius: 22'
Structure: fair to poor, weak primary crotch, branch stub
Vigor: good to fair
Dripline environment: natural, building and debris
Recommendations: prune, cable, inspect annually

Tree #: 13 California black walnut *Juglans hindsii*
DBH: 34"
Dripline radius: 20'
Structure: poor, extensive decay in trunk
Vigor: poor, above average amount of deadwood
Dripline environment: natural, debris
Recommendations: remove or isolate due to hazard

Tree #: 14 California black walnut *Juglans hindsii*
DBH: 34"
Dripline radius: 23'
Structure: poor, extensive decay in trunk and limbs
Vigor: poor, above average amount of deadwood
Dripline environment: natural, building and debris
Recommendations: remove or isolate due to hazard

Tree #: 15 Plum *Prunus sp.*
DBH: 15" at 1'
Dripline radius: 15'
Structure: fair to poor, weak primary crotches
Vigor: good to fair
Dripline environment: natural
Recommendations: prune

Tree #: 16 citrus *Citrus sp.*
DBH: 11,6,4"
Dripline radius: 10'
Structure: fair to poor, weak primary crotch
Vigor: good to fair
Dripline environment: natural, debris
Recommendations: prune

Tree #: 17 California fan palm *Washingtonia filifera*
DBH: 34"
Dripline radius: 10'
Structure: fair
Vigor: fair
Dripline environment: natural, debris
Recommendations: prune

Tree #: 18 Almond *Prunus dulcis*
DBH: 12" at 2'
Dripline radius: 12'
Structure: fair to poor, canopy leans to the west due to crowding
Vigor: fair to poor, excessive deadwood
Dripline environment: natural, bamboo thicket
Recommendations: prune

Tree #: 19 California black walnut *Juglans hindsii*
DBH: 19"
Dripline radius: 25'
Structure: fair to poor, canopy leans to the north due to crowding
Vigor: fair to poor, above average amount of deadwood
Dripline environment: bamboo thicket, paving in dripzone
Recommendations: prune, inspect annually

Tree #: 20 Persimmon *Diospyros kaki*
DBH: 15"
Dripline radius: 18'
Structure: fair to poor, decay in pockets in old pruning wounds
Vigor: fair
Dripline environment: bamboo thicket, paving in dripzone
Recommendations: prune

Tree #: 21 Persimmon *Diospyros kaki*
DBH: 11"
Dripline radius: 15'
Structure: fair, root buttress is resting on pavement
Vigor: fair
Dripline environment:, paving in dripzone
Recommendations: prune

Tree #: 22 Chinaberry tree *Melia azedarach*
DBH: 17"
Dripline radius: 21'
Structure: fair, broken branch
Vigor: fair
Dripline environment:natural
Recommendations: prune

Tree #: 23 Mexican fan palm *Washingtonia robusta*
DBH: 19"
Dripline radius: 9'
Structure: good to fair
Vigor: fair
Dripline environment:natural
Recommendations: prune

Tree #: 24 Fig *Ficus carica*
DBH:" 9,7,5
Dripline radius: '
Structure: poor, regrowth off decayed trunk
Vigor: fair
Dripline environment:natural, paved road
Recommendations: remove or isolate due to poor structure

Tree #: 25 California black walnut *Juglans hindsii*
DBH: 23"
Dripline radius: 28'
Structure: fair to poor, trunk leans to the north due to crowding
Vigor: fair
Dripline environment:natural, bamboo thicket
Recommendations: prune

Tree #: 26 Pecan *Carya illinoensis*

DBH: 7,3"

Dripline radius: 27'

Structure: fair to poor, trunk leans to the north due to crowding

Vigor: fair

Dripline environment: natural, bamboo thicket

Recommendations: prune

A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas

TREE HAZARD EVALUATION FORM 2nd Edition

Site/Address: S. West corner Elk Grove Florin & Gerber

Map/Location: Control 04 - R2B - PMR - 209

Owner: public ____ private ✓ unknown ____ other ____

Date: 5/19/04 Inspector: Lani Honck

Date of last inspection: ____

HAZARD RATING:

____ + ____ + ____ = ____

Failure Potential + Size of part + Target Rating = Hazard Rating

____ Immediate action needed

____ Needs further inspection

____ Dead tree

TREE CHARACTERISTICS

Tree #: 14 **Species:** California black walnut

DBH: 34 **# of trunks:** 1 **Height:** 30 **Spread:** 45'

Form: ☐ generally symmetric ☐ minor asymmetry ☑ major asymmetry ☐ stump sprout ☐ stag-headed

Crown class: ☑ dominant ☐ co-dominant ☐ intermediate ☐ suppressed

Live crown ratio: 40 % **Age class:** ☐ young ☐ semi-mature ☐ mature ☑ over-mature/senescent

Pruning history: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none ☑ multiple pruning events Approx. dates: ____

Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☐ indigenous ☑ protected by gov. agency

TREE HEALTH

Foliage color: ☑ normal ☐ chlorotic ☐ necrotic **Epicormics?** Y N

Foliage density: ☐ normal ☑ sparse **Leaf size:** ☑ normal ☐ small

Annual shoot growth: ☐ excellent ☐ average ☑ poor **Twig Dieback?** (Y) N

Woundwood development: ☐ excellent ☐ average ☑ poor ☐ none

Vigor class: ☐ excellent ☐ average ☐ fair ☑ poor

Growth obstructions: ☐ stakes ☐ wire/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☑ other building

Major pests/diseases: ____

SITE CONDITIONS

Site Character: ☑ residence ☐ commercial ☐ industrial ☐ park ☐ open space ☐ natural ☐ woodland\forest

Landscape type: ☐ parkway ☐ raised bed ☐ container ☐ mound ☐ lawn ☐ shrub border ☐ wind break

Irrigation: ☑ none ☐ adequate ☐ inadequate ☐ excessive ☐ trunk wettled

Recent site disturbance? Y (N) ☐ construction ☐ soil disturbance ☐ grade change ☐ line clearing ☐ site clearing

% dripline paved: 0% 10-25% (25-50%) 50-75% 75-100% **Pavement lifted?** Y (N)

% dripline w/ fill soil: 0% 10-25% 25-50% 50-75% 75-100%

% dripline grade lowered: 0% 10-25% 25-50% 50-75% 75-100%

Soil problems: ☐ drainage ☐ shallow ☐ compacted ☑ droughty ☐ saline ☐ alkaline ☐ acidic ☐ small volume ☐ disease center ☐ history of fail ☐ clay ☐ expansive ☐ slope ____° aspect: ____

Obstructions: ☐ lights ☐ signage ☐ line-of-sight ☐ view ☐ overhead lines ☐ underground utilities ☐ traffic ☐ adjacent veg. ☐ ____

Exposure to wind: ☑ single tree ☐ below canopy ☐ above canopy ☐ recently exposed ☐ windward, canopy edge ☐ area prone to windthrow

Prevailing wind direction: S Occurrence of snow/ice storms ☐ never ☑ seldom ☐ regularly

TARGET

Use Under Tree: ☑ building ☐ parking ☐ traffic ☑ pedestrian ☐ recreation ☐ landscape ☐ hardscape ☐ small features ☐ utility lines

Can target be moved? Y N **Can use be restricted?** Y (N)

Occupancy: ☐ occasional use ☑ intermittent use ☐ frequent use ☐ constant use

The International Society of Arboriculture assumes no responsibility for conclusions or recommendations derived from use of this form.

#14

TREE DEFECTS

ROOT DEFECTS:

Suspect root rot: Y (N) **Mushroom/conk/bracket present:** Y (N) **ID:** _____

Exposed roots: ☐ severe ☐ moderate ☐ low **Undermined:** ☐ severe ☐ moderate ☐ low

Root pruned: _____ distance from trunk **Root area affected:** _____% **Buttress wounded:** Y N **When:** _____

Restricted root area: ☐ severe ☑ moderate ☐ low **Potential for root failure:** ☐ severe ☐ moderate ☑ low

LEAN: _____ deg. from vertical ☐ natural ☐ unnatural ☐ self-corrected **Soil heaving:** Y N

Decay in plane of lean: Y N **Roots broken** Y N **Soil cracking:** Y N

Compounding factors: _____ **Lean severity:** ☐ severe ☐ moderate ☐ low

CROWN DEFECTS: Indicate presence of individual defects and rate their severity (s = severe, m = moderate, l = low)

DEFECT	ROOT CROWN	TRUNK	SCAFFOLDS	BRANCHES
Poor taper				
Bow, sweep				
Codominants/forks				
Multiple attachments				
Included bark				
Excessive end weight				
Cracks/splits				
Hangers			M	
Girdling				
Wounds/seam		S		
Decay		S-M	M	M
Cavity				
Conks/mushrooms/bracket				
Bleeding/sap flow				
Loose/cracked bark				
Nesting hole/bee hive				
Deadwood/stubs			M	M
Borers/termites/ants				
Cankers/galls/burls				
Previous failure			M	

HAZARD RATING

Tree part most likely to fail: _____

Inspection period: _____ annual _____ biannual _____ other _____

Failure Potential + Size of Part + Target Rating = Hazard Rating

3 + 3 + 2 = 8

Failure potential: 1 - low; 2 - medium; 3 - high; 4 - severe
Size of part: 1 - <6" (15 cm); 2 - 6-18" (15-45 cm); 3 - 18-30" (45-75 cm); 4 - >30" (75 cm)
Target rating: 1 - occasional use; 2 intermittent use; 3 - frequent use; 4 - constant use

HAZARD ABATEMENT

Prune: ☐ remove defective part ☐ reduce end weight ☐ crown clean ☐ thin ☐ raise canopy ☐ crown reduce ☐ restructure ☐ shape

Cable/Brace: _____ **Inspect further:** ☐ root crown ☐ decay ☐ aerial ☐ monitor

Remove tree: (Y) N **Replace?** Y N **Move target:** Y (N) **Other:** _____

Effect on adjacent trees: ☐ none ☐ evaluate

Notification: ☐ owner ☐ manager ☐ governing agency **Date:** _____

COMMENTS

A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas

TREE HAZARD EVALUATION FORM 2nd Edition

Site/Address: S.E. corner Elk Grove Florin & Gerber

Map/Location: Control 04-R2B-PMR-209

Owner: public ____ private ✓ unknown ____ other ____

Date: 5/19/04 Inspector: Lani Houck

Date of last inspection: ____

HAZARD RATING:

Failure Potential	+	Size of part	+	Target Rating	=	Hazard Rating
4	+	3	+	1	=	8

✓ Immediate action needed

____ Needs further inspection

____ Dead tree

TREE CHARACTERISTICS

Tree #: 13 **Species:** California black walnut

DBH: 34 **# of trunks:** 1 **Height:** 30 **Spread:** 40

Form: ☐ generally symmetric ☐ minor asymmetry ☑ major asymmetry ☐ stump sprout ☐ stag-headed

Crown class: ☑ dominant ☐ co-dominant ☐ intermediate ☐ suppressed

Live crown ratio: 20 % **Age class:** ☐ young ☐ semi-mature ☐ mature ☑ over-mature/senescent

Pruning history: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none ☑ multiple pruning events Approx. dates: ____

Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☐ indigenous ☐ protected by gov. agency

TREE HEALTH

Foliage color: ☑ normal ☐ chlorotic ☐ necrotic **Epicormics?** (Y) N

Foliage density: ☐ normal ☑ sparse **Leaf size:** ☑ normal ☑ small

Annual shoot growth: ☐ excellent ☐ average ☑ poor **Twig Dieback?** (Y) N

Woundwood development: ☐ excellent ☐ average ☑ poor ☐ none

Vigor class: ☐ excellent ☐ average ☐ fair ☑ poor

Growth obstructions: ☐ stakes ☐ wire/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☐ other ____

Major pests/diseases: ____

SITE CONDITIONS

Site Character: ☐ residence ☐ commercial ☐ industrial ☐ park ☑ open space ☐ natural ☐ woodland/forest

Landscape type: ☐ parkway ☐ raised bed ☐ container ☐ mound ☐ lawn ☐ shrub border ☐ wind break

Irrigation: ☑ none ☐ adequate ☐ inadequate ☐ excessive ☐ trunk wettled

Recent site disturbance? Y N ☐ construction ☐ soil disturbance ☐ grade change ☐ line clearing ☐ site clearing

% dripline paved:	0%	10-25%	25-50%	50-75%	75-100%	**Pavement lifted?** Y N
% dripline w/ fill soil:	0%	10-25%	25-50%	50-75%	75-100%	
% dripline grade lowered:	0%	10-25%	25-50%	50-75%	75-100%	

Soil problems: ☐ drainage ☐ shallow ☐ compacted ☑ droughty ☐ saline ☐ alkaline ☐ acidic ☐ small volume ☐ disease center ☐ history of fail ☐ clay ☐ expansive ☐ slope ____° aspect: ____

Obstructions: ☐ lights ☐ signage ☐ line-of-sight ☐ view ☐ overhead lines ☐ underground utilities ☐ traffic ☐ adjacent veg. ☐ ____

Exposure to wind: ☑ single tree ☐ below canopy ☐ above canopy ☐ recently exposed ☐ windward, canopy edge ☐ area prone to windthrow

Prevailing wind direction: S Occurrence of snow/ice storms ☐ never ☑ seldom ☐ regularly

TARGET

Use Under Tree: ☐ building ☐ parking ☐ traffic ☑ pedestrian ☐ recreation ☐ landscape ☐ hardscape ☐ small features ☐ utility lines

Can target be moved? Y N **Can use be restricted?** (Y) N

Occupancy: ☑ occasional use ☐ intermittent use ☐ frequent use ☐ constant use

The International Society of Arboriculture assumes no responsibility for conclusions or recommendations derived from use of this form.

#13

TREE DEFECTS

ROOT DEFECTS:

Suspect root rot: Y (N) **Mushroom/conk/bracket present:** Y (N) **ID:** _____

Exposed roots: ☐ severe ☐ moderate ☐ low **Undermined:** ☐ severe ☐ moderate ☐ low

Root pruned: _____ distance from trunk **Root area affected:** _____% **Buttress wounded:** Y N **When:** _____

Restricted root area: ☐ severe ☐ moderate ☐ low **Potential for root failure:** ☐ severe ☐ moderate ☑ low

LEAN: _____ deg. from vertical ☐ natural ☐ unnatural ☐ self-corrected **Soil heaving:** Y (N)

Decay in plane of lean: Y (N) **Roots broken** Y (N) **Soil cracking:** Y (N)

Compounding factors: _____ **Lean severity:** ☐ severe ☐ moderate ☐ low

CROWN DEFECTS: Indicate presence of individual defects and rate their severity (s = severe, m = moderate, l = low)

DEFECT	ROOT CROWN	TRUNK	SCAFFOLDS	BRANCHES
Poor taper				
Bow, sweep				
Codominants/forks				
Multiple attachments				
Included bark				
Excessive end weight				
Cracks/splits				
Hangers			M	M
Girdling				
Wounds/seam		S	S	
Decay		S	S	S
Cavity				
Conks/mushrooms/bracket				
Bleeding/sap flow				
Loose/cracked bark				
Nesting hole/bee hive				
Deadwood/stubs			S	
Borers/termites/ants				
Cankers/galls/burls				S
Previous failure				

HAZARD RATING

Tree part most likely to fail: major limb / trunk

Inspection period: _____ annual _____ biannual _____ other _____

Failure Potential + Size of Part + Target Rating = Hazard Rating

4 + 3 + 1 = 8

Failure potential: 1 - low; 2 - medium; 3 - high; 4 - severe
Size of part: 1 - <6" (15 cm); 2 - 6-18" (15-45 cm); 3 - 18-30" (45-75 cm); 4 - >30" (75 cm)
Target rating: 1 - occasional use; 2 intermittent use; 3 - frequent use; 4 - constant use

HAZARD ABATEMENT

Prune: ☐ remove defective part ☐ reduce end weight ☐ crown clean ☐ thin ☐ raise canopy ☐ crown reduce ☐ restructure ☐ shape

Cable/Brace: _____ **Inspect further:** ☐ root crown ☐ decay ☐ aerial ☐ monitor

Remove tree: (Y) N **Replace?** Y N **Move target:** Y N **Other:** _____

Effect on adjacent trees: ☐ none ☐ evaluate

Notification: ☐ owner ☐ manager ☐ governing agency **Date:** _____

COMMENTS

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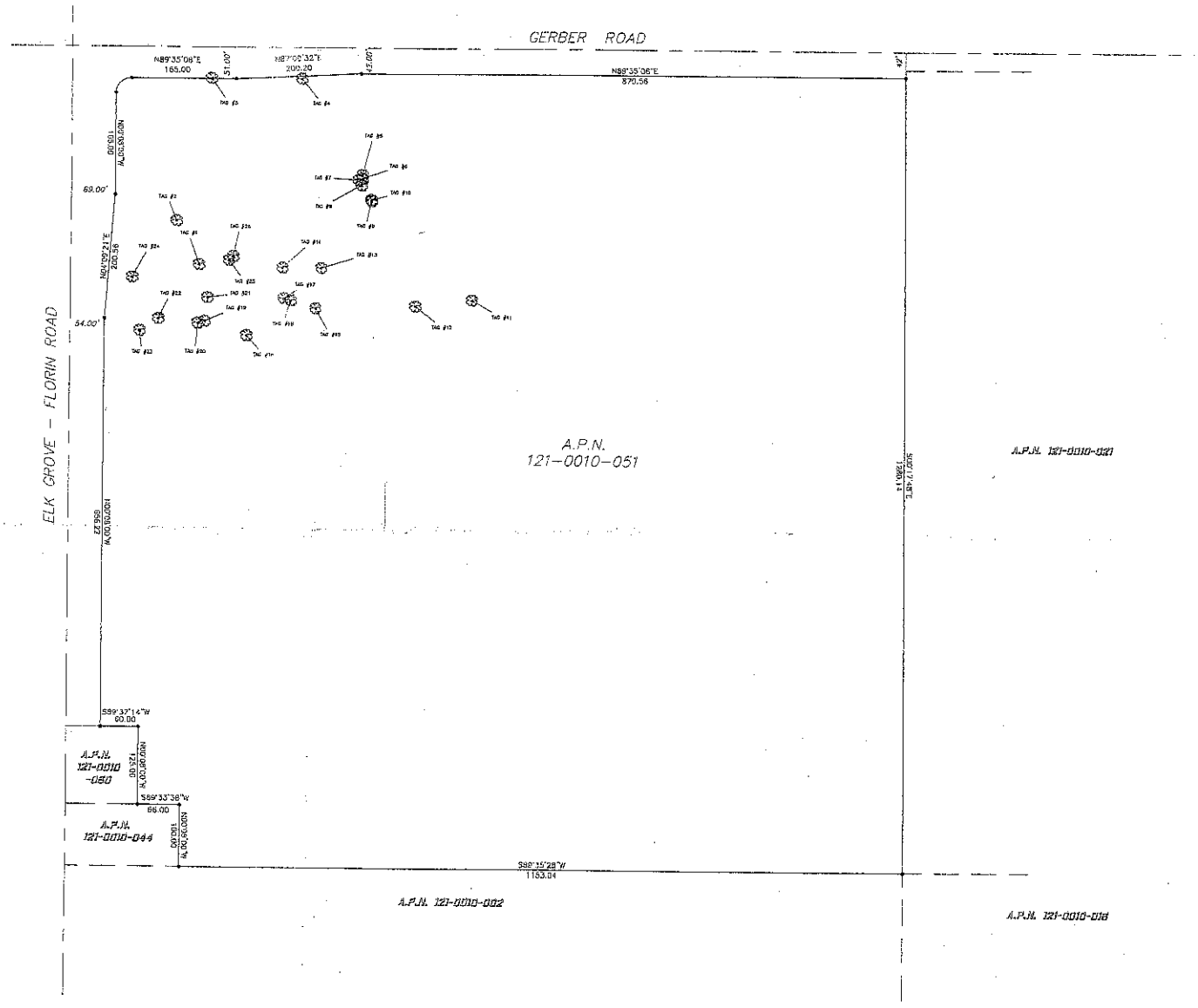
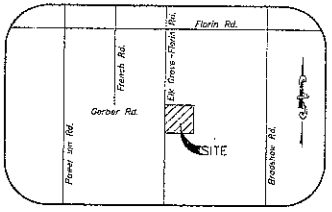
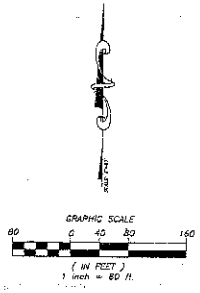
DEPARTMENT OF
REVIEW AND





VICINITY MAP



VM-3 - 12

NOTES
1. TREE LOCATIONS ARE REPRESENTED BY THE TAG NUMBER THAT WAS FOUND ON THE TREES LOCATED. THESE NUMBERS SHOULD CORRESPOND TO THE NUMBERS FOUND IN THE ARBORIST'S REPORT PREPARED BY CONNOR ARBORIST SERVICES ON MAY 19, 2004, FOR PETROVICH DEVELOPMENT COMPANY.
2. THE EXTENT OF THIS TREE LOCATION SURVEY IS THE HORIZONTAL LOCATION AND TAGGED DESCRIPTION ONLY. NO VERTICAL LOCATIONS OR ELEVATIONS ARE INCLUDED IN THE SERVICES PROVIDED BY THIS SURVEYOR.

LEGEND

TAG #20 — TREE WITH ARBORIST TAG DESCRIBED IN ARBORIST REPORT FROM CONNOR ARBORIST SERVICES DATED 5/18/04.

NOTES:
THIS MAP IS A TRUE REPRESENTATION OF A TREE LOCATION SURVEY PREFORMED BY ME OR UNDER MY DIRECTION AT THE REQUEST OF PETROVICH DEVELOPMENT COMPANY IN AUGUST, 2004.

PRECISION LAND SURVEYING, INC.
8850 AUBURN FOLSOM ROAD, GRANITE BAY, CA.
P.O. BOX 1042 FOLSOM, CA. 95763-1042
(916) 789-2006

DRAWN BY: WET
CHECKED BY: RAM

REVISION #	DATE	DESCRIPTION

TREE SURVEY

ASSESSOR'S PARCEL NUMBER 121-0010-051 FOR PETROVICH DEVELOPMENT COMPANY.
SACRAMENTO COUNTY CALIFORNIA

PROJECT No. 0237
SCALE: 1"= 80'
SHEET 1 OF 1 SHEETS

NEIL O. ANDERSON
AND ASSOCIATES

GEOTECHNICAL
ENVIRONMENTAL
INSPECTIONS & TESTING
LABORATORY SERVICES
POOL ENGINEERING
POST TENSION DESIGN

PHASE I ENVIRONMENTAL SITE ASSESSMENT

SEC ELK GROVE-FLORIN & GERBER

7635 ELK GROVE-FLORIN ROAD

SACRAMENTO, CA 95829

04-0208

RECEIVED
MAR 30 2004
PLANNING DEPT.
County of Sacramento

PREPARED BY:

Neil O. Anderson & Associates
902 Industrial Way
Lodi, California 95240
(209) 367-3701
fax (209) 369-4228

Prepared For:
Petrovich Development Company
5046 Sunrise Blvd. - Suite One
Fair Oaks, CA 95628

March 26, 2004
NOA PROJECT NUMBER E04019A

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March 26, 2004
NOA PROJECT NUMBER E04019A

PHASE I ENVIRONMENTAL SITE ASSESSMENT

SEC ELK GROVE-FLORIN & GERBER

7635 ELK GROVE-FLORIN ROAD

SACRAMENTO, CA 95829

1.0 SUMMARY

Neil O. Anderson and Associates (NOA) has been retained by Philip Harvey and Mr. Bruce Roberts, of Petrovich Development Company, to conduct a Phase I Environmental Site Assessment for the property located at 7635 Elk Grove-Florin Road, Sacramento, Sacramento County, CA.

Nine (9) Federal, six (6) State, and eight (8) regional and local databases were searched to determine whether any recognized environmental conditions exist on the subject property. The search radius for this investigation extended to adjoining properties and properties within a search distance of one-quarter to one mile. The background and past uses of the subject property were investigated. Physical characteristics including the topography, hydrogeologic setting, and groundwater depth and flow direction beneath the subject property were researched. A site reconnaissance of the subject property and its immediate surroundings was completed as well. The data pertinent to this investigation can be found in the body of this document. The primary investigator for the assessment was Clifford Walker, Jr., California Registered Environmental Assessor #REA1-00797.

The subject property is largely a fallow agricultural field occupied with a pre-fabricated residence and four farm related buildings. The area north of the barn contains inoperable tractors and evidence that equipment maintenance activities occurred in this area. Stained soil, a drum of petroleum liquid and old batteries were observed north of the barn.

This assessment has revealed evidence of recognized environmental conditions in connection with the subject property.

LODI ■ SACRAMENTO ■ MODESTO

ENVIRONMENTAL DIVISION 902 Industrial Way, Lodi, California 95240 ■ 209.367.3701 ■ 209.369.4228 ■ www.noanderson.com

2.0 Introduction

2.1 Purpose

Due to concerns regarding potential liability for toxic hazards, real estate investors need to assess property before purchase to determine if current or past occupants or surrounding land uses could adversely impact property development. Performance of a Phase I Environmental Site Assessment according to ASTM Standard E1527-00 satisfies one of the requirements to qualify for the innocent landowner defense within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

The purpose of this Phase I Environmental Site Assessment is to identify to the extent feasible, pursuant to the processes prescribed in ASTM Standard E1527-00, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*, recognized environmental conditions in connection with the property. Additional investigative procedures, designed to meet the due diligence criteria specified by many lending institutions, have been implemented as well. Per ASTM E1527-00, §1.1.1:

> The term "recognized environmental conditions" means the presence or likely presence of any hazardous substances or petroleum products on the property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures, onto the property, or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not recognized environmental conditions.

2.2 Scope of Work

The scope of work performed to develop the information contained in this Phase I Environmental report includes:

1. Collecting available information concerning the property as it pertains to:
   a. Past land use
   b. Past owners
   c. Location of buried storage tanks, hazardous waste storage, wastewater treatment facilities and/or on-site landfills, etc.
   d. Types of chemicals used on-site past and present
   e. Geologic and hydrogeologic features
   f. Past geotechnical investigations (if available)

g. Other data pertinent to the specific site

2. Conducting a site visit to:
   a. Identify vegetative features
   b. Locate surface waters
   c. Assess physical features
   d. Observe adjacent land use
   e. Gather evidence of indiscriminate and/or illegal waste disposal

3. Conducting a review of regulatory agencies' records to:
   a. Review applicable State and Local regulations
   b. Contact appropriate regulatory personnel
   c. Review regulatory files regarding the property in question

4. Preparing the Phase I Environmental Site Assessment Report, including assembling supporting documentation.

5. Making recommendations for a Phase II Investigation if necessary

A previous environmental assessment prepared by Lush Geosciences, Inc. (Lush, 1999) was reviewed by **NOA** in preparing this Report. The Lush assessment was provided by, but not prepared for Petrovich Development Company, LLC.

This Phase I Environmental Site Assessment Report discusses all work performed by **NOA** to date with regard to this project. The principal findings are outlined throughout the body of this text and are summarized in the conclusion of this report.

2.3 Significant Assumptions

No significant assumptions were made during the course of this investigation.

2.4 Limitations and Exceptions

This report was compiled as a Phase I Environmental Site Assessment for the subject project. This report contains information and data provided to **NOA** by several sources. **NOA** in no way warrants the accuracy or completeness of the information provided to this investigation by those sources.

It should be noted that when an assessment is completed without adequate subsurface exploration or chemical screening of soil and groundwater beneath the site, as in this study, no statement of scientific certainty can be made regarding latent subsurface conditions which may be the result of on-site or off-site sources. The findings and conclusions of this report are not scientific certainties, but rather probabilities based on professional judgement concerning the significance of the data gathered during the course of this investigation. **NOA** is not able to represent that the site or adjoining land contains no hazardous waste, oil, underground storage tanks, or other latent condition beyond that detected or observed by **NOA** during the Phase I Environmental Site

Assessment. The possibility always exists for contaminants to migrate through surface water, air, or groundwater. An investigation to determine whether or not contaminants are present in the surface and subsurface soil is not within the scope of work required to produce the Phase I Environmental Site Assessment. Chemical analysis of soil and groundwater samples to quantify levels of contamination is also not within the scope of work required to develop a Phase I Environmental Site Assessment.

For this assessment, the following limitations arose:

- Most of the surface of the site was covered with grasses or weeds up to two feet high which obscured observation of the soil.
- There was no access allowed to the interior of any of the primary buildings.
- Safety concerns created by a guard dog limited access to the west end of the garage.
- The completed Environmental Questionnaire and Disclosure Statement provided by the current landowner was returned to **NOA** unsigned and undated.

2.5 Special Terms and Conditions

Our office has not been provided with specific criteria for the development of this report other than a request to evaluate the property in question for possible problems related to toxic or hazardous agents, nor have we been directed to address any specific questions concerning the site. Should there be a need to conduct an investigation into a specific question not addressed in this report, contact our office immediately regarding your concerns.

2.6 User Reliance

This report was prepared for the exclusive use of Petrovich Development Company. No other person or entity is entitled to rely upon this report without the specific written authorization of **NOA.** Such reliance is subject to the same limitations, terms, and conditions as the original contract with the client. **NOA** specifically disclaims any responsibility for any unauthorized use of this report.

3.0 SITE DESCRIPTION

3.1 Location and Legal Description

The subject property is located at 7635 Elk Grove-Florin Road, Sacramento, Sacramento County, CA. The site Assessor's Parcel Number is 121-0010-051. The property is a square shaped parcel approximately 36.71 acres in size.

Location and site maps of the subject property are attached to this report as **Appendix A**. Photographs of the subject property are attached to this report as **Appendix B**.

3.2 Site and Vicinity General Characteristics

The subject property is fallow agricultural land occupied by five (5) buildings and dense growth of bamboo and berry vines around the garage. The surrounding properties to the north and west are developed with residential or commercial buildings. To the east and south are farm-type residences with open fields.

3.3 Current Use of the Property

The subject property is apparently only used as a residence and storage facility within several locked buildings. A fresh produce stand exists at the northwest corner of the property.

3.4 Descriptions of Structures, Roads, Other Improvements on the Site

There are no improved roads or infrastructure on the subject property (except for the five buildings described above).

3.5 Current Uses of the Adjoining Properties

To the north of the subject property is Gerber Road and then a golf center. To the south and east are farm-type residences and open fields. To the west is Elk Grove-Florin Road and then a church and residences.

4.0 PHYSICAL SETTING

4.1 Topography

The subject property is located at the west side of the northwest corner of Section 7, Township 7 North, Range 6 East, of the Mount Diablo Baseline and Meridian system. The property lies at approximately 40-45 feet above mean sea level and is relatively flat. Topography of the subject property slopes slightly to the south.

4.2 Geology

The subject property is located in the Sacramento Valley. This valley occupies the northern and central portion of the Great Valley Geomorphic Province. The Sacramento River is the main drainage conduit for this area.

The Great Valley Province is an elongated northwest-southeast trending Asymmetric Geosyncline (structural trough). This region persisted as a lowland or shallow marine embayment during the entire Cenozoic Era and late Mesozoic Era. During the Pliocene Epoch the east side of the valley was receiving stream deposits from the ancestral Sierra Nevada, which consisted of predominantly fine-grained alluvial fans. In recent times sediments in this area were deposited mostly from stream channels and alluvial fans (Bailey, 1966).

The geosyncline has a regional southwest tilt, with the longitudinal axis located off center to the west. This area ranges in elevation from slightly below sea level to about 400 feet at its north and south ends. The valley is bounded to the east by the Sierra Nevada and the west by the Coast Ranges. It is about 400 miles long and 50 miles wide.

The rock sequences of the Great Valley can be divided into two sections, a division supported by geophysical studies and well records. First is a belt along the west base of the Sierra; this includes minimally deformed alluvial fans and lake deposits that feather east onto the Sierran basement. Second section is a linear belt from 10 to 20 miles (16-32km) wide at the east base of the Coast Range; this is composed of deformed Mesozoic and Cenozoic rocks that dip east beneath the valley. The sedimentary cover of gravels and sands is thinner in the western belt.

Although unconfirmed, the contact at depth between Sierran and Coast Range basements is presumed to be a fault. Nearer the Coast Range margin, the contact between the two basement units has been definitely located (Norris and Webb, 1990).

4.3 Soils

The *Soil Survey of Sacramento County, California* (1993) shows soils on the subject property to be located within the San Joaquin Silt Loam with 0-3% slopes and within the San Joaquin Silt Loam with 3-8% slopes. The *Soil Survey* describes these map units as follows:

> San Joaquin Silt Loam with 0-3% slopes:
> *This moderately deep, moderately well drained soil is on low terraces. It formed in alluvium derived form dominantly granitic rocks. Slopes are complex... The average annual precipitation is 15 to 19 inches.*
>
> *Permeabily is very slow in the San Joaquin soil. Water is perched above the claypan for short periods after heavy rainfall in winter and early spring or when the soil is over irrigated. Available water capacity is low...the depth to a hardpan ranges from 23 to 40 inches. The shrink-swell potential is high. Runoff is slow. The hazard of water erosion is slight.*

San Joaquin Silt Loam with 3-8% slopes:

This moderately deep, moderately well drained soil is on low terraces. It formed in alluvium derived form dominantly granitic rocks. Slopes are complex... The average annual precipitation is 15 to 19 inches.

Permeabily is very slow in the San Joaquin soil. Water is perched above the claypan for short periods after heavy rainfall in winter and early spring or when the soil is over irrigated. Available water capacity is low...the depth to a hardpan ranges from 23 to 40 inches. The shrink-swell potential is high. Runoff is medium. The hazard of water erosion is moderate.

4.4 Groundwater

The *Sacramento County, California Groundwater Elevations Spring 2003* and *Fall 2002* groundwater maps show groundwater elevations approximately 40 feet below mean sea level and groundwater flow to the south in the region of the subject property. Given that the USGS maps depict the subject property between 40 and 45 feet above mean sea level, it can be inferred that groundwater will be found approximately 80 to 85 feet below the ground surface.

5.0 USER PROVIDED INFORMATION

5.1 Title Records

Mr. Roberts did not provide a chain-of-title report for the subject property; he did, however, provide a preliminary title report (Placer Title, 2004) for the subject property. This report did not describe the subject property as containing any particular recognized environmental conditions.

5.2 Environmental Liens or Activity and Use Limitations

Mr. Roberts referred **NOA** to the report described in Section 5.1 above (Placer Title, 2004) with respect to known environmental liens or land use limitations recorded against the subject property. **NOA** found no such encumbrances in the report (Placer Title, 2004).

5.3 Specialized Knowledge

Mr. Roberts indicated no specialized knowledge related to the environmental condition of the subject property. No environmental reports have been prepared by or for Petrovich Development Company, LLC.

5.4 Valuation Reduction for Environmental Issues

Mr. Roberts replied that the purchase price of the subject property is not significantly lower than comparable properties in the area.

5.5 Owner, Property Manager, and Occupant Information

The representative of the current owner of the subject property returned the owner's section of the Environmental Questionnaire. The findings from this Questionnaire are discussed in Section 8.0 of this report.

5.6 Reason for Performing Phase I

Mr. Roberts stated that this Phase I is being performed so that the property owner can qualify as an "innocent landowner" under CERCLA.

5.7 Other

On page 3 of the environmental assessment report reviewed by NOA (Lush, 1999), it was noted that an underground "fuel oil tank was present at the east side of the residence; the Site owner states that the tank was removed with no indication of contamination."

Mr. Roberts indicated no other environmental knowledge of the subject property.

6.0 RECORDS REVIEW

In preparing this report **NOA** has engaged the services of Environmental Data Resources, Inc. (EDR) of Southport, Connecticut. EDR provided **NOA** with a list and profile of the recorded sites within the study area that have been identified by the regulatory agencies.

Included in the EDR governmental database search report was a list of "orphan sites." These sites were not depicted on the EDR radius map of identified sites. **NOA** reviewed the "orphan sites" list for properties that may be located within the search radius specified for each governmental database; all such sites have been included in the body of this report those orphan sites.

The EDR report includes information from several additional data sources beyond those discussed below, which exceed the scope of work of this report. Details of these sources are included in the EDR report in **Appendix F.** Although these additional sources are not discussed in detail below, these additional sources were reviewed, and any findings of significance are reported in the search results section of this report.

6.1 Review of Federal Regulatory Agency Database

The following federal agency databases have been reviewed:

SOURCE	Last Agency Update	Search Radius
6.1.1 National Priority List (NPL) Source: U.S. Environmental Protection Agency (US EPA). The NPL database, maintained by, is a subset of CERCLIS (see below) and identifies sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas.	1/29/04	1 mile
6.1.2 Comprehensive Environmental Response Compensation and Liability Information System List (CERCLIS) Source: US EPA. The CERCLIS database contains information on potentially hazardous waste sites that have been reported to the US EPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).	11/17/03	1 mile
6.1.3 CERCLIS "No Further Remedial Action Planned" (NFRAP) Source: US EPA. The CERC-NFRAP database contains information on sites designated "No Further Remedial Action Planned" which have been removed from the CERCLIS database. NFRAP sites may be sites where no contamination was found following an initial investigation, where remedial action has been completed, or where US EPA has deferred to a state or local agency to oversee remediation.	11/17/03	¼ mile
6.1.4 Resource Conservation and Recovery Information System - Hazardous Waste Generators (RCRIS) Source: US EPA. RCRIS contains basic information on facilities which generate hazardous waste as defined by Resource Conservation and Recovery Act (RCRA). Each site is categorized as one of the following: LARGE QUANTITY GENERATOR (LQG): Facilities that generate more than 1000 kg. per month of non-acutely hazardous waste, or more than 1 kg. per month of acutely hazardous waste. SMALL QUANTITY GENERATOR (SQG): Facilities that generate between 100 kg. and 1000 kg. per month of non-acutely hazardous waste.	1/12/04	½ mile
6.1.5 Resource Conservation and Recovery Information System - Treatment, Storage and Disposal Facilities (RCRIS-TSD) Source: US EPA. The RCRIS-TSD database contains basic information on facilities that Transport, Store, or Dispose of (TSD) hazardous waste as defined by RCRA.	1/12/04	1 mile
6.1.6 RCRA Corrective Action Activity (CORRACTS) Source: US EPA. CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.	12/18/03	1 mile

SOURCE	Last Agency Update	Search Radius
6.1.7 Emergency Response Notification System (ERNS) Source: U.S. Coast Guard, National Response Center. ERNS database contains information on the reported releases of hazardous substances.	12/31/02	½ mile
6.1.8 Toxic Chemical Release Inventory System (TRIS) Source: US EPA. TRIS contains information on facilities which release toxic chemicals into the air, water, and land in reportable quantities under the Superfund Amendments and Reauthorization Act (SARA) Title III Section 313.	12/31/01	½ mile
6.1.9 Facility Index System (FINDS) Source: US EPA. FINDS contains both facility information and "pointers" to other sources that contain more detail.	10/23/03	½ mile

6.2 Review of State Regulatory Agency Databases

The following state agency database have been reviewed:

SOURCE	Last Agency Update	Search Radius
6.2.1 CAL-SITES Source: California Environmental Protection Agency (Cal EPA). CAL-SITES, also known as the Site Mitigation and Brownfields Reuse Program Database, includes facilities subdivided into the following categories: Hazardous waste cleanup sites; Properties needing further evaluation; School site evaluations; No further action properties; Voluntary Cleanup Program properties; Properties referred to another agency.	11/30/03	1 mile
6.2.2 Historic Registered Underground Storage Tanks (HIST-UST) Source: State Water Resources Control Board (SWRCB). The SWRCB formerly maintained a statewide listing of UST sites. Although no longer maintained, the data identifies facilities which had registered USTs, either active of inactive as of 1994.	10/15/90	½ mile
6.2.3 Registered Underground Storage Tanks (UST) Source: SWRCB. The SWRCB is currently gathering UST facility information, as submitted by local agencies, into its GeoTracker database. This data is currently incomplete and is undergoing data cleanup.	04/02/03	½ mile
6.2.4 Leaking Underground Fuel Tanks (LUFT) Source: SWRCB. LUFT information is managed with the SWRCB's GeoTracker database, as reported by local agencies.	4/02/03	½ mile
6.2.5 Solid Waste Information System (SWIS) Source: California Integrated Waste Management Board. The SWIS database contains an inventory of solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 2004 criteria for solid waste landfills or disposal sites.	11/14/03	½ mile

SOURCE	Last Agency Update	Search Radius
6.2.6 Waste Management Unit Database (WMUDS/SWAT) Source: SWRCB. The WMUDS/SWAT database is used for program tracking and inventory of waste management units. The WMUDS/SWAT database is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 Information, Chapter 15 Monitoring Parameters, TPCA Program information, RCRA Program Information, Closure Information, and Interested Parties Information.	04/01/00	½ mile

6.3 Review of Regional and Local Regulatory Agency Records

The following regional and local agency database have been reviewed:

SOURCE	Last Agency Update	Search Radius
6.3.1 LUSTIS- Region 5 California Regional Water Quality Control Board, Leaking Underground Storage Tank Information System	07/01/03	½ mile
6.3.2 SLIC - Region 5 California Regional Water Quality Control Board, list of Spills, Leaks, Investigations, and Cleanups	01/08/04	1 mile
6.3.3 Sacramento County-CS Source: Sacramento County Environmental Management. The database lists underground storage tanks, hazardous waste generators, and business plans.	7/17/03	½ mile
6.3.4 Sacramento County -ML Source; Sacramento County Environmental Management. The database lists any business that has hazardous materials on site: including hazardous material storage sites, underground storage tanks and waste generators.	07/17/03	½ mile
6.3.5 Toxic Site Sacramento County Environmental Management Department, list of toxic sites	1/29/04	target property and adjacent
6.3.6 Out of Business Sacramento County Environmental Management Department, list of sites that were found to be out of business prior to September 1998.	9/01/98	target property and adjacent
6.3.7 Underground Storage Tank Removals Sacramento County Environmental Management Department, list of underground storage tank removals	11/15/99	target property and adjacent
6.3.8 Complaints Sacramento County Environmental Management Department, list of complaints	2/03/04	target property and adjacent

6.4 Database Search Findings

6.4.1 Subject Property

The subject property does not appear on any of the Federal, State or local agency databases searched at this time.

6.4.2 Underground Storage Tanks

EDR reports three (3) UST facilities within one-half mile of the subject property:

8899 Gerber Road	*Farm*
8950 McCoy Avenue	*I.T.C. Thermodyne*
8950 McCoy Avenue	*Elpido Velosco*

Leaks were reported at the following no (0) UST facilities within one-half mile of the subject property:

6.4.3 Hazardous Materials Handlers

EDR reports five (5) hazardous materials handlers within one-half mile of the subject property:

8915 Gerber Road	*Champions Golf Center*
8899 Gerber Road	*George T. Dakuzaku*
8950 McCoy Avenue	*Elpido Velosco*
8880 Gerber Road	*American River FD #50*
7149 S Watt Avenue	*Javan Shell Food Mart*

NOA reviewed the information provided by EDR related to the facilities described above and found no evidence that activities at these facilities have or will represent recognized environmental conditions on the subject property.

6.4.4 Incidents and Spills

EDR reports one (1) hazardous materials spill within one-half mile of the subject property:

8880 Gerber Road	*American River FD #50*

The spill was reported in August 1991; no quantity or chemical name was reported.

6.4.5 Landfills

EDR reports no (0) landfills within one-half mile of the subject property:

6.4.6 Hazardous Waste Cleanup and Remediation Sites

EDR reports no (0) cleanup and/or remediation sites within one mile of the subject property:

6.4.7 Other Listings

No information reported from supplemental sources indicates the likely presence of conditions of environmental concern for the subject property.

6.5 Local Agency Inquiries

6.5.1 Sacramento County Environmental Management Department

Four databases were reviewed at the Sacramento County Environmental Management Department on March 5, 2004. The databases were searched for all addresses on or adjacent to the subject property.

The following site was found on the *Toxic Site* list, dated January 9, 2004:

No records found

The following sites were found on the *Underground Storage Tank Removals* list, dated November 15, 1999:

No records found

The following sites were found on the Master List Inspection Inventory Report, dated February 3, 2004:

8880 Gerber Road	*American River FD*

The following sites were found on the *Complaints* list, dated February 3, 2004:

8880 Gerber Road	*American River FD (a spill of urethane floor finish on 8/19/1991)*

The following sites were found on the *Out of Business Prior to July 1, 1998* list, dated September 1, 1998:

8915 Gerber Road	*Champions Golf Center*
8899 Gerber Road	*George T. Dakuzaku*
9086 Gerber Road	*Sacramento Pallet Co.*
8880 Gerber Road	*Florin Fire Protection*

While this database reports *Champions Golf Center* and *Florin Fire Protection* as "out of business", **NOA** staff have personal knowledge that these facilities are still operational at the addresses listed.

Having reviewed these lists, **NOA** has determined that no further review or discussion of these lists is warranted due to the nature of the businesses and lack of correlated findings in other agency databases.

6.5.2 Sacramento City Fire Department

The Sacramento City Fire Department was contacted by telephone to determine whether files present at that agency note any hazardous materials storage, releases or spills, underground storage tanks, above ground storage tanks, or leaking underground storage tanks on or in the vicinity of the subject property. According to Ms. Trish O'Connell, secretary, the Fire Department does not maintain underground storage tank files and is not capable of searching hazardous materials files.

7.0 HISTORICAL USE INFORMATION

7.1 Recorded Land Title Records

A preliminary title report for the subject property was provided by the client for **NOA**'s use in preparing this report. Please refer to **Section 5.2** of this report for a discussion of this document. No pertinent environmental information was contained in the preliminary title report.

7.2 Aerial Photographs

Aerial photographs of the subject property, dated 1952, 1961, 1971, 1981, and 1993 were obtained through EDR.

In the 1952 photo, the subject property appears to be cultivated agricultural land with a cluster of farm related buildings and trees in the northwest corner of the property. Similar agricultural land uses with scattered farm residences appear on all sides of the subject property. Elk Grove-Florin Road appear at the west border of the property and Gerber Road appears at the north border of the property,

In the 1961 photo, a new storage type building appears east of the cluster of farm buildings on the north side of the subject property. No further changes were noted from the 1952 photograph.

In the 1971 photo, an access road is shown from the cluster of buildings north to Gerber Road. Elk Grove-Florin and Gerber Roads have been widened. Otherwise, no further changes were noted from the 1961 photograph.

In the 1981 photo, the access road from Gerber Road is widened and now serving the storage building to the east of the farm buildings. A new crop pattern appears in the northeast corner of the property. Otherwise, no further changes were noted from the 1971 photograph.

In the 1993 photo, a new small building appears in the northeast corner of the subject property and the access road to Gerber Road appears to be less traveled. A commercial building appears northwest of the subject property across the road and a parking lot serving a golf driving range appears north and across Gerber Road. Otherwise, no further changes were noted from the 1981 photograph.

These photos are included in **Appendix C** of this report. Having reviewed these photos, **NOA** has determined that due to the scale and quality of the photos no further site-specific details are ascertainable.

7.3 USGS Topographic Maps

Historic topographic maps of the subject property were obtained through EDR. Maps of the Galt quadrangle (15 minute series) published in 1947, the Elk Grove quadrangle (7.5 minute series) published in 1968, 1968 photorevised 1979 were provided to **NOA**.

In the 1947 map, the subject property is shown with one residential sized building and an access road to Gerber Road to the north. Elk Grove-Florin Road is at the west border of the property. The subject property is depicted as agricultural land at approximately 45 feet above mean sea level; the land slopes slightly to the south. The surrounding land uses appear to be dispersed rural residential or agricultural in nature. No additional details of development are shown on or adjacent to the subject property.

In the 1968 map, a residence and a rectangular building are shown on the northern portion of the subject property. Additional residences appear along roads in the vicinity of the property. No other new information is apparent about the subject property or land uses in the vicinity compared to the 1947 map.

In the 1979 map, additional residences appear along roads in the vicinity of the property. No other new information is available about the subject property or land uses in the vicinity compared to the 1968 map.

These maps are included in **Appendix C** of this report. Having reviewed these maps, **NOA** has determined that due to the scale of the maps no further site-specific details are ascertainable.

7.4 Sanborn Insurance Company Maps

An attempt was made by EDR to obtain Sanborn Insurance Company maps for the period covering the years 1860 through the present in order to determine what types of activities were conducted on the subject property and on adjoining properties. No Sanborn maps were found for the subject property.

7.5 Local Street Directories

The R. L. Polk, Sacramento Directory Company and other directories were searched and reported to **NOA** by EDR, including issues dated approximately every five years from 1920 through 1999. No listings were reported within one-half mile of the subject property.

7.6 Building Department/Planning Department Records

The Sacramento County Division of Public Works was contacted to determine whether any building or demolition permit records exist for the subject property address. The only records found related to permits issued in June 1990 for the steel building at the northeast corner of the subject property.

8.0 INTERVIEWS

An attempt has been made to obtain historical as well as current information relative to the subject property from the property owner or key site manager of the property. The objective of the interview process is to obtain any information indicating recognized environmental conditions in connection with the proposed project site. An Environmental Questionnaire and Disclosure statement was mailed to Mr. Bruce Roberts of Petrovich Development Company by **NOA** with a request to forward the appropriate section to the owner or key site manager of the subject property for completion.

Mr. Roberts completed the client's portion of the Questionnaire. He indicated no knowledge of any recognized environmental conditions related to the subject property.

The current landowner's portion of the Questionnaire was returned to **NOA** indicating that the current landowners are George and Joanne Badilla, Bernice Schneider, and Mary Sunahara. The completed questionnaire stated the land has been used for agriculture for at least 65 years; a fuel oil tank had been removed from the east side of the residence; and, that Lust Geosciences completed an environmental report for the subject property dated 12/26/1999 [a portion of the Lush report (Lush 1999) was attached.]. No further information related to recognized environmental conditions were noted in the responses from the landowners. The Questionnaire was unsigned and undated.

A copy of the client's and landowner's response to the Questionnaire is included as **Appendix E**.

9.0 SITE VISIT/ASSESSMENT

A visual reconnaissance of the subject property was conducted on March 5, 2004 by Clifford Walker, Jr. A site map and photographs of the subject property are attached to this report in **Appendices A and B**. A site visit/assessment checklist is attached to this report as **Appendix D**.

The subject property is located at the southeast corner of Gerber Road and Elk Grove-Florin Road in Sacramento, California. The site is largely a fallow agricultural field occupied with a pre-fabricated residence and four farm related buildings. The surface of the property is almost entirely obscured from view by grasses and weeds. There is vestigial evidence of a residence west of the existing buildings near Elk Grove-Florin Road. A set of large, pad-mounted electrical transformers are adjacent to the southwest corner of the property. The land uses adjacent to the property include open fields, farm residences, a church, residences and a golf center.

North of the barn on the subject property was an accumulation of inoperable tractors and construction equipment and related parts. Some hazardous materials and stained soil was observed. No access to the interior of the barn and garage was available at the time of the site visit. It appears that the barn was used, in part, to support the equipment repair activities that were observed on the north side of the barn.

9.1 Hazardous Substances / Containers

9.1.1 Substances Associated with Identified Uses

Vehicle parts, batteries and household debris were observed to the north of the barn.

9.1.2 Storage Tanks

No evidence of hazardous material storage tanks were observed on the subject property.

9.1.3 Drums and Other Containers

Over 16 drums of debris, parts and unknown materials were observed on the subject property in the vicinity of the barn. One of the drums contained a liquid with a petroleum odor.

9.2 Pits, Ponds, Lagoons

No ponds, pits or lagoons were observed on the subject property.

9.3 Soil Stains, Odors, Stressed Vegetation

Soil staining and dead vegetation were observed north of the barn.

9.4 Fill soil and debris

No fill soil was observed, however less than 10 cubic yards of domestic rubbish was observed north of the barn. The interior of the buildings was not available for inspection during the site visit.

9.5 PCBs

The term polychlorinated biphenyls (PCBs) refers to any of several compounds that are produced by replacing hydrogen atoms in biphenyl with chlorine. PCBs are used in various industrial applications, primarily as an insulating fluid in electrical equipment. PCBs are considered hazardous materials due to their toxicity and their tendency to accumulate in animal tissues. The Toxic Substance Control Act of 1976 banned the manufacture, processing, distribution, and use of PCBs. However, continued use of existing PCB-containing and PCB-contaminated equipment, such electrical transformers, capacitors, and electromagnets is allowed for the life of that equipment. Federal regulations (40 CFR 761.2) require that electrical equipment of unknown PCB content be presumed to be PCB-contaminated if it was manufactured prior to July 2, 1979.

Six pole-mounted and two pad-mounted electrical transformers were noted on, or adjacent to, the site. No leaks were observed from any of these transformers. The age or PCB content of the pole-mounted transformers on site was not determinable. Given the age of the building, Federal regulation requires that transformers are assumed to be PCB contaminated until proven otherwise. A phone conversation with SMUD Substation Manager, Gilbert Cannady, revealed that the pad-mounted transformers adjacent to the southwest corner of the property were installed new on that new site in 1990 and hence could not contain PCB.

9.6 Wells and Septic Systems

According to a prior environmental assessment (Lush 1999), a private well exists at the west end of the garage building. It is assumed that a septic system serves the property.

9.7 Adjacent Properties

To the north of the subject property is Gerber Road and then a parking lot serving a golf center. To the east and south are open fields with farm-type residences and outbuildings. To the east is Elk Grove-Florin Road and then a church and residences. Adjacent to the southwest corner of the property is a fenced area containing an electrical sub-station with two pad-mounted transformers.

10.0 FINDINGS

The subject property is largely a fallow agricultural field occupied with a pre-fabricated residence and four farm related buildings. The surface of the property is almost entirely obscured from view by grasses and weeds. There is vestigial evidence of a residence west of the existing buildings near Elk Grove-Florin Road. A set of large, pad-mounted electrical transformers are adjacent to the southwest corner of the property. The land uses adjacent to the property include open fields, farm residences, a church, residences and a golf center.

1. The property lies at approximately 40 to 45 feet above mean sea level and is relatively flat. Topography to the immediate west of the subject property slopes slightly to the south.

2. The subject property is located within the San Joaquin Silt Loam, 0 to 8 percent slopes.

3. Groundwater within the region of the subject property has been inferred to be approximately 80 to 85 feet below the ground surface and flowing to the south.

4. The subject property was first developed prior to 1952 with few residential and related farm buildings in the northwest corner. With the exception of the primary residence, all of these buildings remain.

5. Three underground storage tank facilities, no leaking underground storage tank facilities, five hazardous materials handlers, and one hazardous materials spill were identified within one-half mile of the subject property. No remediation cleanup projects were identified within one mile of the subject property.

6. The pole-mounted transformers are presumed to be PCB contaminated until proven otherwise. The pad-mounted transformers adjacent to the southwest corner of the property do not contain PCB.

7. The area north of the barn contains inoperable tractors and evidence that equipment maintenance activities occurred in this area. Stained soil, a drum of petroleum liquid and old batteries were observed.

8. No regulatory record was found related to the underground fuel oil tank removed from the east side of the (former) primary residence.

11.0 OPINIONS

- The underground tank facilities, hazardous waste facilities and other findings in the agency databases described in this report revealed no evidence of recognized environmental conditions in connection with the subject property.

- ❑ The presence of contaminants or other recognized environmental conditions related to soil was not clearly ascertainable due to the presence of grasses or weeds covering most of the subject property.
- ❑ The stained soil and equipment maintenance activities north of the barn need further investigation.
- ❑ The contents of the locked buildings need further investigation.

12.0 CONCLUSIONS

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-00 of 7635 Elk Grove-Florin Road, Sacramento, Sacramento County, California. Any exceptions to, or deletions from, this practice are described in the Limitations Section of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the subject property except for the presence of stained soil, petroleum liquid and batteries north of the barn.

13.0 RECOMMENDATIONS

1. The former owner should complete a site specific, Phase 2 Environmental Questionnaire and Disclosure statement based on the findings of this report.

2. The inoperable equipment and debris should be moved away from the barn and the weeds cut low enough to examine the soil on all sides of the barn and garage. Care should be taken not to spill any oils or fuel from the vehicles.

3. A Phase 2 investigation should be undertaken to determine the contents of the buildings, the contents of the drums and other containers, and the chemical compositions of any stained soil discovered after the soil is exposed. At the minimum, analyses of stained soil should include Total Petroleum Hydrocarbons.
   A licensed hazardous waste contractor should be employed to inventory and handle drums and containers of any hazardous or unknown materials. Any waste materials and soil should be disposed according to all applicable local, State and Federal laws and regulations. Soil at the east side of the (former) primary residence should be sampled and tested for evidence of petroleum hydrocarbons. Soil at the base of the pole-mounted transformers should be inspected and tested for PCB if staining is found. The disposal of the transformers should be accomplished by the power company or a licensed hazardous waste contractor if they are not owned by the power company.

4. During the demolition phase of construction, care should be taken to inspect and characterize any waste materials and stained soil discovered and dispose of any waste materials and soil according to all applicable local, State and Federal laws and regulations.

5. During the regrading of the property, care should be taken to examine the turned soil to insure no potentially contaminated soil is inadvertently spread or mixed with clean soil.

6. The existing water well casing should be properly abandoned according to County health department rules and regulations.

14.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

Neil O. Anderson and Associates

Prepared by:

Clifford Walker, Jr.
REA #1-00797

Reviewed by:

Robert A. Nicholson
REA # 1-01326

15.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS PARTICIPATING IN PHASE I ENVIRONMENTAL SITE ASSESSMENT

Clifford Walker, Jr. R.E.A.
Professional Experience:
NOA Environmental (2000-present)
J.R. Simplot Company (1989-2000)
American Forest Products Company (1973-1988)

Education:
B.S., Forestry, University of California, Berkeley

Professional Memberships:
American Society of Safety Engineers

Robert A. Nicholson, R.E.A.

Professional Experience:
NOA Environmental (1977-present)

Education:
A.A., Fire Technology, American River College
Bachelor of Arts Degree Program, Environmental Studies, CSU Sacramento

Professional Memberships:
American Society of Testing and Materials
Committee E-50 on Standards for Environmental Assessments
Association of Groundwater Scientists and Engineers
Past State Chairman, Technical Review Committee, Groundwater Resources Association

16.0 Selected Sources Cited and Consulted

Bailey, Edgar H. (editor), 1966, Geology of Northern California: California Division of Mines and Geology, Bulletin 190.

California Regional Water Quality Control Board, Region 5, January 2004, Leaking Underground Storage Tanks Quarterly Report.

California Regional Water Quality Control Board, Region 5, Checked February 6, 2004, List of Spills, Leaks, Investigations, and Cleanups (SLIC).

Environmental Data Resources, Inc., March 1, 2004, The EDR-Radius Map with GeoCheck Report No. 1137738.3s

Environmental Data Resources, Inc., March 3, 2004, The EDR-Aerial Photography Print Service, Report No. 1137738-8

Environmental Data Resources, Inc., March 1, 2004, The EDR-Historical Topographic Map Report, Report No. 1137738-5

Lawrence Livermore National Laboratory, "Recommendations To Improve the Cleanup Process for California's Leaking Underground Fuel Tanks (LUFTS)," submitted to the California State Water Resources Control Board and the Senate Bill 1764 Leaking Underground Fuel Tank Advisory Committee, October 16, 1995.

Lawrence Livermore National Laboratory, "California Leaking Underground Fuel Tank (LUFT) Historical Case Analyses," submitted to the California State Water Resources Control Board Underground Storage Tank Program and the Senate Bill 1764 Leaking Underground Fuel Tank Advisory Committee, November 16, 1995.

Lush Geosciences, Inc., December 26, 1999, "Level I Environmental Assessment 7635 Elk Grove-Florin Road Sacramento, California"

Sacramento County Division of Public Works, 4101 Branch Center Road, Sacramento, March 5, 2004

Norris, Robert M. and Webb, Robert W., 1990, Geology of California, Second Edition.

Parcel Quest, February 27, 2004, pqonline.parcelquest.co.

Placer Title Company, January 2, 2004, Preliminary Report 404-3370.

Sacramento County Environmental Management Department, 8475 Jackson Road, Suite 230, Sacramento, CA.

United States Department of Agriculture, Soil Conservation Service, 1993, Soil Survey of Sacramento County, California.

Appendix A —	Location Maps
Appendix B —	Photographs
Appendix C —	Historical Photos and Maps
Appendix D —	Site Assessment Checklist
Appendix E —	Environmental Questionnaire and Disclosure Statement
Appendix F —	Government Records Search Report

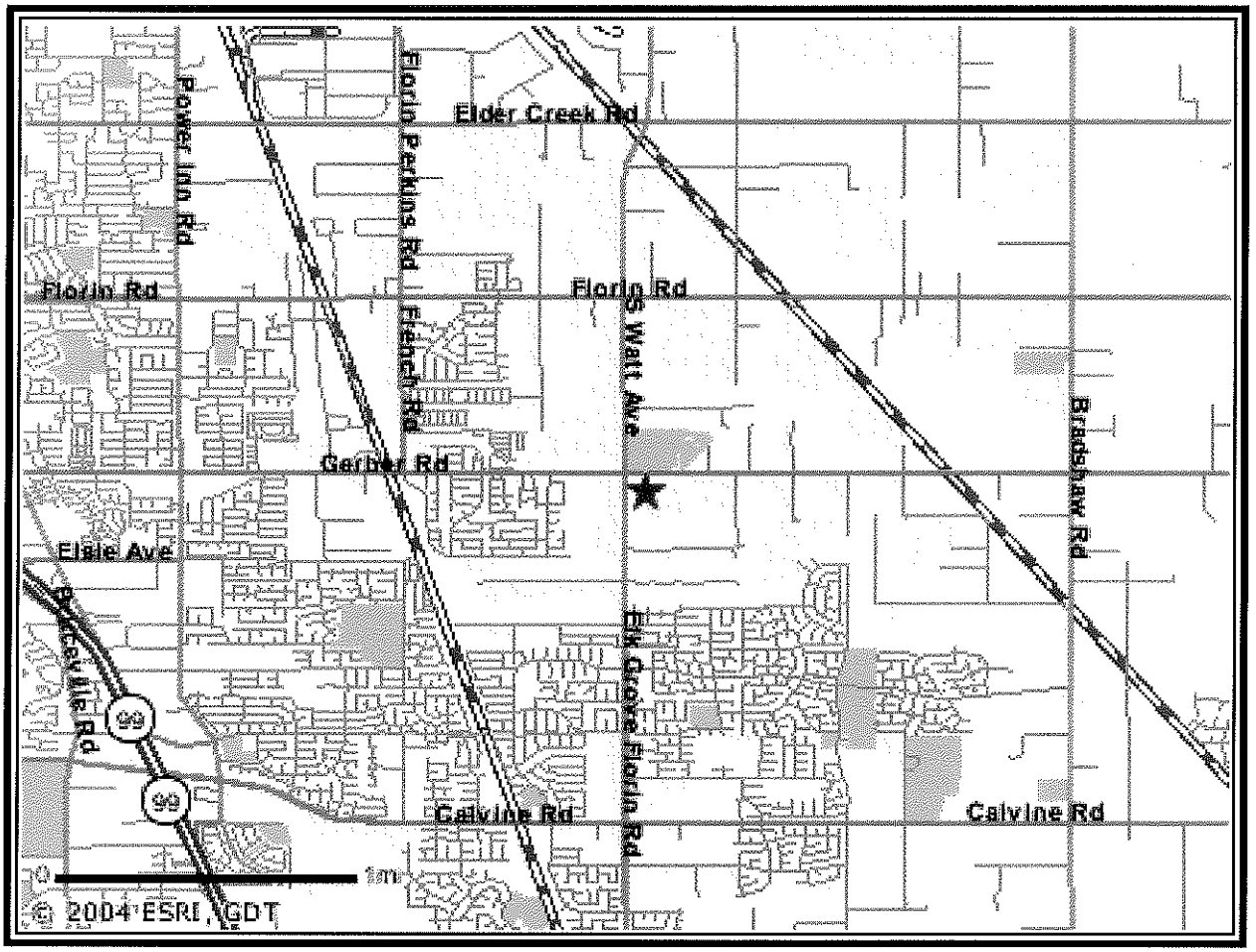


Figure 1 – Regional Location Map

March 5, 2004 Project #E04019A	**SEC Elk Grove-Florin / Gerber** **7635 Elk Grove - Florin Road** **Sacramento, CA 95829**	NEIL O. ANDERSON AND ASSOCIATES 902 Industrial Way * Lodi, CA 95240 209.367.3701

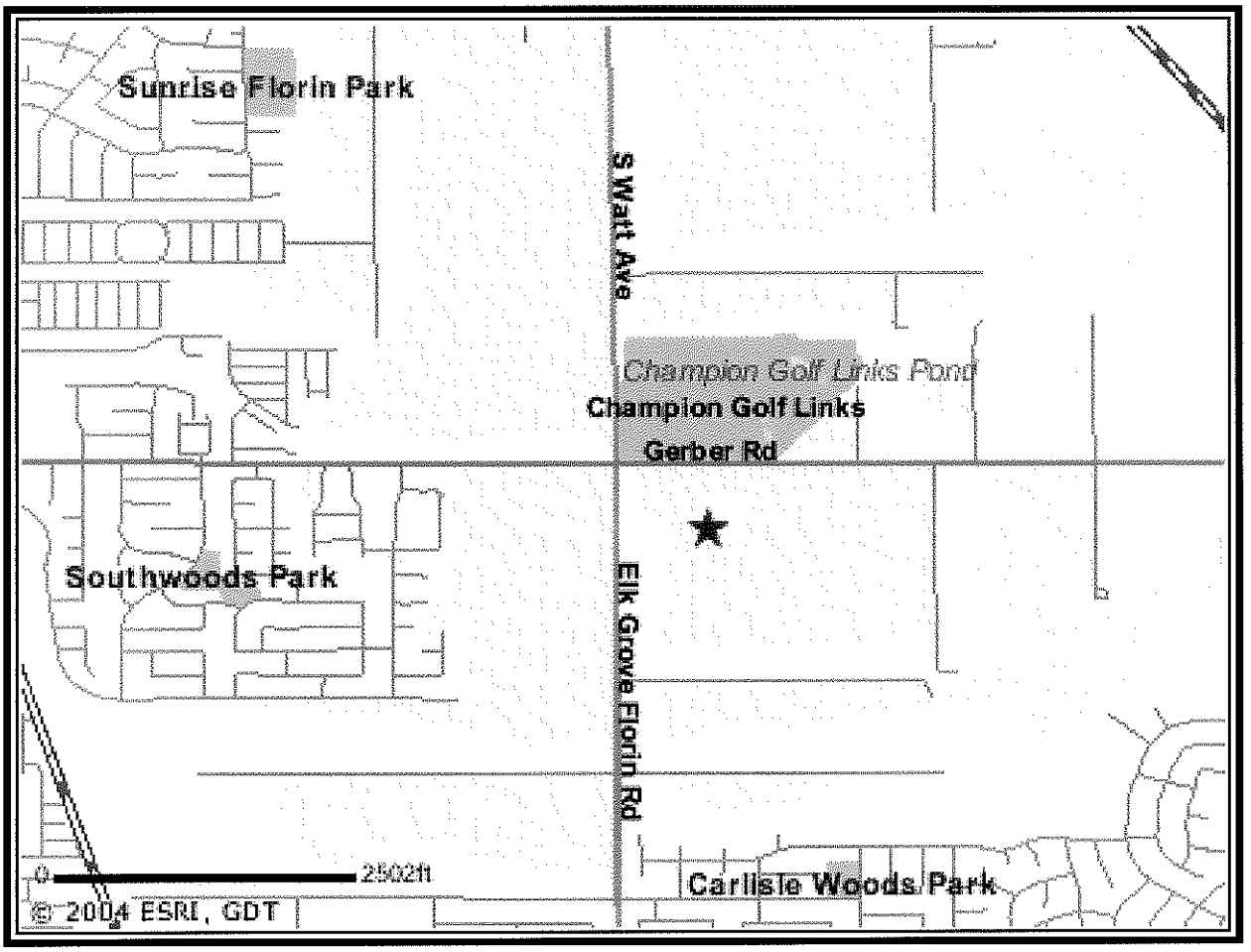
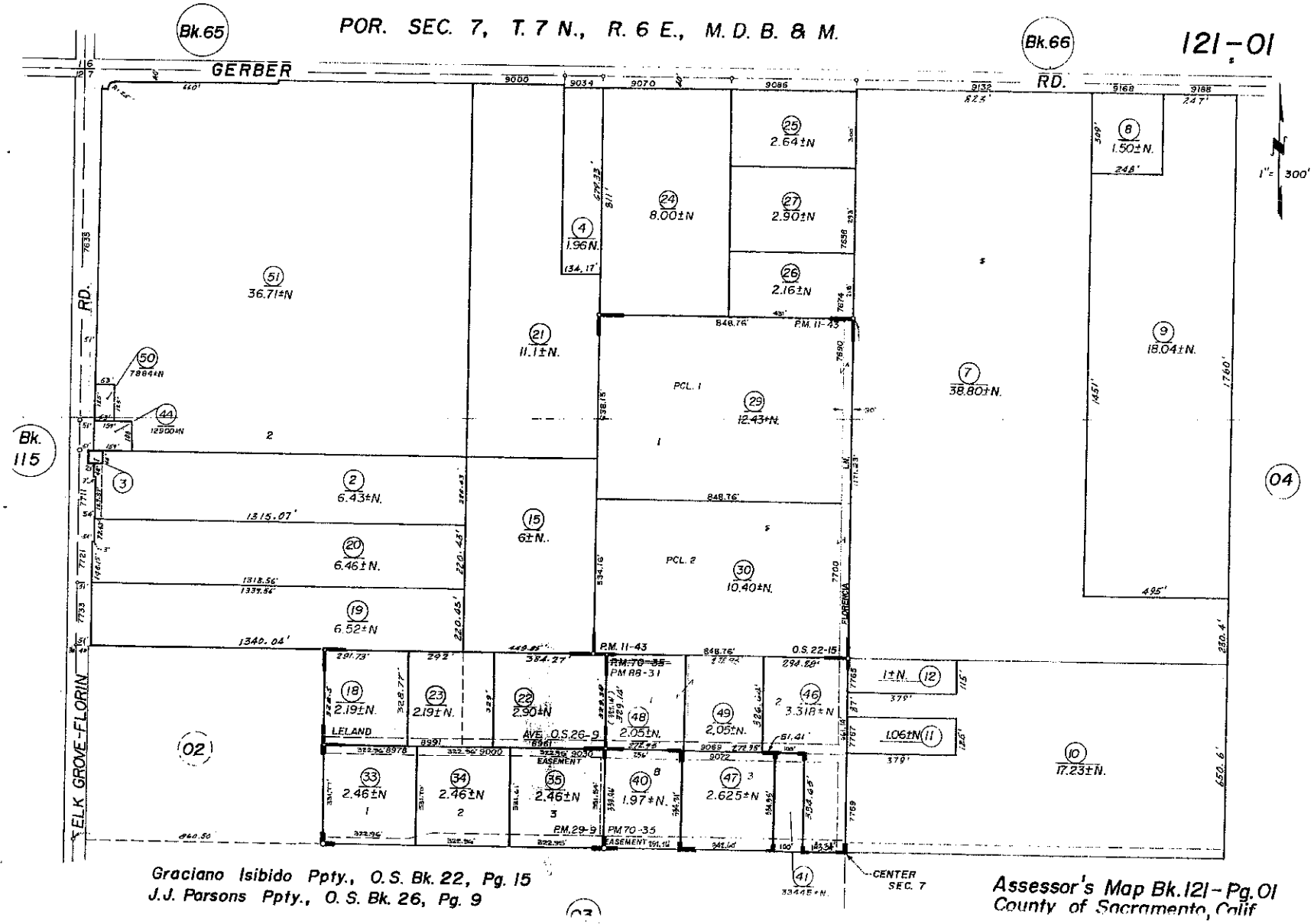


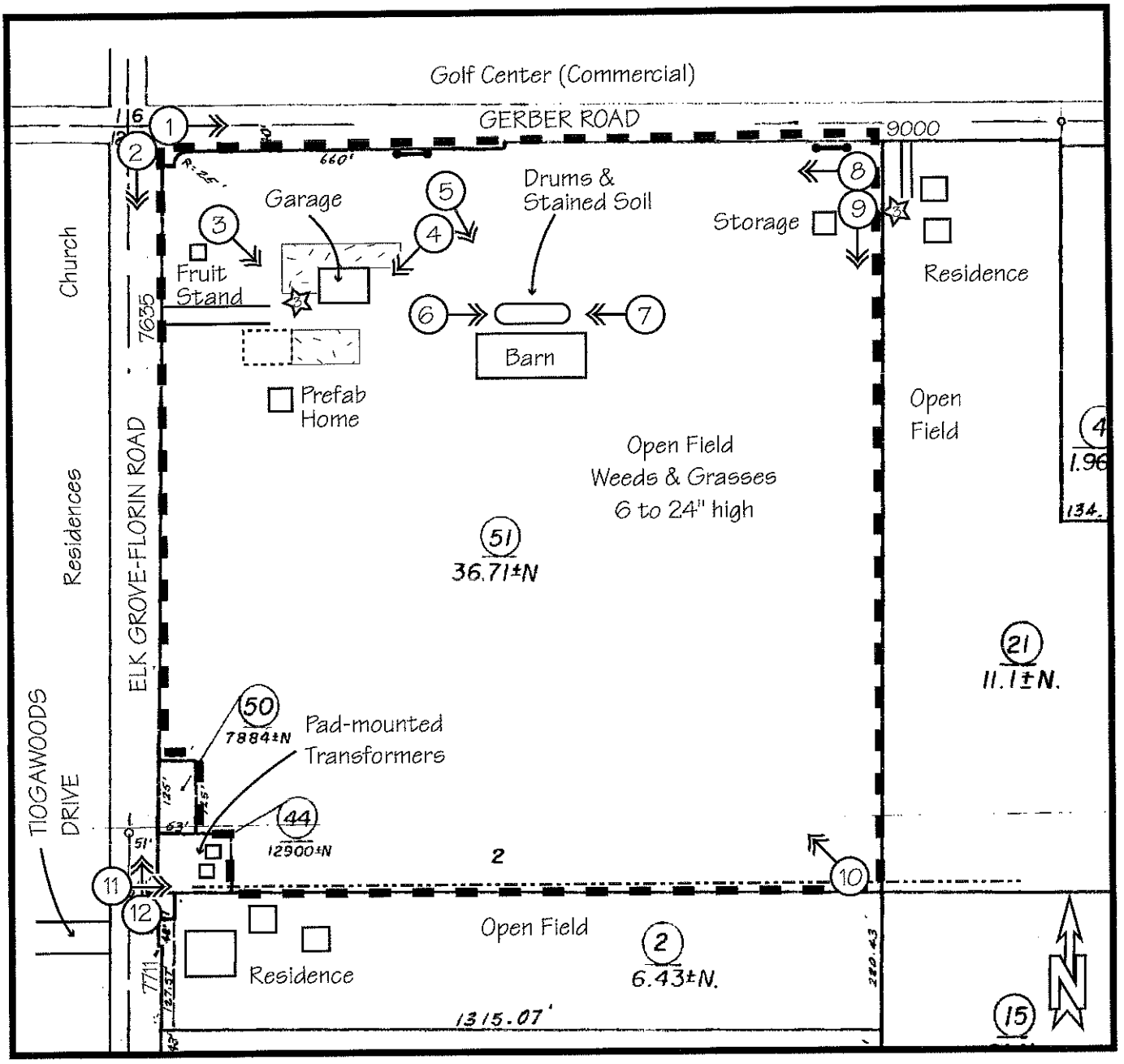
Figure 2 – Site Location Map

March 5, 2004 Project #E04019A	**SEC Elk Grove-Florin / Gerber** **7635 Elk Grove - Florin Road** **Sacramento, CA 95829**	NEIL O. ANDERSON AND ASSOCIATES 902 Industrial Way * Lodi, CA 95240 209.367.3701



Graciano Isibido Ppty., O.S. Bk. 22, Pg. 15
J.J. Parsons Ppty., O.S. Bk. 26, Pg. 9

Assessor's Map Bk. 121 - Pg. 01
County of Sacramento, Calif



Details:

- Subject Property
- Photo Location
- Number of Pole-Mounted Transformers
- Gate
- Dense Bamboo or Berry Vegetative Cover
- Site of Former Residence
- Drainage Ditch

Base Map: County of Sacramento, California, Assessor's Map Bk. 121, Pg. 01.

Site Map and Photo Location Guide

7635 Elk Grove-Florin Road
Sacramento, CA

E04019A

NEIL O. ANDERSON AND ASSOCIATES

Appendix B — Photographs

Figure 1 – At the northwest corner of the subject property facing east along Gerber Road.

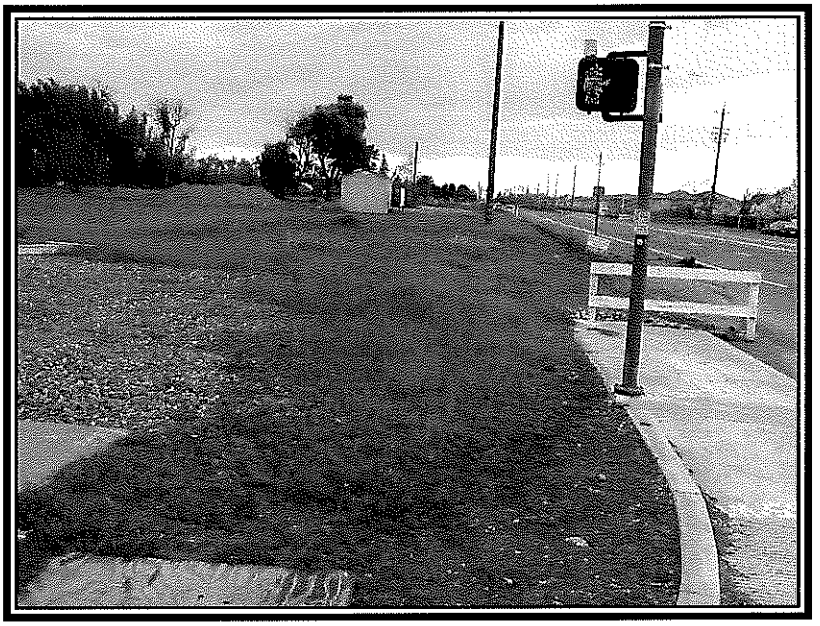


Figure 2 – At the same corner facing south along Elk Grove-Florin Road.

Figure 3 – Near the fruit stand on Elk Grove-Florin Road facing southeast. Bamboo and berry vegetation obscure the view of the garage. The empty site of the "former residence" is shown on the right side of the photo.

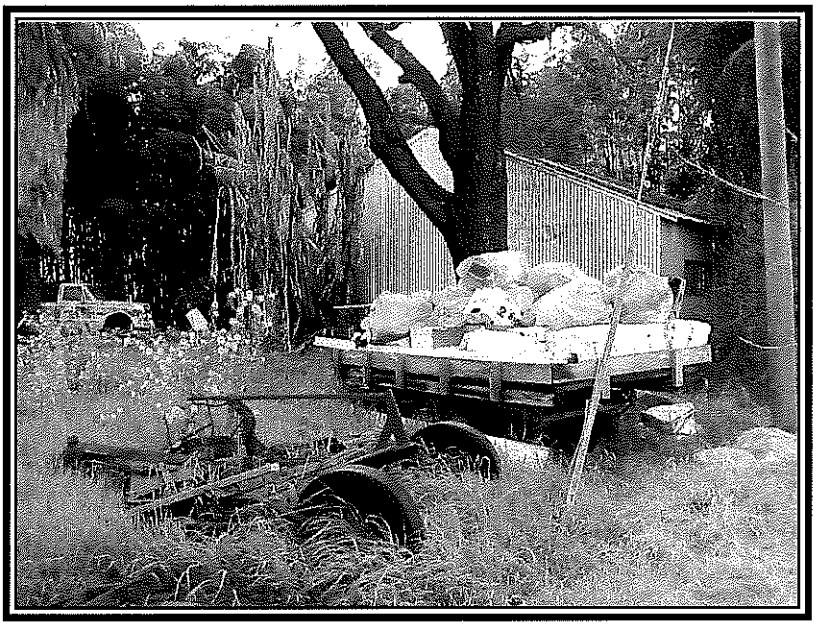


Figure 4 – At the east side of the "garage" building facing southwest.

Figure 5 – Near the northwest corner of the "barn" facing southeast.

Figure 6 – At the north side of the "barn" facing east. Inoperable vehicles, drums, and other parts are shown.

Figure 7 – At the north side of the "barn" facing west. The red drum was partially filled with liquid that had a petroleum odor. Soil staining was observed below the table.

Figure 8 – At the northeast corner of the subject property facing west.

Figure 9 - At the northeast corner facing south. The steel building contained furniture, domestic items and a very old car.

Figure 10 - At the southeast corner of subject property facing northwest.

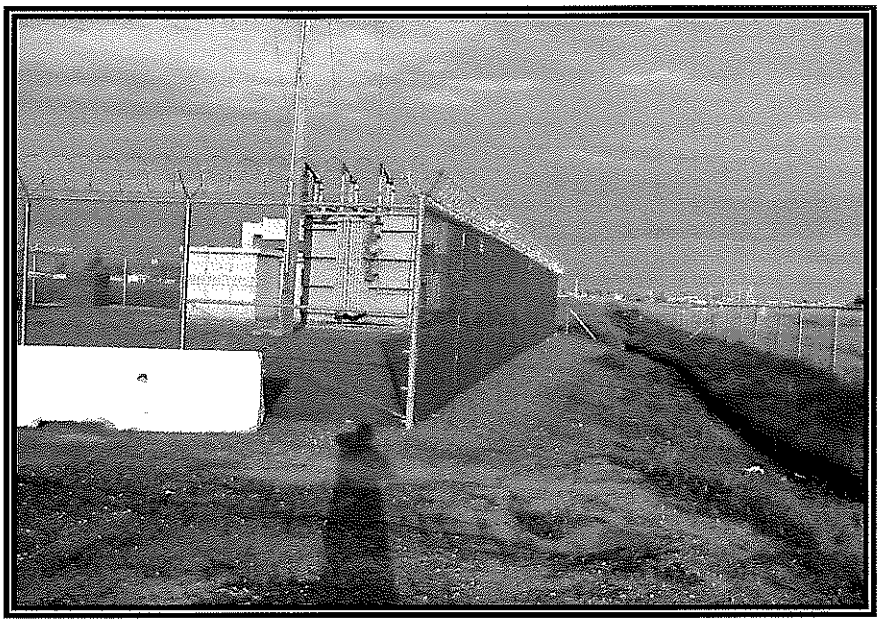


Figure 11 - At Elk Grove-Florin Road facing east. The PG&E transformers are not on the subject property.

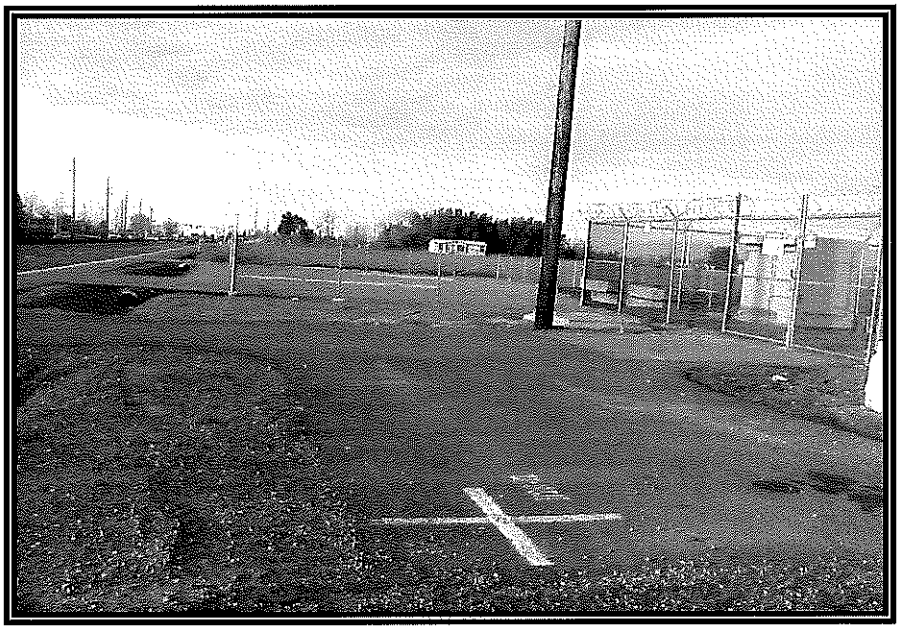
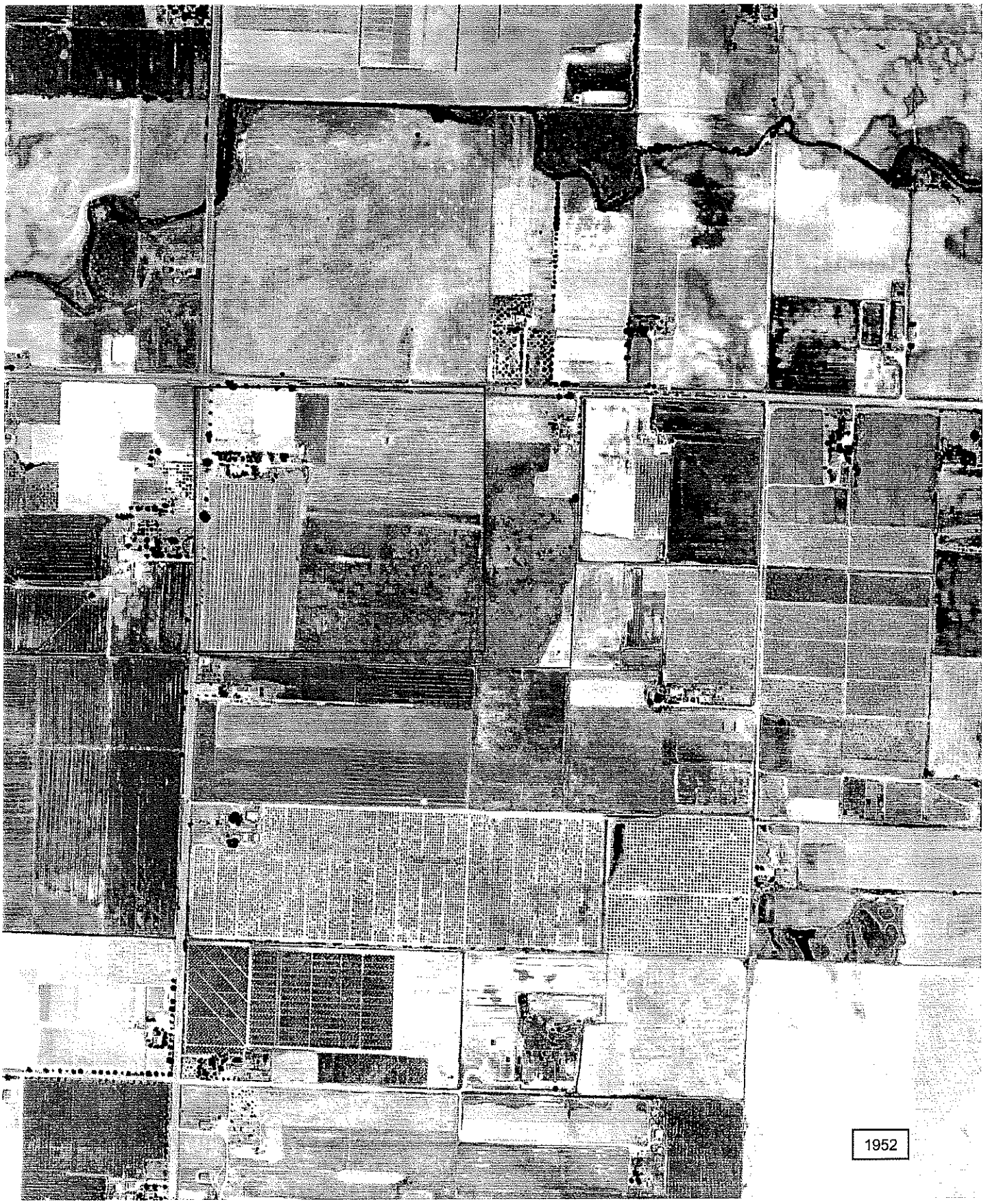


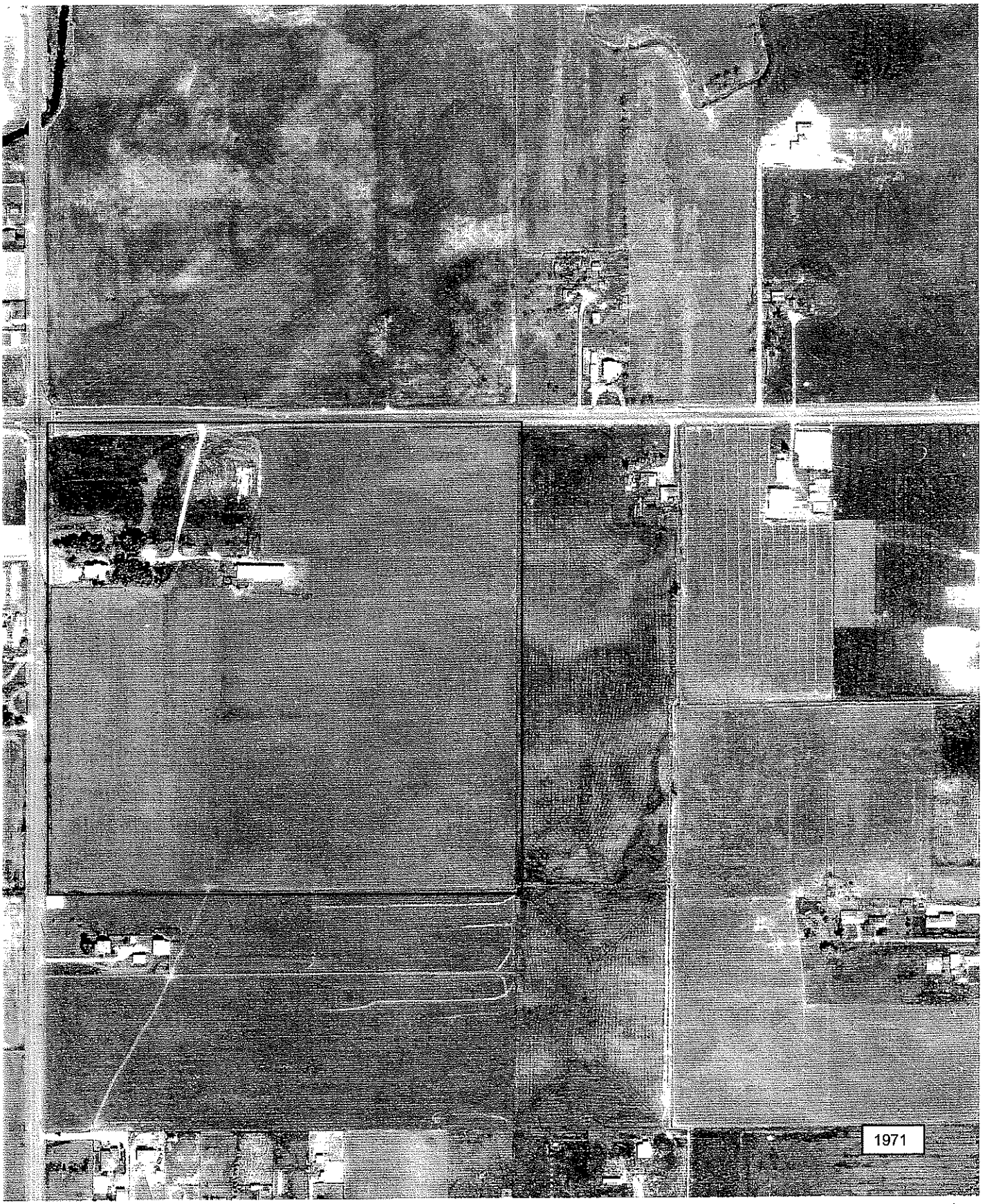
Figure 12 - At Elk Grove-Florin Road facing north. The subject property is beyond the fenced area.

Appendix C — Historical Photos and Maps



Inquiry : 1137738.8 Year : 1952 Flyer : Pacific Air Scale : 1"=555'

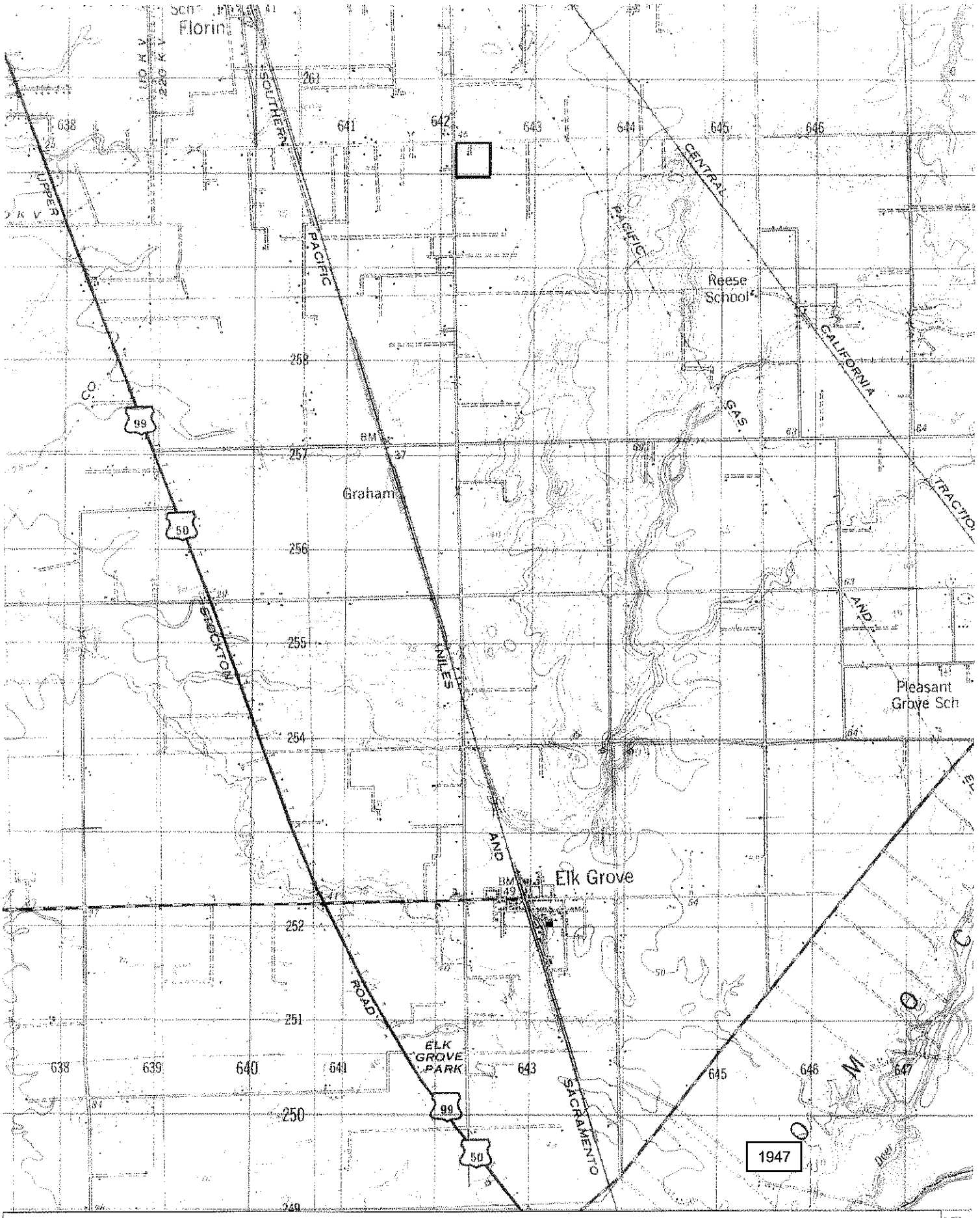
Inquiry : 1137738.85 Year : 1961 Flyer : Cartwright Scale : 1"=555'



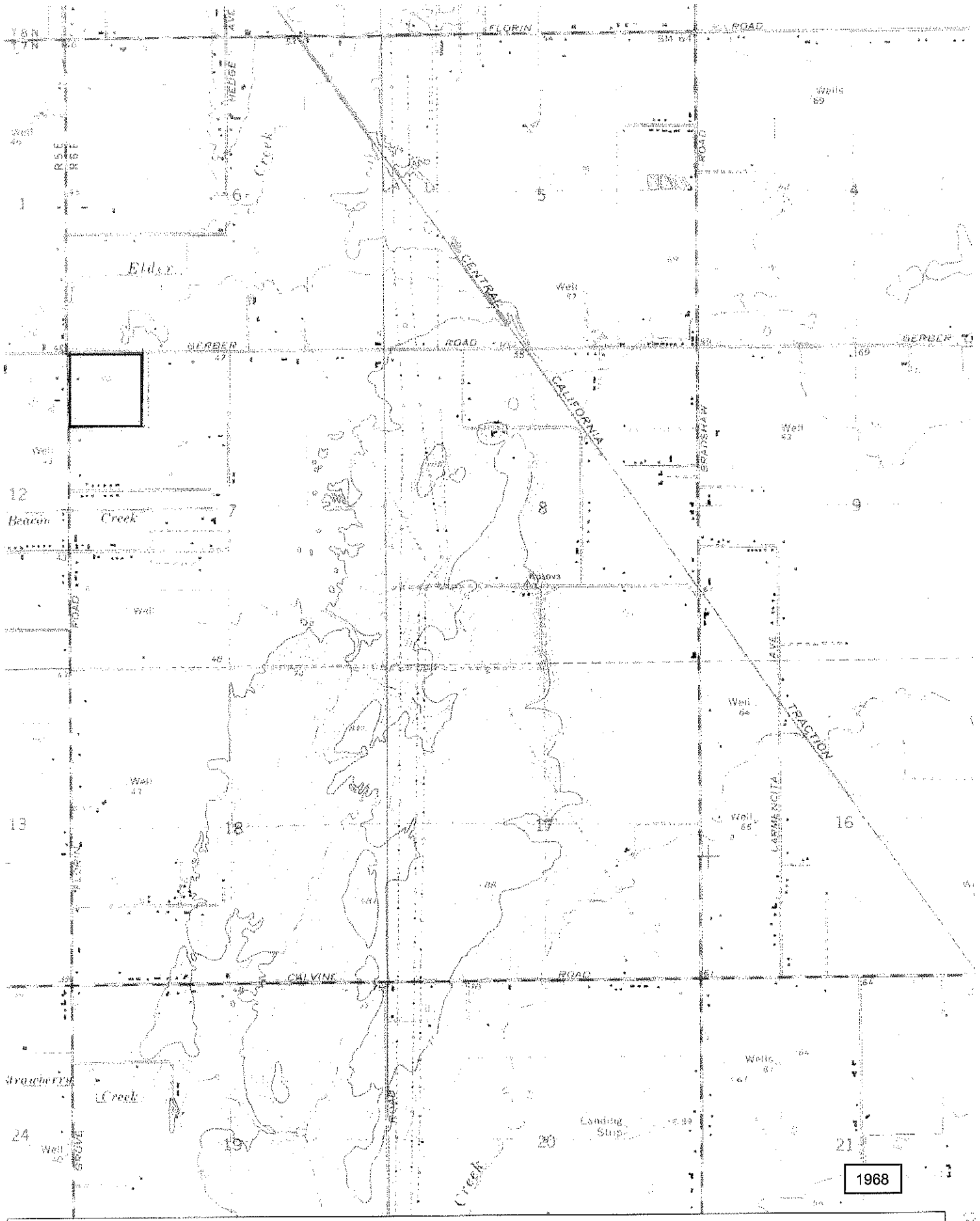
Inquiry : 1137738.8 Year : 1971 Flyer : Cartwright Scale : 1"=333'

Inquiry : 1137738.8 Year : 1981 Flyer : Cartwright Scale : 1"=333'

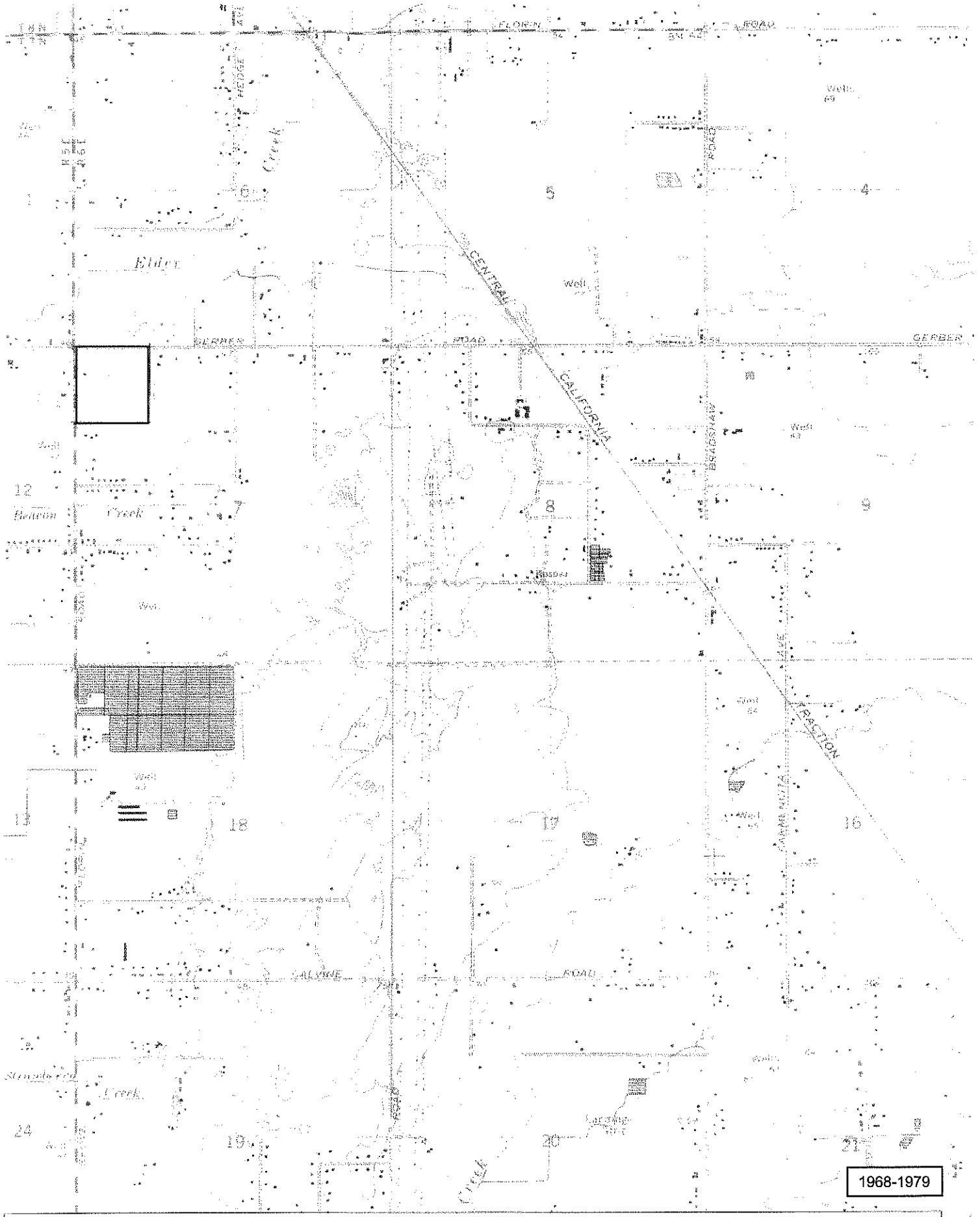
Inquiry : **1137738.8** Year : 1993 Flyer : USGS Scale : 1"=666'



N ^ EDR INQUIRY# 1137738.5 TARGET QUAD: GALT YEAR: 1947 Series: 15' Scale: 1:50,000



N ^ EDR INQUIRY# 1137738.5 TARGET QUAD: ELKGROVE YEAR: 1968 Series: 7.5' Scale: 1:24,000



N ^ EDR INQUIRY# 1137738.5 TARGET QUAD: ELKGROVE PHOTOREVISED: 1968-1979 Series: 7.5' Scale: 1:24,000

Appendix D — Site Assessment Checklist

Phase I Site Reconnaissance Checklist
NOA Project Number: E04019A

Project Name: *SEC Elk Grove-Florin/Gerber*

Address: *7635 Elk Grove-Florin Road*

Sacramento, California 95829

Apply each question to the subject property and to properties and facilities readily examined within 1,000 feet of the subject property.

1. Describe land uses:

   a. Subject property:

      Fallow agricultural land with a small fruit stand, a pre-fabricated modular residence and three out buildings.

   b. Adjoining land to the north:

      Gerber Road and then a golf range

   c. Adjoining land to the south:

      Open fields and a farm residence with out buildings

   d. Adjoining land to the east:

      Open fields and a farm residence with out buildings

   e. Adjoining land to the west:

      Elk Grove-Florin Road; then a church and residences

   f. Other observations / comments

      The fenced enclosures at the southwest corner of the subject property contain larger transformers and what appears to be maintenance access points for the regional sewer system.

2. Is the property currently used for any industrial or manufacturing use?

   No

   Are any properties adjoining the subject property currently used for industrial or manufacturing purposes?

   No

3. Is the property or any adjoining property used as a gasoline station, motor repair facility, commercial printing facility, dry cleaner, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility?

   No

4. Are there any transformers on the property?

   Yes, see site map in ***Appendix A****. No leaks were observed.*

   Within 250 feet?

   Yes, see site map in ***Appendix A****. No leaks were observed*

5. Is there a transformer that is not owned by a public or private utility, electrical cooperative, or homeowner's association and for which there are no records indicating the absence of PCBs?

   No

6. Is there any staining of soil on the subject property?

   Yes, north of the barn, soil was stained in the vicinity of old drums and equipment.

   Properties within 250 feet?

   None observed

7. Was stressed or dead vegetation noted during the site reconnaissance?

   No

8. Are any strong, noxious, or pungent odors present on the subject property?

   None observed

   Sites within 250 feet?

   None observed

9. Have any construction debris, substances identified as hazardous, unidentified waste materials, tires, automotive or industrial batteries, or any other waste materials, trash, debris, or refuse been dumped on the subject property?

   Yes. North of the barn was an accumulation of tractors and construction equipment that appeared to be inoperable. There were six engines, eight batteries, 16+ drums and less than 10 cubic yards of domestic rubbish.

   Within 250 feet?

   None observed

10. Is there evidence that fill dirt has been brought onto the site which originated from a contaminated site or an unknown location?

    No

11. Is there evidence of any pesticides, automotive or industrial batteries, paints, or other chemicals being stored or used at the property?

    Yes. See item 9.

    Within 250 feet?

    None observed

12. Are there any industrial drums or sacks of chemicals located on the subject property?

    No new products were observed

    Within 250 feet?

    None observed

13. Are there any open or damaged containers containing unidentified substances on the subject property?

    Yes. One of the drums described in item 9 was found to exhibit a petroleum odor.

    Within 250 feet?

    None observed

14. Identify any surface waters on the subject property within 1,000 feet.

    None observed

15. Is there evidence that the subject property is serviced by a private well?

    Yes (assumed from 1999 environmental report - not observed)

Evidence of a private well within 1,000 feet?

No

16. Identify the potable water supply source:

On site well (assumed from 1999 environmental report - not observed)

17. Identify the sewage disposal system:

Septic system (assumed, not observed)

18. Are there any pits, ponds, or lagoons located on the property in connection with waste treatment or waste disposal?

No

19. Is there evidence that the subject property discharges waste water, other than storm water, directly into a ditch or stream on or adjacent to the property?

No

Any discharges within 200 feet?

None observed

20. Is there evidence of underground/aboveground storage tanks on the subject property?

No

Within 200 feet?

None observed

21. Are there any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the subject property?

None observed

Within 200 feet?

None observed

22. If there is a structure on the subject property, are there any flooring drains or walls located within the structure which have been stained with a substance other than water or are emitting foul odors?

No access to buildings on site

23. If there is a structure on the subject property, describe its uses and note any presence of readily apparent asbestos-containing materials (ACM).

No access to buildings on site

24. Identify the location and type of heating and cooling system.

None observed

25. Describe the subject property and its physical, topographic, and vegetative features.

An essentially flat parcel graded slightly to the south. Most of the property is occupied with grasses or weeds six inches to 24 inches tall. Adjacent to the garage is a dense stand of bamboo and some berries.

Site Reconnaissance conducted on March 5, 2004 by Clifford Walker, Jr.

NOA ENVIRONMENTAL

S:\ENVIRO\Projects\2004\E04019A SEC Elk Grove, Florin Ph 1 Geotech\Site Recon (2).wpd

Appendix E — Environmental Questionnaire and Disclosure Statement

NEIL O. ANDERSON
AND ASSOCIATES

GEOTECHNICAL
ENVIRONMENTAL
INSPECTIONS & TESTING
LABORATORY SERVICES
POOL ENGINEERING
POST TENSION DESIGN

NOA ENVIRONMENTAL JOB NUMBER: E04019A
PROPERTY LOCATION: SEC Elk Grove-Florin Road and Gerber Road Sacramento, CA 95829

ENVIRONMENTAL QUESTIONNAIRE AND DISCLOSURE STATEMENT

PHASE 1 ENVIRONMENTAL SITE ASSESSMENT

Subject Property:

Project Name:	SEC Elk Grove-Florin / Gerber
Street Address:	7635 Elk Grove-Florin Road
City, State, Zip:	Sacramento, CA 95829
County:	Sacramento
Assessor's Parcel Number[s]:	121-0010-051

If you have any questions about this questionnaire, please contact Chip Walker at (209)367-3701x19

LODI ■ SACRAMENTO ■ MODESTO

ENVIRONMENTAL DIVISION 902 Industrial Way, Lodi, California 95240 ■ 209.367.3701 ■ 209.369.4228 ■ www.noanderson.com

The Phase 1 Environmental Site Assessment

Background

The primary purpose of a Phase 1 Environmental Site Assessment is to provide you, the user of the report, with some legal protections in the event that previously unknown environmental contamination is discovered on the site at some time in the future. Under the federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), a current property owner can be held financially liable for contamination caused by previous owners or occupants of a property, unless they can meet specific requirements to qualify as an "innocent landowner." Among the requirements to qualify for this defense is a need to make "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice." [42 USC §9601(35)(B)] Frequently, lending institutions require preparation of a Phase 1 report prior to accepting a property a collateral on a loan to provide the institution with similar protection.

In order to provide a standardized definition of "good commercial or customary practice," the American Society of Testing and Materials has devised a standard practice, known as ASTM Standard E1527-00, for conducting Phase 1 Environmental Site Assessments. By retaining NOA Environmental to complete a Phase 1 according to ASTM E1527-00, you have set in motion an investigative process by which "all appropriate inquiry into the previous ownership and uses of the property" will be conducted. Please be aware that while the Phase 1 process is often routine, our responsibility is not to merely complete a checklist of information sources reviewed, but to investigate the past ownership or uses of the subject property and nearby properties and identify any situations which might have caused environmental contamination of the property.

User's Responsibilities

ASTM Standard E1527-00 identifies specific responsibilities on the part of the user to assist in completing the investigation. It also specifies that the current owner(s) and occupants (if any) be interviewed. The attached two-part questionnaire is designed to address these specific portions of the Phase 1 investigation.

Part 1 includes questions which relate specifically to the user's responsibilities, and to additional information sources which will be useful to us in completing our investigation most efficiently. Please complete this portion of the questionnaire at your earliest convenience and return it to us promptly.

Part 2 includes questions to be asked of the current property owner and/or occupants. Please forward a copy of this portion of the questionnaire to the current owner and request that they complete and return it as soon as possible. [If you currently own the property, please complete Part 2 as well.] If the property is currently developed for non-residential uses, a copy of Part 2 should also be forwarded to each commercial tenant, with a request that it be completed and returned.

We thank you for you assistance with this process.

If you have any questions about this questionnaire, please contact Chip Walker at (209)367-3701x19

NOA ENVIRONMENTAL

ENVIRONMENTAL QUESTIONNAIRE AND DISCLOSURE STATEMENT

PART 1: USER'S RESPONSIBILITIES
(To be completed by Client)

1. Does a current Preliminary Title Report indicate that there are any environmental liens or land use limitations recorded against the property? (Please provide a copy of the title report if available.) ☐ Yes ☒ No
(Note: Some lenders require preparation of a chain-of-title report, identifying ownership of the property back to 1940 or earliest developed use, which ever is earlier. If this applies, please provide us with such a report.)

2. Have any previous Phase 1 or other environmental reports been prepared for this property? (Please provide copies of any available reports.) NOT BY PETROVICH DEVELOPMENT CO LLC ☐ Yes ☒ No

3. Do you have any specialized knowledge or experience relating to environmental conditions on the property which may be helpful to us? ☐ Yes ☒ No

4. Is the purchase price significantly lower than comparable properties in the area? If so, please explain: ☐ Yes ☒ No

5. Is there an additional purpose for completion of this Phase 1, beyond qualifying as an "innocent landowner" under CERCLA, or other business environmental risks to be addressed? If so, please explain: ☐ Yes ☒ No

If you have any questions about this questionnaire, please contact Chip Walker at (209)367-3701x19

ENDORSEMENT

PART 1

As the User of the Phase 1 Environmental Assessment being prepared for the property (or the duly authorized representative of such User), I have specific knowledge of the questions posed in PART 1 of this Questionnaire regarding the property, and hereby certify to and for the benefit of Lender/Purchaser that to the best of my knowledge, information and belief the information disclosed above is true and correct.

PETROVICH DEVELOPMENT CO LLC

User or Client's name

3/7/04

Signature and date

VICE PRES

Title

If you have any questions about this questionnaire, please contact Chip Walker at (209)367-3701x19

NOA ENVIRONMENTAL JOB NUMBER: E04019A
PROPERTY LOCATION: SEC Elk Grove-Florin Road and Gerber Road Sacramento, CA 95829

NOA ENVIRONMENTAL

ENVIRONMENTAL QUESTIONNAIRE AND DISCLOSURE STATEMENT

PART 2: OWNER INFORMATION
(To be completed by Owner or Owner's representative)

I. GENERAL INFORMATION

1. Current owner of property: year purchased:
   George & Joanne Bardella,
   Bernice Schneider, & Mary Sunahara

2. Previous owner(s): years owned:

3. Please describe current use(s) of property:
   Agricultural

4. Please describe any other known past use(s) of property, and approximate dates of each use:
   Agricultural for at least the last 65 years

5. Are there any businesses using any portion of the property which are operated by an entity other than the property owner (including a tenant farming operation)? ☐ Yes ☒ No
   If yes, please provide a contact name and phone number for each:

6. What is the current zoning and/or general plan designation of the subject property?
   AR-10

If you have any questions about this questionnaire, please contact Chip Walker at (209)367-3701x19

7. To the best of your knowledge has the property ever been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility? ☐ Yes ☒ No

8. To the best of your knowledge has any **adjoining** property been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility? ☐ Yes ☒ No

9. Do you have any knowledge of environmental liens or governmental notification relating to past or recurrent violations of environmental laws with respect to the property or any facility located on the property? ☐ Yes ☒ No

10. Do you have any knowledge of the past or current existence of hazardous substances or petroleum products or environmental violations with respect to the property or any facility located on the property? ☐ Yes ☒ No

11. Please describe any other relevant historical information in your possession concerning the subject property.

See Attached
Lush Geoscience Report
dated 12/24/99

If you have any questions about this questionnaire, please contact Chip Walker at (209)367-3701x19

NOA ENVIRONMENTAL JOB NUMBER: E04019A
PROPERTY LOCATION: SEC Elk Grove-Florin Road and Gerber Road Sacramento, CA 95829
Page 7

12. Are there any electrical transformers or capacitors on the property which are known to contain PCBs (Polychlorinated biphenyls) , or which may have been manufactures before 1980 and whose PCB content is unknown? ☐ Yes ☐ No

there is a transformer near the well

13. Water is provided to the property by:
☒ A well ☐ N/A
☐ Public water system

14. Waste water disposal is provided to the property by:
☐ Public sewer system ☐ On-site septic system
☐ Pond(s) ☐ Other
☐ N/A

15. Are there any wastewaters generated and/or disposed of on the property, other than stormwater runoff and domestic sewage? Please describe. (*Please attach copies of any wastewater discharge permits or licenses pertaining to operations on the property.*) ☐ Yes ☒ No

16. Are there any other types of liquid wastes and solid wastes generated at the property? Please describe how they are handled and disposed of. (*Please attach copies of any waste disposal permits or licenses pertaining to operations on the property.*) ☐ Yes ☒ No

17. Are the any activities on the property which generate air pollutants, including fuel burning equipment? Please describe. (*Please attach copies of any air permits or licenses pertaining to operations on the property.*) ☐ Yes ☒ No

If you have any questions about this questionnaire, please contact Chip Walker at (209)367-3701x19

II. STRUCTURES

Are there currently any structures on the property? ☒ Yes ☐ No

To the best of your knowledge, have there been any structures on the property in the past which have since been removed? ☐ Yes ☒ No

If the answer to either question is "yes," please answer the following:

1. For each existing building, please provide type of building and date of original construction and any substantial renovations:

   Residence
   garage
   barn & warehouse

2. For each building known to have been removed, please provide type of building and approximate dates the building existed:

   N/A

3. If known, please provide the name and phone number of the project Architect and Civil Engineer of the current facilities.

   N/A

4. Provide a brief description of development with property dimensions, area, and acreage.

5. Are there currently, or to the best of your knowledge have there been previously, any flooring, drains, or walls located within the facility that are stained by substances other than water or are emitting foul odors? ☐ Yes ☒ No

If you have any questions about this questionnaire, please contact Chip Walker at (209)367-3701x19

6. If any buildings were constructed prior to 1980, is there currently or was there previously asbestos in any of the construction materials contained in the building(s)? ☐ Yes ☐ No

7. If so, has a survey been conducted to assess the type, amount, location and condition of asbestos? (Please attach a copy of any survey report.)

III. STORAGE TANKS AND OTHER CHEMICAL STORAGE ☒ Yes ☐ No

Are there currently, or to the best of your knowledge have there been previously, any registered or unregistered gasoline, diesel, fuel oil or other chemical storage tanks (above or underground) located on the property?

Are any pesticides, paints, or other chemicals stored or used on the property in drums, sacks or other containers greater than 5 gallons each or 50 gallons in the aggregate? ☐ Yes ☐ No

If the answer to either question is "yes," please answer the questions below:

1. For each tank, please list substance stored and tank capacity:

   Underground fuel oil tank at east side of residence was removed

2. Have the tanks been inspected or tested for leakage? When was the most recent test? What were the results? (Please attach copies of results if available).

3. For other storage containers, please describe the substances, quantities stored, and types of containers.

If you have any questions about this questionnaire, please contact Chip Walker at (209)367-3701x19

4. Have there been any spills, leaks, or other releases of chemicals on the property? If so, please describe the chemicals and quantities released, any cleanup measures taken, and the results of any soil or groundwater samples performed to detect the presence of chemicals spilled, leaked, or released on the property. ☐ Yes ☒ No

5. Please attach copies of any permits or licenses pertaining to the use, storage, handling, or disposal of chemicals on the property.

IV. INDUSTRIAL PROPERTIES

Is the property currently used for any industrial purpose? ☐ Yes ☒ No

Has the property ever been previous used for an industrial purpose (other than the current use)? ☐ Yes ☒ No

If the answer to either question is "yes," please answer the following:

1. Has the property been used for disposal of any liquid or solid waste? ☐ Yes ☒ No
2. Have evaporation or storage ponds been located on the property? ☐ Yes ☒ No
3. Have waste water treatment facilities, such as acid neutralization vaults, been located on the property? ☐ Yes ☒ No
4. Are there raw chemical or waste chemical storage areas on the property? ☐ Yes ☒ No

If any of questions 1-4 are answered "yes," please provide a description, including the location of all disposal sites, treatment facilities and storage areas, the type of chemicals or wastes handled at each site, the results of any soil or groundwater samples taken in the vicinity of each site, and the manner in which each site not presently in use was closed.

If you have any questions about this questionnaire, please contact Chip Walker at (209)367-3701x19

V. AGRICULTURAL PROPERTIES

Is the property currently used for agricultural purposes, other that grazing or pasture land? ☐ Yes ☒ No

To the best of your knowledge, has the property been used in the past for agricultural purposes, other that grazing or pasture land? ☐ Yes ☒ No

If the answer to either question is "yes," please answer the following:

1. Have pesticides, herbicides or other agricultural chemicals been applied to the property? If so, please describe the locations where such pesticides, herbicides or chemicals were applied, the type of pesticides, herbicides or chemicals applied in each area. (Please attach copies of pesticide use reports if available.) ☐ Yes ☐ No

2. Have pesticides, herbicides or other agricultural chemicals been mixed, formulated, rinsed, or disposed of on the property? If so, please describe the locations where such pesticides, herbicides or chemicals were mixed, formulated rinsed, or disposed, the type of pesticides, herbicides or chemicals mixed, formulated, rinsed or disposed of at each location. ☐ Yes ☐ No

3. Has any soil or groundwater analyses performed to detect pesticides, herbicides or chemicals used at the site? If so, please provide a summary of the findings. ☐ Yes ☐ No

If you have any questions about this questionnaire, please contact Chip Walker at (209)367-3701x19

ENDORSEMENT:

PART 2

As the present owner of the property or as an officer or general partner of the present owner of the property (or the duly authorized representative of such owner), I am familiar with all of the operations presently conducted on the property, and hereby certify to and for the benefit of Lender/Purchaser that to the best of my knowledge, information and belief the information disclosed above is true and correct.

_____
Owner's or Key Site Manager's name

_____
Signature and date

_____
Title

If you have any questions about this questionnaire, please contact Chip Walker at (209)367-3701x19

LUSH GEOSCIENCES
INCORPORATED
GEOLOGICAL AND ENVIRONMENTAL SERVICES

December 26, 1999
512-005

Mr. Steve Gidaro
Gidaro Group
2251 Fair Oaks Boulevard, Suite 300
Sacramento, California 95825

Subject: Executive Summary, Level 1 Environmental Assessment
7635 Elk Grove-Florin Road
Sacramento, California

Dear Mr. Gidaro:

At your request, Lush Geosciences, Inc. has performed a limited environmental site assessment of the property located at southeast of the intersection of 7635 Elk Grove-Florin Road in Sacramento, California (Figure 1). Our investigation included the following work elements:

- Review of United States Environmental Protection Agency's CERLIS and NPL sites.
- Review of California Environmental Protection Agency's CalSites (formerly ASPIS) and Bond Expenditure Plan Sites.
- Review of California Integrated Waste Management Board's lists of Active and Inactive Landfills.
- Review of Cal EPA's "Cortese" List.
- Review of Sacramento County Department of Environmental Management's Complaint Incident Report, Toxic Site, and Hazmat lists.
- Review of Sacramento Metropolitan Air Quality Management District's list of Air Permitted Sources.
- Interviews with the property occupants and occupants of adjoining properties.
- Interviews with representatives of various government agencies.
- Review of aerial photographs (1937, 1957, 1964, 1975, and 1983).
- A reconnaissance of the site and its nearby vicinity.

3560 BUSINESS DRIVE, SUITE 120 • SACRAMENTO, CA 95820 • (916) 737-9294 • FAX (916) 737-9209

Site Assessment Results

The Site includes one parcel totaling approximately 37.53 acres (Figure 2). The Site was occupied by a vacant residence, garage, barn, agricultural fields, and a warehouse structure. There is one groundwater supply well near the residence and adjacent to the garage. Rural residential property and agricultural property bound the eastern and southern portions of the site. The subject property is bounded to the north by Gerber Road, beyond which is a golf course, and to the south by Elk Grove-Florin Road, beyond which is a church and rural residences.

The area north of the barn building had several drums and 1-gallon plastic containers of waste oil and at least one auto battery. Some ground staining was associated with the drums and the battery had leaked. This staining is judged unlikely to have penetrated to a significant depth below the Site.

A historical review of aerial photographs and investigation of records from regulatory agencies indicated that the site has been rural residential / agricultural for at least the last 60 years. We understand that agricultural chemical applications have included little or no pesticides; crops have included grapes and alfalfa. Records on file with the Sacramento County Environmental Health Department indicate that there are no records of underground storage tanks or hazardous materials contamination at the site. However, we understand that a fuel oil tank was removed from the east side of the residence with no evidence of contamination.

Regulatory files indicated that no other registered underground storage tanks are present or have been removed from the site. No records of other underground storage tanks are present within approximately 0.5 mi of the site. Records on file at the Sacramento County Environmental Management Department and Department of Health Service and the nature of nearby properties indicate that hazardous materials other than normal household or agricultural chemicals have not been stored for use or retail sale within the 0.5-mi search radius of this investigation.

Our review of SCEMD lists revealed two sites within 0.5 mile of the subject property which store or use potentially hazardous materials. These properties are the American River Fire Department at 8882 Gerber Road and Inter City Service at 9297 Gerber Road. No contamination incidents were reported or listed.

No direct evidence was found for significant soil or groundwater contamination beneath the project site as a result of onsite or nearby operations. This conclusion is based on our review of the available regulatory records, our understanding of the status of nearby known or potentially contaminated sites, the distances from potential sites of contamination to the site, and the hydrogeological conditions of the subsurface. There are no indications that Site activities have resulted in contamination of soil or groundwater at the Site. The water supply wells onsite are deep and potentially valuable as resources for future development. If they are not to be used, they should be properly abandoned.

Contamination from other nearby sources appears unlikely. These conclusions are based on the hydrogeologic characteristics of the area and on our understanding of known and possible contaminated sites. This conclusion can be strengthened with the collection and analysis of soil and groundwater samples.

Please call us if you have any questions regarding this report.

Sincerely,

LUSH GEOSCIENCES, INC.

Andrew P. Lush
President

ANDREW P. LUSH
No. REA 02515
Exp. 6/03
STATE OF CALIFORNIA

512-005

1.0 INTRODUCTION

This report presents the results of a Level 1 Environmental Assessment performed by Lush Geosciences, Inc. for the property located southeast of the intersection of Elk Grove-Florin Road and Gerber Road at 7635 Elk Grove-Florin Road in Sacramento, California (Site) (Figure 1). The Site includes one parcel totaling approximately 37.53 acres (Figure 2).

1.1 Purpose

The objective of this investigation was to evaluate whether there is evidence of environmental impact on the subsurface soil and groundwater beneath the subject property due to the hazardous or potentially hazardous materials on or in the vicinity of the subject property.

1.2 Involved Parties

This assessment was performed at the request of Mr. Steve Gidaro of the Gidaro Group in association with a real estate transaction; the current Site owners are George and Joanne Badella, Bernice Schneider, and Mary Sunahara.

2.0 SCOPE OF WORK

The scope of work for this assessment, as outlined in our proposal of December 10, 1999, was to provide information regarding the past use of the Site and its immediate vicinity. The assessment objectives were to evaluate whether there is evidence of soil or groundwater contamination beneath the Site from storage, use, or disposal of hazardous or potentially hazardous materials present on or in the immediate vicinity of the Site.

We have performed this work in accordance with widely accepted industry standards; the scope of work performed meets the requirements of the 1995 American Society for Testing and Materials (ASTM) standard for environmental site assessments.

Our investigation included: 1) examination of records pertaining to the site and its vicinity at offices of the Sacramento County and the State of California; 2) review of aerial photographs; 3) interviews with occupants of the property and adjacent properties and with

regulatory personnel familiar with the site and its vicinity; and 4) reconnaissance of the site and its vicinity.

Information regarding hazardous materials contamination on or near the project Site was obtained from the following agencies:

- United States Environmental Protection Agency's CERLIS and NPL sites.
- California Environmental Protection Agency's CalSites (formerly ASPIS) and Bond Expenditure Plan Sites.
- California State Environmental Protection Agency (Cal EPA) Department of Toxic Substances Control, and U.S. Environmental Protection Agency (EPA) information on file at Cal EPA and at Sacramento County libraries;
- California Environmental Protection Agency (Cal EPA), Office of Environmental Information;
- California State Department of Water Resources (DWR);
- The Central Valley Region of the California Regional Water Quality Control Board (CRWQCB);
- California Integrated Waste Management Board (CIWMB);
- Sacramento County Environmental Management Department (SCEMD); and
- The Online HazMat Archives & Records Access (OHARA).

3.0 SITE IDENTIFICATION

The Site includes one parcel southeast of the intersection of Elk Grove-Florin Road and Gerber Road in Sacramento, California, and appears in Sacramento County Assessors Parcel Map Book 121 as Parcel 121-0010-43.

3.1 Location

The Site appears on the U.S.G.S. 7.5-minute series topographic map of the Elk Grove Quadrangle in Township 7 North, Range 6 East, Section 6 (Figure 1). The Site is located

southeast of the intersection of Elk Grove-Florin Road and Gerber Road, approximately 3 mi east of Highway 99.

3.2 Site Description

At the time of our field reconnaissance (December 16, 1999), the site was occupied by a residence, garage, barn, pasture lands and a storage structure (Figure 2). Photographs of the Site are presented in Appendix A. Recent construction is occurring along the west margin of the Site. A water supply well for the site is immediately adjacent to the garage, northeast of the residence. Three pole-mounted transformers are located north of the well. The transformers show no obvious indications of leakage and are not likely to contain PCB oils.

It is our understanding that a fuel oil tank was present at the east side of the residence; the Site owners states that the tanks was removed with no indications of contamination. The area north of the barn building had several drums and 1-gallon plastic containers of waste oil and at least one auto battery. Some minor ground staining was associated with the drums and the battery had leaked. This staining is judged unlikely to have penetrated to a significant depth below the Site.

3.3 Adjacent Properties

The subject property is bounded to the east and south by rural residential property and agricultural fields. The west portion is bounded by Elk Grove-Florin Road, beyond which is a church and rural residences. The northern portion of the Site is bounded by Gerber Road, beyond which is a golf course and rural residences (Figure 3).

4.0 HISTORICAL LAND USE

The site has been used for agriculture and as a residence for at least the last 60 years. It is our understanding that crops have been limited to alfalfa and grapes, and that minimal agricultural chemicals have been used.

4.1 Fire Insurance Maps

A historical review of Sanborn fire insurance maps did not show coverage of the site at the times of the map coverage; this typically means that development was limited or non-existent at the time of the respective maps.

4.2 Aerial Photographs

Aerial photographs from the USDA Soil Conservation Service (1937, 1957, 1964, 1972, and 1987) of the Site vicinity were reviewed to evaluate the recent past uses of the Site. Our research indicates that the subject property has been used for agriculture and as a rural residence during that time interval. The eastern storage building was added within the last 5 years, and the barn was added prior to 1957

5.0 ENVIRONMENTAL SETTING

The Site is in the south-central Sacramento Valley floor. The nearest surface water is Elder Creek, 700 feet to the north, and Beacon Creek approximately 1,400 feet to the south. Surface drainage at the site is directed toward Elk Grove-Florin Road to the south and west.

5.1 Physiography

The Site is located near the southern edge of the Sacramento Valley, which is the northern half of the Great Valley Physiographic Province. The elevation at the Site is approximately 42 to 47 ft above mean sea level. The topography of the site is relatively flat with a general slope to the south. The semi-arid local climate is characterized by mild to cool, wet winters and hot, dry summers with approximately 15 to 19 ins of annual precipitation.

5.2 Soil Conditions

Native soil is not exposed at the Site; it has been mapped as San Joaquin silt loam (USDA, 1993). The Site is underlain alluvial sediments of the Quaternary Riverbank formation (Wagner et al., 1981).

5.3 Groundwater

The Site is located within the Sacramento River Hydrologic Basin, as defined by the State of California Department of Water Resources (DWR). Groundwater surface elevation maps from DWR (1986) and the Sacramento County Department of Public Works (1991, 1993), indicate that the elevation of uppermost groundwater beneath the Site was approximately 50 ft below mean sea level, or 95 to 100 ft below existing ground surface, with a flow direction that is generally to the south.

6.0 AGENCY REVIEW

A review of data available from various regulatory agencies and a computer search of agency listings (Appendix B) indicates that the Site is not listed with the SCEMD as a hazardous materials user or waste generator. Records on file at SCEMD and our vicinity reconnaissance indicate that hazardous materials have not been stored for use or disposal within the 0.5-mi search radius of this assessment.

6.1 Underground Storage Tanks

According to the SCEMD files and our vicinity reconnaissance, the Site has not had known registered underground storage tanks present onsite, although a fuel oil tank had been present and was removed. There are presently no sites with registered active underground storage tanks located within approximately 0.5 mi of the Site (Table 1).

TABLE 1
KNOWN USE OF HAZARDOUS MATERIALS
WITHIN APPROXIMATELY 0.5 MI OF
7635 ELK GROVE-FLORIN ROAD
SACRAMENTO, CALIFORNIA

Address	Facility Name	Number of Tanks	Hazardous Materials	Approximate Distance(ft)/ Direction
Hazardous Material				
8882 Gerber Road	American River Fire	0	PH	500/W
9297 Gerber Road	Inter City Service	0	PH	4,000/E
Toxic Site				
None				
Monitoring Wells				
None				
Underground Storage Tanks - Removed				
None				
Underground Storage Tanks - Installed				
None				

0 = Facilities that use or store hazardous materials
1a = Facilities with aboveground tanks
PH = Petroleum Hydrocarbons

6.2 Hazardous Materials

Records on file at SCEMD (1999) and the nature of the observed area during our vicinity reconnaissance indicate that hazardous materials are or have been used or stored at two sites within approximately 0.5 mi of the project Site; the American River Fire Department at 8882 Gerber Road and Inter City Service at 9297 Gerber Road (Table 1). There are no facilities within 0.5 mi of the Site that have been surveyed for the presence of hazardous materials by Cal EPA and are listed on the CALSITES list, formerly known as the Abandoned Sites Program Information System (Cal EPA, 1999).

6.3 Contaminated Sites

Soil and groundwater contamination has not been reported within 0.5-mi of the subject property; no other active sites are known to have significant contamination within or near the 0.5-mi search radius of this assessment (Table 2) (SCEMD, 1999).

There are no sites within the 0.5 mi-search radius of this assessment listed on the California Environmental Protection Agency, Office of Environmental Information Hazardous Waste and Substances Site List ("Cortese" List) (Cal EPA, 1999) or on the Central Valley Regional Water Quality Control Board Underground Tank Tracking System list (December, 1998).

TABLE 2
KNOWN CONTAMINATED SITES
WITHIN APPROXIMATELY 0.5 MI OF
7635 ELK GROVE-FLORIN ROAD
SACRAMENTO, CALIFORNIA

Address	Facility Name	Hazardous Materials	Approximate Distance(ft)/ Direction
Contaminated Sites			
	None		
Active Landfills			
	None		
"Superfund" Sites			
	None		

7.0 CONCLUSIONS

There are no indications that Site activities have resulted in contamination of soil or groundwater at the Site. Contamination from other nearby sources appears unlikely. These conclusions are based on the hydrogeologic characteristics of the area and on our understanding of known and possible contaminated sites. This conclusion can be strengthened with the collection and analysis of soil and groundwater samples.

8.0 LIMITATIONS

The above conclusions are based on our assessment of conditions indicated to exist as of the date of our field reconnaissance (December 16, 1999). Our assessment included a brief field reconnaissance, a review of the referenced public documents and materials provided by the client, and interviews with representatives of the Site owner and other persons thought to be familiar with the Site and its near vicinity, and state or local regulatory persons familiar with the area. This assessment was conducted in accordance with generally accepted standards of environmental geological practice at the time it was performed. The results of this assessment do not preclude the possibility that substances that are currently or which in the future may be defined as hazardous may be present on the property because of activities that we could not identify or in locations which were not sampled.

Contamination on the project Site may be possible, though unlikely, from sources unknown to us or regulatory agencies at the time of our investigation. Further investigation, including subsurface exploration and laboratory testing of soil and groundwater samples can reduce the uncertainties inherent in this type of limited environmental assessment. No soil engineering or geotechnical references are made nor should they be inferred. This report is applicable only to the investigated property and should not be used for any other property.

Appendix F — Government Records Search Report

The EDR Radius Map
with GeoCheck®

SEC Elk-Grove Florin/Gerber
7635 Elk-Grove Florin Road
Sacramento, CA 95829

Inquiry Number: 1137738.3s

March 01, 2004

EDR® Environmental
Data Resources Inc

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06460

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

FORM-JIM

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GEOCHECK ADDENDUM

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR). The report meets the government records search requirements of ASTM Standard Practice for Environmental Site Assessments, E 1527-00. Search distances are per ASTM standard or custom distances requested by the user.

TARGET PROPERTY INFORMATION

ADDRESS

7635 ELK-GROVE FLORIN ROAD
SACRAMENTO, CA 95829

COORDINATES

Latitude (North):	38.479900 - 38' 28' 47.6"
Longitude (West):	121.369500 - 121' 22' 10.2"
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	642223.6
UTM Y (Meters):	4260115.5
Elevation:	47 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property:	38121-D3 ELK GROVE, CA
Source:	USGS 7.5 min quad index

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the ASTM E 1527-00 search radius around the target property for the following databases:

FEDERAL ASTM STANDARD

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP..... CERCLIS No Further Remedial Action Planned
CORRACTS..... Corrective Action Report
RCRIS-TSD..... Resource Conservation and Recovery Information System
RCRIS-LQG..... Resource Conservation and Recovery Information System
RCRIS-SQG..... Resource Conservation and Recovery Information System

STATE ASTM STANDARD

AWP..... Annual Workplan Sites

EXECUTIVE SUMMARY

Cal-Sites ..... Calsites Database
Cortese ..... "Cortese" Hazardous Waste & Substances Sites List
Notify 65 ..... Proposition 65 Records
Toxic Pits ..... Toxic Pits Cleanup Act Sites
SWF/LF ..... Solid Waste Information System
WMUDS/SWAT ..... Waste Management Unit Database
LUST ..... Leaking Underground Storage Tank Information System
UST ..... List of Underground Storage Tank Facilities
VCP ..... Voluntary Cleanup Program Properties
INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land
INDIAN UST ..... Underground Storage Tanks on Indian Land

FEDERAL ASTM SUPPLEMENTAL

CONSENT ..... Superfund (CERCLA) Consent Decrees
ROD ..... Records Of Decision
Delisted NPL ..... National Priority List Deletions
FINDS ..... Facility Index System/Facility Identification Initiative Program Summary Report
HMIRS ..... Hazardous Materials Information Reporting System
MLTS ..... Material Licensing Tracking System
MINES ..... Mines Master Index File
NPL Liens ..... Federal Superfund Liens
PADS ..... PCB Activity Database System
DOD ..... Department of Defense Sites
US BROWNFIELDS ..... A Listing of Brownfields Sites
RAATS ..... RCRA Administrative Action Tracking System
TRIS ..... Toxic Chemical Release Inventory System
TSCA ..... Toxic Substances Control Act
SSTS ..... Section 7 Tracking Systems
FTTS INSP ..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

STATE OR LOCAL ASTM SUPPLEMENTAL

Sacramento Co. CS ..... CS - Contaminated Sites
AST ..... Aboveground Petroleum Storage Tank Facilities
CLEANERS ..... Cleaner Facilities
CA WDS ..... Waste Discharge System
DEED ..... List of Deed Restrictions
NFE ..... Properties Needing Further Evaluation
NFA ..... No Further Action Determination
EMI ..... Emissions Inventory Data
REF ..... Unconfirmed Properties Referred to Another Agency
SCH ..... School Property Evaluation Program
CA SLIC ..... Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
HAZNET ..... Hazardous Waste Information System

BROWNFIELDS DATABASES

US BROWNFIELDS ..... A Listing of Brownfields Sites
VCP ..... Voluntary Cleanup Program Properties

EDR PROPRIETARY HISTORICAL DATABASES

See the EDR Proprietary Historical Database Section for details

EXECUTIVE SUMMARY

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

FEDERAL ASTM STANDARD

ERNS: The Emergency Response Notification System records and stores information on reported releases of oil and hazardous substances. The source of this database is the U.S. EPA.

A review of the ERNS list, as provided by EDR, and dated 12/31/2002 has revealed that there is 1 ERNS site within approximately 0.625 miles of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
8880 GERBER RD	8880 GERBER RD	1/8 - 1/4 WNW	B8	10

STATE ASTM STANDARD

CHMIRS: The California Hazardous Material Incident Report System contains information on reported hazardous material incidents, i.e., accidental releases or spills. The source is the California Office of Emergency Services.

A review of the CHMIRS list, as provided by EDR, and dated 12/31/2002 has revealed that there is 1 CHMIRS site within approximately 0.625 miles of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
Not reported	8880 GERBER ROAD	1/8 - 1/4 WNW	B5	8

CA FID: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, has revealed that there are 2 CA FID UST sites within approximately 0.625 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
FARM	8899 GERBER RD	1/8 - 1/4 NW	A3	7
I.T.C. THERMODYNE	8950 MCCOY AVE	1/4 - 1/2 N	C11	11

EXECUTIVE SUMMARY

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there is 1 HIST UST site within approximately 0.625 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
ELPIDIO VELOSCO	***8950 MCCOY AV***	***1/4 - 1/2 N***	***C10***	***11***

STATE OR LOCAL ASTM SUPPLEMENTAL

CA ML: Sacramento County Master List. Any business that has hazardous materials on site - hazardous materials storage sites, underground storage tanks, waste generators.

A review of the Sacramento Co. ML list, as provided by EDR, has revealed that there are 11 Sacramento Co. ML sites within approximately 0.625 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
CHAMPIONS GOLF CENTER	***8915 GERBER RD***	***1/8 - 1/4 NW***	***A1***	***6***
GEORGE T. DAKUZAKU	8899 GERBER RD	1/8 - 1/4 NW	A2	6
SACRAMENTO PALLET COMPANY	9086 GERBER RD	1/8 - 1/4 NE	4	7
ELPIDIO VELOSCO	***8950 MCCOY AV***	***1/4 - 1/2 N***	***C10***	***11***
INTER CITY INC	9297 GERBER RD	1/2 - 1 ENE	D12	12
ROSE LANDSCAPING & NURSERY	9307 GERBER RD	1/2 - 1 ENE	D13	12
LOPEZ ENT., INC	7501 PASSALLIS LN	1/2 - 1 NE	E14	13
LOPEZ TRUCKING	7501 PASSALIS LN	1/2 - 1 NE	E15	13

Lower Elevation	Address	Dist / Dir	Map ID	Page
FLORIN FIRE PROTECTION DIST.	8880 GERBER RD	1/8 - 1/4 WNW	B6	9
AMERICAN RIVER FD #50	8880 GERBER RD	1/8 - 1/4 WNW	B7	9
JAVAN SHELL FOOD MART	***7149 S WATT AVE***	***1/4 - 1/2 NNW***	***9***	***10***

EDR PROPRIETARY HISTORICAL DATABASES

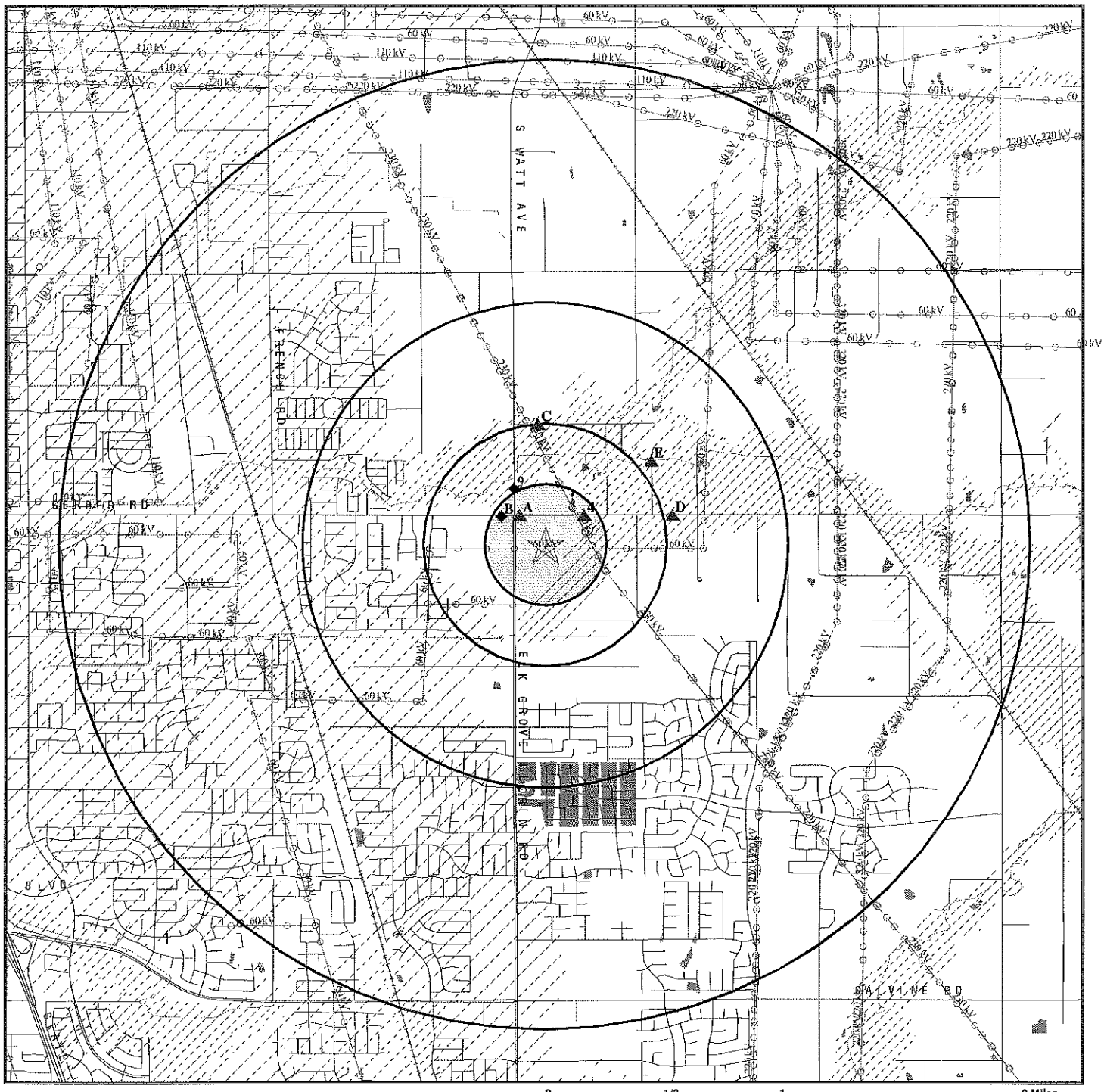
See the EDR Proprietary Historical Database Section for details

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
NEW GENERATION CLEANERS	Sacramento Co. ML, CLEANERS
20TH STREET AND C STREET	LUST, CHMIRS
RICHARDS BLVD / SB I5	LUST, CHMIRS
----------VOID ----------	HAZNET, CHMIRS
LENNANE (OLD SAC CITY)	SWF/LF
SCOLLAN (OLD SAC CITY)	SWF/LF
SACRAMENTO CITY LANDFILL	SWF/LF
DELLAR LANDFILL/OLD SAC CITY	SWF/LF
KIRK AND SON TIRE	SWF/LF
BLT TRANSFER STATION (NORTH SACRAMENTO)	SWF/LF
FLORIN-PERKINS LF INC, MRF & TS	SWF/LF
KILGORE DUMP	SWF/LF
WDR'S GEN ORDER-REUSE OF WASTE DISCHARGE	SWF/LF
14TH AVENUE LANDFILL (EAST / WEST PITS)	SWF/LF
AMB/BTS, LLC	HAZNET
WESTERN HYDRO STATICS INC	HAZNET
SACRAMENTO HOUSING REDEVELOPMENT	HAZNET
CORNER OF STOCKTON BLVD. AND FLORIN RD.	ERNS
EAGLES NEST RD 200' S OF FLORIN RD	ERNS
6401 FLORIN AND PERKINS	ERNS
GERBER AND BRADSHAW ROAD	ERNS
LUMBERJACK PARKING LOT/838 FLORIN RD	ERNS
SACRAMENTO-YOLO MOSQUITO & VECTOR CONTROL DISTRICT	CA SLIC
SMUD PCB SUBSTATION SITE #10	NFE
PWA: VINTAGE PARK DR	Sacramento Co. ML
NELSON/ROGERS DEVELOPMENT	Sacramento Co. CS
SAC COUNTY - HWY & BRIDGES	Sacramento Co. CS

OVERVIEW MAP - 1137738.3s - NOA Environmental



0 1/2 1 2 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Coal Gasification Sites
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Federal Wetlands
- Areas of Concern

TARGET PROPERTY:	SEC Elk-Grove Florin/Gerber	CUSTOMER:	NOA Environmental
ADDRESS:	7635 Elk-Grove Florin Road	CONTACT:	Chip Walker
CITY/STATE/ZIP:	Sacramento CA 95829	INQUIRY #:	1137738.3s
LAT/LONG:	38.4799 / 121.3695	DATE:	March 01, 2004 2:17 pm

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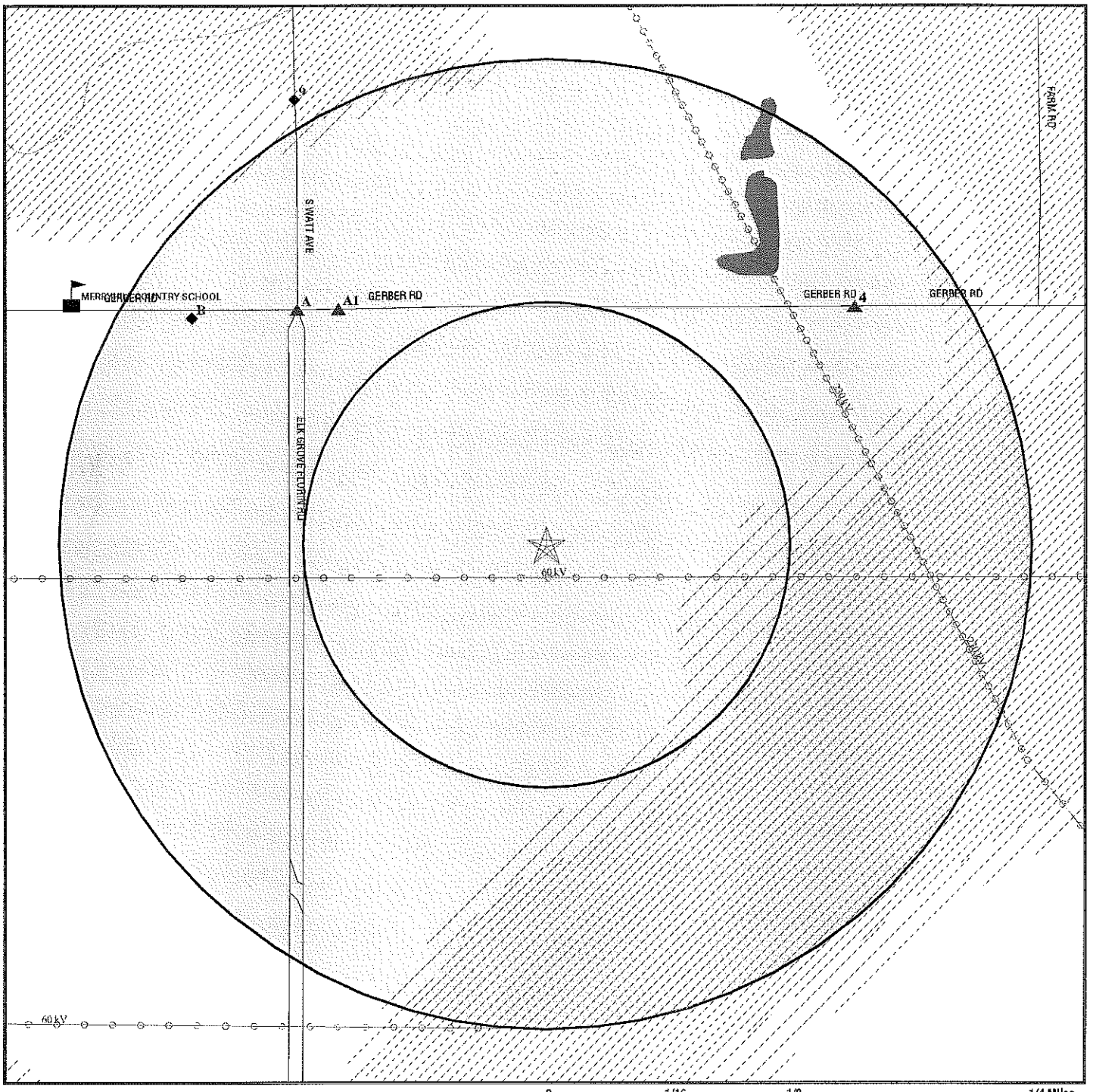
DETAIL MAP - 1137738.3s - NOA Environmental



0 1/16 1/8 1/4 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Coal Gasification Sites
- Historical Gas Stations / Historical Dry Cleaners See the EDR Proprietary Historical Map Findings
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Areas of Concern

TARGET PROPERTY:	SEC Elk-Grove Florin/Gerber	CUSTOMER:	NOA Environmental
ADDRESS:	7635 Elk-Grove Florin Road	CONTACT:	Chip Walker
CITY/STATE/ZIP:	Sacramento CA 95829	INQUIRY #:	1137738.3s
LAT/LONG:	38.4799 / 121.3695	DATE:	March 01, 2004 2:19 pm

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MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FEDERAL ASTM STANDARD								
NPL		1.125	0	0	0	0	0	0
Proposed NPL		0.625	0	0	0	0	NR	0
CERCLIS		1.125	0	0	0	0	0	0
CERC-NFRAP		0.375	0	0	0	NR	NR	0
CORRACTS		1.125	0	0	0	0	0	0
RCRIS-TSD		1.125	0	0	0	0	0	0
RCRIS Lg. Quan. Gen.		0.625	0	0	0	0	NR	0
RCRIS Sm. Quan. Gen.		0.625	0	0	0	0	NR	0
ERNS		0.625	0	1	0	0	NR	1
STATE ASTM STANDARD								
AWP		1.125	0	0	0	0	0	0
Cal-Sites		1.125	0	0	0	0	0	0
CHMIRS		0.625	0	1	0	0	NR	1
Cortese		0.625	0	0	0	0	NR	0
Notify 65		0.125	0	NR	NR	NR	NR	0
Toxic Pits		0.125	0	NR	NR	NR	NR	0
State Landfill		0.625	0	0	0	0	NR	0
WMUDS/SWAT		0.625	0	0	0	0	NR	0
LUST		0.625	0	0	0	0	NR	0
UST		0.625	0	0	0	0	NR	0
VCP		1.125	0	0	0	0	0	0
INDIAN LUST		0.500	0	0	0	NR	NR	0
INDIAN UST		0.125	0	NR	NR	NR	NR	0
CA FID UST		0.625	0	1	1	0	NR	2
HIST UST		0.625	0	0	1	0	NR	1
FEDERAL ASTM SUPPLEMENTAL								
CONSENT		0.125	0	NR	NR	NR	NR	0
ROD		0.125	0	NR	NR	NR	NR	0
Delisted NPL		0.125	0	NR	NR	NR	NR	0
FINDS		0.625	0	0	0	0	NR	0
HMIRS		0.375	0	0	0	NR	NR	0
MLTS		0.375	0	0	0	NR	NR	0
MINES		0.625	0	0	0	0	NR	0
NPL Liens		0.125	0	NR	NR	NR	NR	0
PADS		0.625	0	0	0	0	NR	0
DOD		0.125	0	NR	NR	NR	NR	0
US BROWNFIELDS		0.125	0	NR	NR	NR	NR	0
RAATS		0.125	0	NR	NR	NR	NR	0
TRIS		0.625	0	0	0	0	NR	0
TSCA		0.125	0	NR	NR	NR	NR	0
SSTS		0.625	0	0	0	0	NR	0
FTTS		0.625	0	0	0	0	NR	0
STATE OR LOCAL ASTM SUPPLEMENTAL								
Sacramento Co. CS		0.625	0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
AST		0.625	0	0	0	0	NR	0
CLEANERS		0.625	0	0	0	0	NR	0
CA WDS		0.625	0	0	0	0	NR	0
DEED		0.125	0	NR	NR	NR	NR	0
NFE		0.125	0	NR	NR	NR	NR	0
NFA		0.125	0	NR	NR	NR	NR	0
EMI		TP	NR	NR	NR	NR	NR	0
REF		0.125	0	NR	NR	NR	NR	0
SCH		0.125	0	NR	NR	NR	NR	0
CA SLIC		1.125	0	0	0	0	0	0
HAZNET		0.125	0	NR	NR	NR	NR	0
Sacramento Co. ML		0.625	0	5	2	4	NR	11
EDR PROPRIETARY HISTORICAL DATABASES								
Gas Stations/Dry Cleaners		0.250	0	0	NR	NR	NR	0
Coal Gas		0.625	0	0	0	0	NR	0
BROWNFIELDS DATABASES								
US BROWNFIELDS		0.125	0	NR	NR	NR	NR	0
VCP		1.125	0	0	0	0	0	0

NOTES:

See the EDR Proprietary Historical Database Section for details

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1
NW
1/8-1/4
855 ft.

CHAMPIONS GOLF CENTER
8915 GERBER RD
SACRA, CA 95828

HAZNET **S104565494**
Sacramento Co. ML **N/A**

Site 0 of 0 in cluster

Relative:
Equal

Actual:
47 ft.

HAZNET:

Gepaid:	CAC001089088
TSD EPA ID:	CAT000646117
Gen County:	Sacramento
Tsd County:	Kings
Tons:	8.384
Waste Category:	Aqueous solution with less than 10% total organic residues
Disposal Method:	Treatment, Tank
Contact:	RIM INC
Telephone:	(925) 925-8200
Mailing Address:	8915 GERBER RD SACRAMENTO, CA 95828
County	Sacramento

Sacramento ML:

Facility Id:	Not reported
Number of Tanks:	0
Last Plan Date:	Not reported
Last Inspection Date:	Not reported
WG Bill Code:	50
Food Bill Code :	50
Billing Codes BP:	Disclaimer
Billing Codes UST:	No Tanks
Tier Permitting:	Not reported
Risk Mgmt Protection Program :	Not reported
FD:	J
Target Property Bill Code:	50
CUPA Permit Date:	Not reported
HAZMAT Permit Date:	Not reported
HAZMAT Inspection Date:	Not reported
HAZMAT Date BP Received:	Not reported
UST Inspection Date:	Not reported
UST Tank Test Date:	Not reported
Waste General Insp Date:	Not reported

A2
NW
1/8-1/4
933 ft.

GEORGE T. DAKUZAKU
8899 GERBER RD
SACRA, CA 95829

Sacramento Co. ML **S105269489**
N/A

Site 0 of 0 in cluster

Relative:
Equal

Actual:
47 ft.

Sacramento ML:

Facility Id:	Not reported
Number of Tanks:	1
Last Plan Date:	Not reported
Last Inspection Date:	Not reported
WG Bill Code:	53
Food Bill Code :	53
Billing Codes BP:	Farm-No Fee
Billing Codes UST:	Farm-No Fee
Tier Permitting:	Not reported
Risk Mgmt Protection Program :	Not reported
FD:	J
Target Property Bill Code:	50
CUPA Permit Date:	Not reported

GEORGE T. DAKUZAKU (Continued) **S105269489**

HAZMAT Permit Date:	Not reported
HAZMAT Inspection Date:	Not reported
HAZMAT Date BP Received:	Not reported
UST Inspection Date:	Not reported
UST Tank Test Date:	Not reported
Waste General Insp Date:	Not reported

A3 **FARM** **CA FID UST** **S101590751**
NW **8899 GERBER RD** **N/A**
1/8-1/4 **SACRAMENTO, CA 95828**
933 ft.

Site 0 of 0 in cluster

Relative: Equal

Actual: 47 ft.

FID:

Facility ID:	34006700	Regulate ID:	Not reported
Reg By:	Active Underground Storage Tank Location		
Cortese Code:	Not reported	SIC Code:	Not reported
Status:	Active	Facility Tel:	(916) 678-5197
Mail To:	Not reported PO BOX 154 SACRAMENTO, CA 95828		
Contact:	Not reported	Contact Tel:	Not reported
DUNs No:	Not reported	NPDES No:	Not reported
Creation:	10/22/93	Modified:	00/00/00
EPA ID:	Not reported		
Comments:	Not reported		

---

4 **SACRAMENTO PALLET COMPANY** **Sacramento Co. ML** **S105269490**
NE **9086 GERBER RD** **N/A**
1/8-1/4 **SACRA, CA 95829**
1058 ft.

Relative: Higher

Actual: 51 ft.

Sacramento ML:

Facility Id:	Not reported
Number of Tanks:	0
Last Plan Date:	Not reported
Last Inspection Date:	Not reported
WG Bill Code:	50
Food Bill Code :	50
Billing Codes BP:	Disclaimer
Billing Codes UST:	No Tanks
Tier Permitting:	Not reported
Risk Mgmt Protection Program :	Not reported
FD:	J
Target Property Bill Code:	50
CUPA Permit Date:	Not reported
HAZMAT Permit Date:	Not reported
HAZMAT Inspection Date:	Not reported
HAZMAT Date BP Received:	Not reported
UST Inspection Date:	Not reported
UST Tank Test Date:	Not reported
Waste General Insp Date:	Not reported

B5 **CHMIRS** **S100278032**
WNW **8880 GERBER ROAD** **N/A**
1/8-1/4 **UNINC, CA 95828**
1142 ft.

Site 0 of 0 in cluster

Relative:
Lower

Actual:
46 ft.

CHMIRS:

OES Control Number:	9118583
Chemical Name:	Not reported
Extent of Release:	Not reported
Property Use:	County/City Road
Incident Date:	19-AUG-91
Date Completed:	19-AUG-91
Time Completed :	1725
Agency Id Number :	66
Agency Incident Number :	91142
OES Incident Number :	9118583
Time Notified :	1515
Surrounding Area :	400
Estimated Temperature :	85
Property Management :	K
More Than Two Substances Involved? :	N
Special Studies 1 :	Not reported
Special Studies 2 :	Not reported
Special Studies 3 :	Not reported
Special Studies 4 :	Not reported
Special Studies 5 :	Not reported
Special Studies 6 :	Not reported
Responding Agency Personel # Of Injuries :	0
Responding Agency Personel # Of Fatalities :	0
Resp Agncy Personel # Of Decontaminated :	0
Others Number Of Decontaminated :	0
Others Number Of Injuries :	0
Others Number Of Fatalities :	0
Vehicle Make/year :	Not reported
Vehicle License Number :	Not reported
Vehicle State :	Not reported
Vehicle Id Number :	Not reported
CA/DOT/PUC/ICC Number :	Not reported
Company Name :	Not reported
Reporting Officer Name/ID :	L. PITTMAN SGT. 4537
Report Date :	19-AUG-91
Comments :	Yes
Facility Telephone Number :	916 327-3310
Waterway Involved :	Not reported
Waterway :	Not reported
Spill Site :	Not reported
Cleanup By :	Not reported
Containment :	Not reported
What Happened :	Not reported
Type :	Not reported
Other :	Not reported
Chemical 1 :	Not Reported
Chemical 2 :	Not Reported
Chemical 3 :	Not Reported
Date/Time :	Not reported
Evacuations :	Not reported

(Continued) **S100278032**

B6
WNW
1/8-1/4
1142 ft.

FLORIN FIRE PROTECTION DIST.
8880 GERBER RD
FLORIN, CA 95828

Sacramento Co. ML **S105269488**
N/A

Site 0 of 0 in cluster

Relative:
Lower

Actual:
46 ft.

Sacramento ML:

Facility Id:	Not reported
Number of Tanks:	0
Last Plan Date:	Not reported
Last Inspection Date:	Not reported
WG Bill Code:	51
Food Bill Code :	51
Billing Codes BP:	Out of Business
Billing Codes UST:	No Tanks
Tier Permitting:	Not reported
Risk Mgmt Protection Program :	Not reported
FD:	J
Target Property Bill Code:	51
CUPA Permit Date:	Not reported
HAZMAT Permit Date:	Not reported
HAZMAT Inspection Date:	Not reported
HAZMAT Date BP Received:	08/20/1997
UST Inspection Date:	Not reported
UST Tank Test Date:	Not reported
Waste General Insp Date:	Not reported

B7
WNW
1/8-1/4
1142 ft.

AMERICAN RIVER FD #50
8880 GERBER RD
SACRAMENTO, CA 95828

Sacramento Co. ML **S103707453**
N/A

Site 0 of 0 in cluster

Relative:
Lower

Actual:
46 ft.

Sacramento ML:

Facility Id:	FA0009289
Number of Tanks:	Not reported
Last Plan Date:	06/25/1998
Last Inspection Date:	Not reported
WG Bill Code:	5306*
Food Bill Code :	Not reported
Billing Codes BP:	5203
Billing Codes UST:	Not reported
Tier Permitting:	Not reported
Risk Mgmt Protection Program :	Not reported
FD:	Not reported
Target Property Bill Code:	Not reported
CUPA Permit Date:	Not reported
HAZMAT Permit Date:	Not reported
HAZMAT Inspection Date:	Not reported
HAZMAT Date BP Received:	Not reported
UST Inspection Date:	Not reported
UST Tank Test Date:	Not reported
Waste General Insp Date:	Not reported

AMERICAN RIVER FD #50 (Continued) **S103707453**

B8
WNW
1/8-1/4
1142 ft.

8880 GERBER RD
8880 GERBER RD
FLORIN, CA 95817

ERNS **91230755**
N/A

Site 0 of 0 in cluster

Relative:
Lower

Actual:
46 ft.

The ERNS database may contain additional details for this site.
Please click here or contact your EDR Account Executive for more information.

9
NNW
1/4-1/2
1391 ft.

JAVAN SHELL FOOD MART
7149 S WATT AVE
SACRAMENTO, CA 95829

HAZNET **S104971101**
Sacramento Co. ML **N/A**

Relative:
Lower

Actual:
46 ft.

HAZNET:

Gepaid:	CAL000257930
TSD EPA ID:	Not reported
Gen County:	Sacramento
Tsd County:	Los Angeles
Tons:	0.45
Waste Category:	Unspecified organic liquid mixture
Disposal Method:	Treatment, Tank
Contact:	JAHANSHAH JAVANIFARD
Telephone:	(916) 381-7862
Mailing Address:	7149 S WATT AVE SACRAMENTO, CA 95829
County	Not reported

Sacramento ML:

Facility Id:	FA0014174
Number of Tanks:	Not reported
Last Plan Date:	09/04/2002
Last Inspection Date:	08/19/2002
WG Bill Code:	5304
Food Bill Code :	Not reported
Billing Codes BP:	5210
Billing Codes UST:	Not reported
Tier Permitting:	Not reported
Risk Mgmt Protection Program :	Not reported
FD:	Not reported
Target Property Bill Code:	Not reported
CUPA Permit Date:	Not reported
HAZMAT Permit Date:	Not reported
HAZMAT Inspection Date:	Not reported
HAZMAT Date BP Received:	Not reported
UST Inspection Date:	Not reported
UST Tank Test Date:	Not reported
Waste General Insp Date:	Not reported

C10
North
1/4-1/2
2635 ft.

ELPIDIO VELOSCO
8950 MCCOY AV
SACRA, CA 95829

Sacramento Co. ML **U001615913**
HIST UST **N/A**

Site 0 of 0 in cluster

Relative:
Equal

Actual:
47 ft.

Sacramento ML:

Facility Id:	J0001586
Number of Tanks:	2
Last Plan Date:	Not reported
Last Inspection Date:	Not reported
WG Bill Code:	53
Food Bill Code :	53
Billing Codes BP:	Farm-No Fee
Billing Codes UST:	Farm-No Fee
Tier Permitting:	Not reported
Risk Mgmt Protection Program :	Not reported
FD:	J
Target Property Bill Code:	50
CUPA Permit Date:	Not reported
HAZMAT Permit Date:	Not reported
HAZMAT Inspection Date:	Not reported
HAZMAT Date BP Received:	Not reported
UST Inspection Date:	Not reported
UST Tank Test Date:	Not reported
Waste General Insp Date:	Not reported

UST HIST:

Facility ID:	37245	Facility Status:	Not reported
Total Tanks:	2	Region:	STATE
Owner Name:	ITC THERMODYNE	Box Number:	Not reported
Owner Address:	P.O. BOX 28248 SACRAMENTO, CA 95828		

C11
North
1/4-1/2
2635 ft.

I.T.C. THERMODYNE
8950 MCCOY AVE
SACRAMENTO, CA 95829

CA FID UST **S101628521**
N/A

Site 0 of 0 in cluster

Relative:
Equal

Actual:
47 ft.

FID:

Facility ID:	34007085	Regulate ID:	00037245
Reg By:	Active Underground Storage Tank Location		
Cortese Code:	Not reported	SIC Code:	Not reported
Status:	Active	Facility Tel:	(916) 383-5718
Mail To:	Not reported P O BOX SACRAMENTO, CA 95829		
Contact:	Not reported	Contact Tel:	Not reported
DUNs No:	Not reported	NPDES No:	Not reported
Creation:	10/22/93	Modified:	00/00/00
EPA ID:	Not reported		
Comments:	Not reported		

D12
ENE
1/2-1
2843 ft.

INTER CITY INC
9297 GERBER RD
SACRAMENTO, CA 95829

Sacramento Co. ML **S102315516**
N/A

Site 0 of 0 in cluster

Relative:
Higher

Actual:
49 ft.

Sacramento ML:

Facility Id:	FA0011439
Number of Tanks:	Not reported
Last Plan Date:	01/03/2003
Last Inspection Date:	05/08/2003
WG Bill Code:	5305
Food Bill Code :	Not reported
Billing Codes BP:	5213
Billing Codes UST:	Not reported
Tier Permitting:	Not reported
Risk Mgmt Protection Program :	Not reported
FD:	Not reported
Target Property Bill Code:	Not reported
CUPA Permit Date:	Not reported
HAZMAT Permit Date:	Not reported
HAZMAT Inspection Date:	Not reported
HAZMAT Date BP Received:	Not reported
UST Inspection Date:	Not reported
UST Tank Test Date:	Not reported
Waste General Insp Date:	Not reported

D13
ENE
1/2-1
2939 ft.

ROSE LANDSCAPING & NURSERY
9307 GERBER RD
SACRA, CA 95829

Sacramento Co. ML **S105269491**
N/A

Site 0 of 0 in cluster

Relative:
Higher

Actual:
49 ft.

Sacramento ML:

Facility Id:	Not reported
Number of Tanks:	0
Last Plan Date:	Not reported
Last Inspection Date:	Not reported
WG Bill Code:	50
Food Bill Code :	50
Billing Codes BP:	Disclaimer
Billing Codes UST:	No Tanks
Tier Permitting:	Not reported
Risk Mgmt Protection Program :	Not reported
FD:	J
Target Property Bill Code:	50
CUPA Permit Date:	Not reported
HAZMAT Permit Date:	Not reported
HAZMAT Inspection Date:	Not reported
HAZMAT Date BP Received:	Not reported
UST Inspection Date:	Not reported
UST Tank Test Date:	Not reported
Waste General Insp Date:	Not reported

E14
NE
1/2-1
2940 ft.

LOPEZ ENT., INC
7501 PASSALLIS LN
SACRA, CA 95829

Sacramento Co. ML **S105271057**
N/A

Site 0 of 0 in cluster

Relative:
Equal

Actual:
47 ft.

Sacramento ML:

Facility Id:	J0205090
Number of Tanks:	0
Last Plan Date:	Not reported
Last Inspection Date:	Not reported
WG Bill Code:	50
Food Bill Code :	50
Billing Codes BP:	Disclaimer
Billing Codes UST:	No Tanks
Tier Permitting:	Not reported
Risk Mgmt Protection Program :	Not reported
FD:	J
Target Property Bill Code:	50
CUPA Permit Date:	Not reported
HAZMAT Permit Date:	Not reported
HAZMAT Inspection Date:	Not reported
HAZMAT Date BP Received:	Not reported
UST Inspection Date:	Not reported
UST Tank Test Date:	Not reported
Waste General Insp Date:	Not reported

E15
NE
1/2-1
2940 ft.

LOPEZ TRUCKING
7501 PASSALIS LN
SACRA, CA 95828

Sacramento Co. ML **S105271056**
N/A

Site 0 of 0 in cluster

Relative:
Equal

Actual:
47 ft.

Sacramento ML:

Facility Id:	Not reported
Number of Tanks:	0
Last Plan Date:	Not reported
Last Inspection Date:	Not reported
WG Bill Code:	50
Food Bill Code :	50
Billing Codes BP:	Disclaimer
Billing Codes UST:	No Tanks
Tier Permitting:	Not reported
Risk Mgmt Protection Program :	Not reported
FD:	J
Target Property Bill Code:	50
CUPA Permit Date:	Not reported
HAZMAT Permit Date:	Not reported
HAZMAT Inspection Date:	Not reported
HAZMAT Date BP Received:	Not reported
UST Inspection Date:	Not reported
UST Tank Test Date:	Not reported
Waste General Insp Date:	Not reported

MAP FINDINGS - EDR PROPRIETARY HISTORICAL DATABASES

YEAR	NAME	ADDRESS	CITY	ST	DIR.	DIST.	ELEV.	TYPE

Coal Gas Site Search: No site was found in a search of Real Property Scan's ENVIROHAZ database.

EDR Historical Gas Station & Dry Cleaner Search: No mapped sites were found in EDR's search of the EDR Historical Gas Station & Dry Cleaner Database within 0.250 mile of the Target Property.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
ELK GROVE	S106087872	AMB/BTS, LLC	8400 ELK GROVE/FLORIN RD	95829	HAZNET
SACRA	S105268840	PWA: VINTAGE PARK DR	ELK GROVE FLORIN	95829	Sacramento Co. ML
SACRAMENTO	S105882310		20TH STREET AND C STREET		LUST, CHMIRS
SACRAMENTO	S103588042	LENNANE (OLD SAC CITY)	23RD AND A STREETS		SWF/LF
SACRAMENTO	S102361862	SCOLLAN (OLD SAC CITY)	24TH AND A STREETS		SWF/LF
SACRAMENTO	S105548867	SACRAMENTO CITY LANDFILL	28TH AND 'A' STREETS		SWF/LF
SACRAMENTO	S105548868	DELLAR LANDFILL/OLD SAC CITY	28TH AND A STREETS		SWF/LF
SACRAMENTO	S102361874	KIRK AND SON TIRE	8620 N. ANTELOPE ROAD		SWF/LF
SACRAMENTO	S106112441	SACRAMENTO-YOLO MOSQUITO & VECTOR CONTR DISTRICT	EL CAMINO AVENUE / BUISNESS HWY. 80, AND SILICA		CA SLIC
SACRAMENTO	90465174	CORNER OF STOCKTON BLVD. AND FLORIN RD.	CORNER OF STOCKTON BLVD. AND FLORIN RI		ERNS
SACRAMENTO	S104654455	BLT TRANSFER STATION (NORTH SACRAMENTO)	SE CORNER RALEY BLVD. AND VINCI AVE.		SWF/LF
SACRAMENTO	91240375	EAGLES NEST RD 200' S OF FLORIN RD	EAGLES NEST RD 200' S OF FLORIN RD		ERNS
SACRAMENTO	S100182044	SMUD PCB SUBSTATION SITE #10	ELK GROVE-FLORIN ROAD	95829	NFE
SACRAMENTO	S104654766	NEW GENERATION CLEANERS	8359 ELK GROVE FLORIN RD 111	95829	Sacramento Co. ML, CLEANERS
SACRAMENTO	94397291	6401 FLORIN AND PERKINS	6401 FLORIN AND PERKINS	95828	ERNS
SACRAMENTO	S105548869	FLORIN-PERKINS LF INC, MRF & TS	4201 (3901) FLORIN PERKINS ROAD		SWF/LF
SACRAMENTO	93320542	GERBER AND BRADSHAW ROAD	GERBER AND BRADSHAW ROAD		ERNS
SACRAMENTO	S103588047	KILGORE DUMP	KILGORE ROAD APN72-260-20		SWF/LF
SACRAMENTO	8874398	LUMBERJACK PARKING LOT/838 FLORIN RD	LUMBERJACK PARKING LOT/838 FLORIN RD		ERNS
SACRAMENTO	S105646922		RICHARDS BLVD / SB I5		LUST, CHMIRS
SACRAMENTO	S102361840	WDR'S GEN ORDER-REUSE OF WASTE DISCHARGE	SACRAMENTO, SAN JOAQUIN CO'S		SWF/LF
SACRAMENTO	S105678204	14TH AVENUE LANDFILL (EAST / WEST PITS)	NO. SIDE OF 14TH AVE; E + W OF RR TRACKS		SWF/LF
SACRAMENTO	S106091436	WESTERN HYDRO STATICS INC	5840 S WATT AVE UNIT E	95829	HAZNET
SACRAMENTO	S105067564	NELSON/ROGERS DEVELOPMENT	WATT AVE		Sacramento Co. CS
SACRAMENTO	S105067565	SAC COUNTY - HWY & BRIDGES	WATT AVE		Sacramento Co. CS
SACRAMENTO	S103680230	SACRAMENTO HOUSING REDEVELOPMENT	WESTERN AVE SINGLE FAM REHAB		HAZNET
SACRAMENTO COUNTY	S105872853		----------VOID ----------		HAZNET, CHMIRS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Elapsed ASTM days: Provides confirmation that this EDR report meets or exceeds the 90-day updating requirement of the ASTM standard.

FEDERAL ASTM STANDARD RECORDS

NPL: National Priority List
Source: EPA
Telephone: N/A
National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 01/29/04
Date Made Active at EDR: 02/27/04
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 02/06/04
Elapsed ASTM days: 21
Date of Last EDR Contact: 02/06/04

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 6
Telephone: 214-655-6659

EPA Region 8
Telephone: 303-312-6774

Proposed NPL: Proposed National Priority List Sites
Source: EPA
Telephone: N/A

Date of Government Version: 01/07/04
Date Made Active at EDR: 02/27/04
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 02/06/04
Elapsed ASTM days: 21
Date of Last EDR Contact: 02/06/04

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System
Source: EPA
Telephone: 703-413-0223
CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 11/17/03
Date Made Active at EDR: 02/02/04
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 12/22/03
Elapsed ASTM days: 42
Date of Last EDR Contact: 12/22/03

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned
Source: EPA
Telephone: 703-413-0223
As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

Date of Government Version: 11/17/03
Date Made Active at EDR: 02/02/04
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 12/22/03
Elapsed ASTM days: 42
Date of Last EDR Contact: 12/22/03

CORRACTS: Corrective Action Report
Source: EPA
Telephone: 800-424-9346
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/18/03
Date Made Active at EDR: 02/02/04
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 12/26/03
Elapsed ASTM days: 38
Date of Last EDR Contact: 12/08/03

RCRIS: Resource Conservation and Recovery Information System
Source: EPA
Telephone: 800-424-9346
Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs): generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs): generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs): generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 01/12/04
Date Made Active at EDR: 02/10/04
Database Release Frequency: Varies
Date of Data Arrival at EDR: 01/19/04
Elapsed ASTM days: 22
Date of Last EDR Contact: 01/19/04

ERNS: Emergency Response Notification System
Source: National Response Center, United States Coast Guard
Telephone: 202-260-2342
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/02
Date Made Active at EDR: 02/03/03
Database Release Frequency: Annually
Date of Data Arrival at EDR: 01/27/03
Elapsed ASTM days: 7
Date of Last EDR Contact: 01/26/04

FEDERAL ASTM SUPPLEMENTAL RECORDS

BRS: Biennial Reporting System
Source: EPA/NTIS
Telephone: 800-424-9346
The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/01/01
Database Release Frequency: Biennially
Date of Last EDR Contact: 12/16/03
Date of Next Scheduled EDR Contact: 03/15/04

CONSENT: Superfund (CERCLA) Consent Decrees
Source: EPA Regional Offices
Telephone: Varies
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: N/A
Database Release Frequency: Varies
Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

ROD: Records Of Decision
Source: EPA
Telephone: 703-416-0223
Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 01/09/04
Database Release Frequency: Annually
Date of Last EDR Contact: 01/06/04
Date of Next Scheduled EDR Contact: 04/05/04

DELISTED NPL: National Priority List Deletions
Source: EPA
Telephone: N/A
The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 01/29/04
Database Release Frequency: Quarterly
Date of Last EDR Contact: 02/06/04
Date of Next Scheduled EDR Contact: 05/01/04

FINDS: Facility Index System/Facility Identification Initiative Program Summary Report
Source: EPA
Telephone: N/A
Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 10/23/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 01/06/04
Date of Next Scheduled EDR Contact: 04/05/04

HMIRS: Hazardous Materials Information Reporting System
Source: U.S. Department of Transportation
Telephone: 202-366-4555
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/18/03
Database Release Frequency: Annually
Date of Last EDR Contact: 01/19/04
Date of Next Scheduled EDR Contact: 04/19/04

MLTS: Material Licensing Tracking System
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/15/04
Database Release Frequency: Quarterly
Date of Last EDR Contact: 01/06/04
Date of Next Scheduled EDR Contact: 04/05/04

MINES: Mines Master Index File
Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959

Date of Government Version: 11/25/03
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 12/29/03
Date of Next Scheduled EDR Contact: 03/29/04

NPL LIENS: Federal Superfund Liens
Source: EPA
Telephone: 202-564-4267
Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/91
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 11/21/03
Date of Next Scheduled EDR Contact: 02/23/04

PADS: PCB Activity Database System
Source: EPA
Telephone: 202-564-3887
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 09/30/03
Database Release Frequency: Annually
Date of Last EDR Contact: 02/09/04
Date of Next Scheduled EDR Contact: 05/10/04

DOD: Department of Defense Sites
Source: USGS
Telephone: 703-648-5920
This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 10/01/03
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 02/02/04
Date of Next Scheduled EDR Contact: 05/10/04

STORMWATER: Storm Water General Permits
Source: Environmental Protection Agency
Telephone: 202 564-0746
A listing of all facilities with Storm Water General Permits.

Date of Government Version: N/A
Database Release Frequency: Quarterly
Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

US BROWNFIELDS: A Listing of Brownfields Sites
Source: Environmental Protection Agency
Telephone: 202-566-2777
Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become BCRLF cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 07/15/03
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 12/17/03
Date of Next Scheduled EDR Contact: 03/15/04

RMP: Risk Management Plans
Source: Environmental Protection Agency
Telephone: 202-564-8600
When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: N/A
Database Release Frequency: N/A
Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

RAATS: RCRA Administrative Action Tracking System
Source: EPA
Telephone: 202-564-4104
RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/95
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 12/08/03
Date of Next Scheduled EDR Contact: 03/08/04

TRIS: Toxic Chemical Release Inventory System
Source: EPA
Telephone: 202-566-0250
Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/01
Database Release Frequency: Annually
Date of Last EDR Contact: 12/22/03
Date of Next Scheduled EDR Contact: 03/22/04

TSCA: Toxic Substances Control Act
Source: EPA
Telephone: 202-260-5521
Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/02
Database Release Frequency: Every 4 Years
Date of Last EDR Contact: 12/08/03
Date of Next Scheduled EDR Contact: 03/08/04

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
Source: EPA
Telephone: 202-564-2501

Date of Government Version: 10/16/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 12/22/03
Date of Next Scheduled EDR Contact: 03/22/04

SSTS: Section 7 Tracking Systems
Source: EPA
Telephone: 202-564-5008
Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/01
Database Release Frequency: Annually
Date of Last EDR Contact: 01/19/04
Date of Next Scheduled EDR Contact: 04/19/04

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-564-2501
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/16/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/22/03
Date of Next Scheduled EDR Contact: 03/22/04

STATE OF CALIFORNIA ASTM STANDARD RECORDS

AWP: Annual Workplan Sites
Source: California Environmental Protection Agency
Telephone: 916-323-3400
Known Hazardous Waste Sites. California DTSC's Annual Workplan (AWP), formerly BEP, identifies known hazardous substance sites targeted for cleanup.

Date of Government Version: 11/30/03
Date Made Active at EDR: 01/08/04
Database Release Frequency: Annually

Date of Data Arrival at EDR: 12/01/03
Elapsed ASTM days: 38
Date of Last EDR Contact: 12/01/03

CAL-SITES: Calsites Database
Source: Department of Toxic Substance Control
Telephone: 916-323-3400
The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database.

Date of Government Version: 11/30/03
Date Made Active at EDR: 01/08/04
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 12/01/03
Elapsed ASTM days: 38
Date of Last EDR Contact: 12/01/03

CHMIRS: California Hazardous Material Incident Report System
Source: Office of Emergency Services
Telephone: 916-845-8400
California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/02
Date Made Active at EDR: 08/07/03
Database Release Frequency: Varies

Date of Data Arrival at EDR: 07/11/03
Elapsed ASTM days: 27
Date of Last EDR Contact: 11/24/03

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-9100
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 04/01/01
Date Made Active at EDR: 07/26/01
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 05/29/01
Elapsed ASTM days: 58
Date of Last EDR Contact: 01/29/04

NOTIFY 65: Proposition 65 Records
Source: State Water Resources Control Board
Telephone: 916-445-3846
Proposition 65 Notification Records. NOTIFY 65 contains facility notifications about any release which could impact drinking water and thereby expose the public to a potential health risk.

Date of Government Version: 10/21/93
Date Made Active at EDR: 11/19/93
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 11/01/93
Elapsed ASTM days: 18
Date of Last EDR Contact: 01/19/04

TOXIC PITS: Toxic Pits Cleanup Act Sites
Source: State Water Resources Control Board
Telephone: 916-227-4364
Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/95
Date Made Active at EDR: 09/26/95
Database Release Frequency: No Update Planned
Date of Data Arrival at EDR: 08/30/95
Elapsed ASTM days: 27
Date of Last EDR Contact: 02/02/04

SWF/LF (SWIS): Solid Waste Information System
Source: Integrated Waste Management Board
Telephone: 916-341-6320
Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 11/14/03
Date Made Active at EDR: 01/08/04
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 12/16/03
Elapsed ASTM days: 23
Date of Last EDR Contact: 12/16/03

WMUDS/SWAT: Waste Management Unit Database
Source: State Water Resources Control Board
Telephone: 916-227-4448
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/00
Date Made Active at EDR: 05/10/00
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 04/10/00
Elapsed ASTM days: 30
Date of Last EDR Contact: 12/09/03

LUST: Leaking Underground Storage Tank Information System
Source: State Water Resources Control Board
Telephone: 916-341-5740
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 04/02/03
Date Made Active at EDR: 04/25/03
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 04/16/03
Elapsed ASTM days: 9
Date of Last EDR Contact: 01/12/04

CA UST:

UST: Active UST Facilities
Source: SWRCB
Telephone: 916-341-5700
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 04/02/03
Date Made Active at EDR: 04/30/03
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 04/16/03
Elapsed ASTM days: 14
Date of Last EDR Contact: 01/12/04

VCP: Voluntary Cleanup Program Properties
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 11/30/03
Date Made Active at EDR: 12/23/03
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 12/01/03
Elapsed ASTM days: 22
Date of Last EDR Contact: 12/01/03

INDIAN LUST: Leaking Underground Storage Tanks on Indian Land
Source: Environmental Protection Agency
Telephone: 415-972-3372
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 02/09/04
Date Made Active at EDR: 03/01/04
Database Release Frequency: Varies
Date of Data Arrival at EDR: 02/10/04
Elapsed ASTM days: 20
Date of Last EDR Contact: 01/27/04

INDIAN UST: Underground Storage Tanks on Indian Land
Source: EPA Region 9
Telephone: 415-972-3368

Date of Government Version: 12/05/03
Date Made Active at EDR: 01/08/04
Database Release Frequency: Varies
Date of Data Arrival at EDR: 12/05/03
Elapsed ASTM days: 34
Date of Last EDR Contact: 11/24/03

CA FID UST: Facility Inventory Database
Source: California Environmental Protection Agency
Telephone: 916-445-6532
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/94
Date Made Active at EDR: 09/29/95
Database Release Frequency: No Update Planned
Date of Data Arrival at EDR: 09/05/95
Elapsed ASTM days: 24
Date of Last EDR Contact: 12/28/98

HIST UST: Hazardous Substance Storage Container Database
Source: State Water Resources Control Board
Telephone: 916-341-5700
The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/90
Date Made Active at EDR: 02/12/91
Database Release Frequency: No Update Planned
Date of Data Arrival at EDR: 01/25/91
Elapsed ASTM days: 18
Date of Last EDR Contact: 07/26/01

STATE OF CALIFORNIA ASTM SUPPLEMENTAL RECORDS

AST: Aboveground Petroleum Storage Tank Facilities
Source: State Water Resources Control Board
Telephone: 916-341-5712
Registered Aboveground Storage Tanks.

Date of Government Version: 12/01/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 02/02/04
Date of Next Scheduled EDR Contact: 05/01/04

CLEANERS: Cleaner Facilities
Source: Department of Toxic Substance Control
Telephone: 916-225-0873
A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 11/26/03
Database Release Frequency: Annually
Date of Last EDR Contact: 01/07/04
Date of Next Scheduled EDR Contact: 04/05/04

CA WDS: Waste Discharge System
Source: State Water Resources Control Board
Telephone: 916-657-1571
Sites which have been issued waste discharge requirements.

Date of Government Version: 12/15/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 12/22/03
Date of Next Scheduled EDR Contact: 03/22/04

DEED: List of Deed Restrictions
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
The use of recorded land use restrictions is one of the methods the DTSC uses to protect the public from unsafe exposures to hazardous substances and wastes.

Date of Government Version: 01/05/04
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 01/06/04
Date of Next Scheduled EDR Contact: 04/05/04

NFA: No Further Action Determination
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
This category contains properties at which DTSC has made a clear determination that the property does not pose a problem to the environment or to public health.

Date of Government Version: 11/30/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 12/01/03
Date of Next Scheduled EDR Contact: 03/01/04

EMI: Emissions Inventory Data
Source: California Air Resources Board
Telephone: 916-322-2990
Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/01
Database Release Frequency: Varies
Date of Last EDR Contact: 01/23/04
Date of Next Scheduled EDR Contact: 04/19/04

REF: Unconfirmed Properties Referred to Another Agency
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
This category contains properties where contamination has not been confirmed and which were determined as not requiring direct DTSC Site Mitigation Program action or oversight. Accordingly, these sites have been referred to another state or local regulatory agency.

Date of Government Version: 11/30/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 12/01/03
Date of Next Scheduled EDR Contact: 03/01/04

SCH: School Property Evaluation Program
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 11/30/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 12/01/03
Date of Next Scheduled EDR Contact: 03/01/04

NFE: Properties Needing Further Evaluation
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
This category contains properties that are suspected of being contaminated. These are unconfirmed contaminated properties that need to be assessed using the PEA process. PEA in Progress indicates properties where DTSC is currently conducting a PEA. PEA Required indicates properties where DTSC has determined a PEA is required, but not currently underway.

Date of Government Version: 11/30/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 12/01/03
Date of Next Scheduled EDR Contact: 03/01/04

HAZNET: Hazardous Waste Information System
Source: California Environmental Protection Agency
Telephone: 916-255-1136
Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/02 — Date of Last EDR Contact: 02/09/04
Database Release Frequency: Annually — Date of Next Scheduled EDR Contact: 05/10/04

LOCAL RECORDS

ALAMEDA COUNTY:

Local Oversight Program Listing of UGT Cleanup Sites
Source: Alameda County Environmental Health Services
Telephone: 510-567-6700

Date of Government Version: 12/09/03 — Date of Last EDR Contact: 12/09/03
Database Release Frequency: Semi-Annually — Date of Next Scheduled EDR Contact: 04/26/04

Underground Tanks
Source: Alameda County Environmental Health Services
Telephone: 510-567-6700

Date of Government Version: 12/09/03 — Date of Last EDR Contact: 12/09/03
Database Release Frequency: Semi-Annually — Date of Next Scheduled EDR Contact: 04/26/04

CONTRA COSTA COUNTY:

Site List
Source: Contra Costa Health Services Department
Telephone: 925-646-2286
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 12/01/03 — Date of Last EDR Contact: 12/01/03
Database Release Frequency: Semi-Annually — Date of Next Scheduled EDR Contact: 03/01/04

FRESNO COUNTY:

CUPA Resources List
Source: Dept. of Community Health
Telephone: 559-445-3271
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 01/14/04 — Date of Last EDR Contact: 01/15/04
Database Release Frequency: Semi-Annually — Date of Next Scheduled EDR Contact: 05/10/04

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Kern County Sites and Tanks Listing.

Date of Government Version: 07/25/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/22/03
Date of Next Scheduled EDR Contact: 03/08/04

LOS ANGELES COUNTY:

List of Solid Waste Facilities
Source: La County Department of Public Works
Telephone: 818-458-5185

Date of Government Version: 06/03/03
Database Release Frequency: Varies

Date of Last EDR Contact: 11/21/03
Date of Next Scheduled EDR Contact: 02/16/04

City of El Segundo Underground Storage Tank
Source: City of El Segundo Fire Department
Telephone: 310-524-2236

Date of Government Version: 09/11/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/16/04
Date of Next Scheduled EDR Contact: 05/17/04

City of Long Beach Underground Storage Tank
Source: City of Long Beach Fire Department
Telephone: 562-570-2543

Date of Government Version: 03/28/03
Database Release Frequency: Annually

Date of Last EDR Contact: 11/24/03
Date of Next Scheduled EDR Contact: 02/23/04

City of Torrance Underground Storage Tank
Source: City of Torrance Fire Department
Telephone: 310-618-2973

Date of Government Version: 09/03/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/16/04
Date of Next Scheduled EDR Contact: 05/17/04

City of Los Angeles Landfills
Source: Engineering & Construction Division
Telephone: 213-473-7869

Date of Government Version: 03/01/02
Database Release Frequency: Varies

Date of Last EDR Contact: 12/16/03
Date of Next Scheduled EDR Contact: 03/15/04

HMS: Street Number List
Source: Department of Public Works
Telephone: 626-458-3517
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 09/30/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 11/17/03
Date of Next Scheduled EDR Contact: 02/16/04

Site Mitigation List
Source: Community Health Services
Telephone: 323-890-7806
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/07/03
Database Release Frequency: Annually

Date of Last EDR Contact: 02/16/04
Date of Next Scheduled EDR Contact: 05/17/04

San Gabriel Valley Areas of Concern
Source: EPA Region 9
Telephone: 415-972-3178
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 12/31/98
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 07/06/99
Date of Next Scheduled EDR Contact: N/A

MARIN COUNTY:

Underground Storage Tank Sites
Source: Public Works Department Waste Management
Telephone: 415-499-6647
Currently permitted USTs in Marin County.

Date of Government Version: 08/19/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/02/04
Date of Next Scheduled EDR Contact: 05/01/04

NAPA COUNTY:

Sites With Reported Contamination
Source: Napa County Department of Environmental Management
Telephone: 707-253-4269

Date of Government Version: 10/02/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 12/29/03
Date of Next Scheduled EDR Contact: 03/29/04

Closed and Operating Underground Storage Tank Sites
Source: Napa County Department of Environmental Management
Telephone: 707-253-4269

Date of Government Version: 10/02/03
Database Release Frequency: Annually

Date of Last EDR Contact: 12/29/03
Date of Next Scheduled EDR Contact: 03/29/04

ORANGE COUNTY:

List of Underground Storage Tank Cleanups
Source: Health Care Agency
Telephone: 714-834-3446
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 11/06/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 11/25/03
Date of Next Scheduled EDR Contact: 03/08/04

List of Underground Storage Tank Facilities
Source: Health Care Agency
Telephone: 714-834-3446
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 11/06/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/19/03
Date of Next Scheduled EDR Contact: 03/08/04

List of Industrial Site Cleanups
Source: Health Care Agency
Telephone: 714-834-3446
Petroleum and non-petroleum spills.

Date of Government Version: 11/06/03
Database Release Frequency: Annually

Date of Last EDR Contact: 12/08/03
Date of Next Scheduled EDR Contact: 03/08/04

PLACER COUNTY:

Master List of Facilities
Source: Placer County Health and Human Services
Telephone: 530-889-7312
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 10/16/03
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 12/22/03
Date of Next Scheduled EDR Contact: 03/22/04

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Source: Department of Public Health
Telephone: 909-358-5055
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 12/23/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 01/19/04
Date of Next Scheduled EDR Contact: 04/19/04

Underground Storage Tank Tank List
Source: Health Services Agency
Telephone: 909-358-5055

Date of Government Version: 12/01/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 01/19/04
Date of Next Scheduled EDR Contact: 04/19/04

SACRAMENTO COUNTY:

CS - Contaminated Sites
Source: Sacramento County Environmental Management
Telephone: 916-875-8406

Date of Government Version: 07/17/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 02/02/04
Date of Next Scheduled EDR Contact: 05/01/04

ML - Regulatory Compliance Master List
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 07/17/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 02/02/04
Date of Next Scheduled EDR Contact: 05/01/04

SAN BERNARDINO COUNTY:

Hazardous Material Permits
Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 01/08/04
Database Release Frequency: Quarterly
Date of Last EDR Contact: 12/08/03
Date of Next Scheduled EDR Contact: 03/08/04

SAN DIEGO COUNTY:

Solid Waste Facilities
Source: Department of Health Services
Telephone: 619-338-2209
San Diego County Solid Waste Facilities.

Date of Government Version: 08/01/00
Database Release Frequency: Varies
Date of Last EDR Contact: 11/21/03
Date of Next Scheduled EDR Contact: 02/23/04

Hazardous Materials Management Division Database
Source: Hazardous Materials Management Division
Telephone: 619-338-2268
The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 10/31/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 01/09/04
Date of Next Scheduled EDR Contact: 04/05/04

SAN FRANCISCO COUNTY:

Local Oversite Facilities
Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920

Date of Government Version: 12/09/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 12/08/03
Date of Next Scheduled EDR Contact: 03/08/04

Underground Storage Tank Information
Source: Department of Public Health
Telephone: 415-252-3920

Date of Government Version: 12/09/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 12/08/03
Date of Next Scheduled EDR Contact: 03/08/04

SAN MATEO COUNTY:

Fuel Leak List
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921

Date of Government Version: 11/24/03
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 01/26/04
Date of Next Scheduled EDR Contact: 04/12/04

Business Inventory
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 11/13/03
Database Release Frequency: Annually
Date of Last EDR Contact: 01/12/04
Date of Next Scheduled EDR Contact: 04/12/04

SANTA CLARA COUNTY:

Fuel Leak Site Activity Report
Source: Santa Clara Valley Water District
Telephone: 408-265-2600

Date of Government Version: 12/31/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 12/29/03
Date of Next Scheduled EDR Contact: 03/29/04

Hazardous Material Facilities
Source: City of San Jose Fire Department
Telephone: 408-277-4659

Date of Government Version: 10/01/03
Database Release Frequency: Annually

Date of Last EDR Contact: 12/08/03
Date of Next Scheduled EDR Contact: 03/08/04

SOLANO COUNTY:

Leaking Underground Storage Tanks
Source: Solano County Department of Environmental Management
Telephone: 707-421-6770

Date of Government Version: 12/16/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/16/03
Date of Next Scheduled EDR Contact: 03/15/04

Underground Storage Tanks
Source: Solano County Department of Environmental Management
Telephone: 707-421-6770

Date of Government Version: 12/16/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/16/03
Date of Next Scheduled EDR Contact: 03/15/04

SONOMA COUNTY:

Leaking Underground Storage Tank Sites
Source: Department of Health Services
Telephone: 707-565-6565

Date of Government Version: 01/26/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/26/04
Date of Next Scheduled EDR Contact: 04/26/04

SUTTER COUNTY:

Underground Storage Tanks
Source: Sutter County Department of Agriculture
Telephone: 530-822-7500

Date of Government Version: 01/29/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/09/04
Date of Next Scheduled EDR Contact: 04/05/04

VENTURA COUNTY:

Inventory of Illegal Abandoned and Inactive Sites
Source: Environmental Health Division
Telephone: 805-654-2813
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 09/01/02
Database Release Frequency: Annually
Date of Last EDR Contact: 11/26/03
Date of Next Scheduled EDR Contact: 02/23/04

Listing of Underground Tank Cleanup Sites
Source: Environmental Health Division
Telephone: 805-654-2813
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 12/01/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 12/16/03
Date of Next Scheduled EDR Contact: 03/15/04

Underground Tank Closed Sites List
Source: Environmental Health Division
Telephone: 805-654-2813
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 12/01/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 01/12/04
Date of Next Scheduled EDR Contact: 04/12/04

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 12/01/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 12/16/03
Date of Next Scheduled EDR Contact: 03/15/04

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Source: Yolo County Department of Health
Telephone: 530-666-8646

Date of Government Version: 10/29/03
Database Release Frequency: Annually
Date of Last EDR Contact: 01/19/04
Date of Next Scheduled EDR Contact: 04/19/04

California Regional Water Quality Control Board (RWQCB) LUST Records

LUST REG 1: Active Toxic Site Investigation
Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-576-2220
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/01
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 11/21/03
Date of Next Scheduled EDR Contact: 02/23/04

LUST REG 2: Fuel Leak List
Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457

Date of Government Version: 01/21/04
Database Release Frequency: Quarterly
Date of Last EDR Contact: 01/14/04
Date of Next Scheduled EDR Contact: 04/12/04

LUST REG 3: Leaking Underground Storage Tank Database
Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147

Date of Government Version: 05/19/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 02/16/04
Date of Next Scheduled EDR Contact: 05/17/04

LUST REG 4: Underground Storage Tank Leak List
Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 01/23/04
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 12/31/03
Date of Next Scheduled EDR Contact: 03/29/04

LUST REG 5: Leaking Underground Storage Tank Database
Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-255-3125

Date of Government Version: 07/01/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 01/06/04
Date of Next Scheduled EDR Contact: 04/05/04

LUST REG 6L: Leaking Underground Storage Tank Case Listing
Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 916-542-5424
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/03
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 12/08/03
Date of Next Scheduled EDR Contact: 03/08/04

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-346-7491

Date of Government Version: 01/21/04
Database Release Frequency: Quarterly
Date of Last EDR Contact: 01/06/04
Date of Next Scheduled EDR Contact: 04/05/04

LUST REG 7: Leaking Underground Storage Tank Case Listing
Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-346-7491

Date of Government Version: 07/02/02
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 12/29/03
Date of Next Scheduled EDR Contact: 03/29/04

LUST REG 8: Leaking Underground Storage Tanks
Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4498
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 01/12/04
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 01/08/04
Date of Next Scheduled EDR Contact: 05/10/04

LUST REG 9: Leaking Underground Storage Tank Report
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/01
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 01/19/04
Date of Next Scheduled EDR Contact: 04/19/04

California Regional Water Quality Control Board (RWQCB) SLIC Records

SLIC REG 1: Active Toxic Site Investigations
Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220

Date of Government Version: 04/03/03
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 11/21/03
Date of Next Scheduled EDR Contact: 02/23/04

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 03/28/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 01/14/04
Date of Next Scheduled EDR Contact: 04/12/04

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 09/16/03
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 02/16/04
Date of Next Scheduled EDR Contact: 05/17/04

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 01/28/04
Database Release Frequency: Quarterly
Date of Last EDR Contact: 01/26/04
Date of Next Scheduled EDR Contact: 04/26/04

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-855-3075
Unregulated sites that impact groundwater or have the potential to impact groundwater.

Date of Government Version: 01/08/04
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 01/06/04
Date of Next Scheduled EDR Contact: 04/05/04

SLIC REG 6L: SLIC Sites
Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574

Date of Government Version: 09/09/03
Database Release Frequency: Varies
Date of Last EDR Contact: 12/08/03
Date of Next Scheduled EDR Contact: 03/08/04

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583

Date of Government Version: 05/08/03
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 01/09/04
Date of Next Scheduled EDR Contact: 04/05/04

SLIC REG 7: SLIC List
Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491

Date of Government Version: 12/19/03
Database Release Frequency: Varies

Date of Last EDR Contact: 12/01/03
Date of Next Scheduled EDR Contact: 02/23/04

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-3298

Date of Government Version: 04/01/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/07/04
Date of Next Scheduled EDR Contact: 04/05/04

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980

Date of Government Version: 12/01/03
Database Release Frequency: Annually

Date of Last EDR Contact: 12/01/03
Date of Next Scheduled EDR Contact: 03/04/04

EDR PROPRIETARY HISTORICAL DATABASES

EDR Historical Gas Station and Dry Cleaners: EDR has searched select national collections of business directories and has collected listings of potential dry cleaner and gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning and gas station/filling station/service station establishments. The categories reviewed included, but were not limited to: *gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, dry cleaner, cleaners, laundry, laundromat, cleaning/laundry, wash & dry, etc.*

This information is meant to assist and complement environmental professionals in their conduct of environmental site assessments, and is not meant to be a substitute for a full historical investigation as defined in ASTM E1527. The information provided in this proprietary database may or may not be complete; i.e., the absence of a dry cleaner or gas station/filling station/service station site does not necessarily mean that such a site did not exist in the area covered by this report.

(A note on "dry cleaning" sites: it is not possible for EDR to differentiate between establishments that use PERC on-site as a cleaning solvent and sites that function simply as drop-off and pick-up locations or that are traditional wet cleaning/laundry facilities. Therefore, it is essential for environmental professionals to incorporate professional judgment in the evaluation of each site.)

Former Manufactured Gas (Coal Gas) Sites: The existence and location of Coal Gas sites is provided exclusively to EDR by Real Property Scan, Inc. ©Copyright 1993 Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative.

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The information contained in this report has predominantly been obtained from publicly available sources produced by entities other than Real Property Scan. While reasonable steps have been taken to insure the accuracy of this report, Real Property Scan does not guarantee the accuracy of this report. Any liability on the part of Real Property Scan is strictly limited to a refund of the amount paid. No claim is made for the actual existence of toxins at any site. This report does not constitute a legal opinion.

BROWNFIELDS DATABASES

VCP: Voluntary Cleanup Program Properties
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 11/30/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/01/03
Date of Next Scheduled EDR Contact: 03/01/04

US BROWNFIELDS: A Listing of Brownfields Sites
Source: Environmental Protection Agency
Telephone: 202-566-2777
Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become BCRLF cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: N/A
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: PennWell Corporation
Telephone: (800) 823-6277
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

SEC ELK-GROVE FLORIN/GERBER
7635 ELK-GROVE FLORIN ROAD
SACRAMENTO, CA 95829

TARGET PROPERTY COORDINATES

Latitude (North):	38.479900 - 38˚ 28' 47.6"
Longitude (West):	121.369499 - 121˚ 22' 10.2"
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	642223.6
UTM Y (Meters):	4260115.5
Elevation:	47 ft. above sea level

EDR's GeoCheck Physical Setting Source Addendum has been developed to assist the environmental professional with the collection of physical setting source information in accordance with ASTM 1527-00, Section 7.2.3. Section 7.2.3 requires that a current USGS 7.5 Minute Topographic Map (or equivalent, such as the USGS Digital Elevation Model) be reviewed. It also requires that one or more additional physical setting sources be sought when (1) conditions have been identified in which hazardous substances or petroleum products are likely to migrate to or from the property, and (2) more information than is provided in the current USGS 7.5 Minute Topographic Map (or equivalent) is generally obtained, pursuant to local good commercial or customary practice, to assess the impact of migration of recognized environmental conditions in connection with the property. Such additional physical setting sources generally include information about the topographic, hydrologic, hydrogeologic, and geologic characteristics of a site, and wells in the area.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata. EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

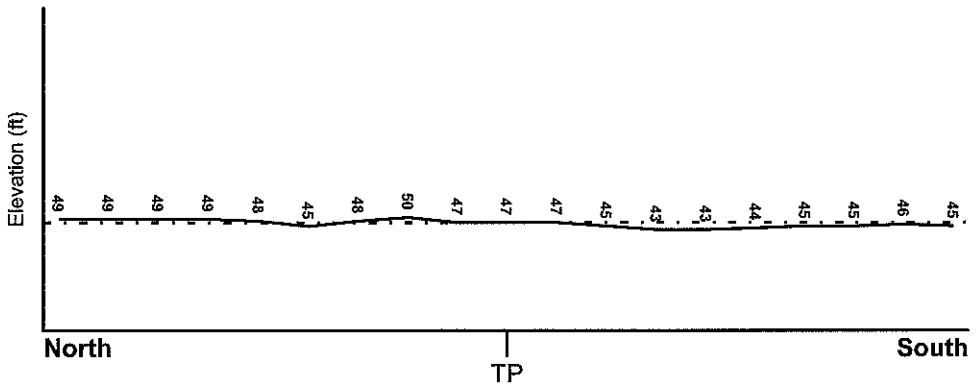
TOPOGRAPHIC INFORMATION

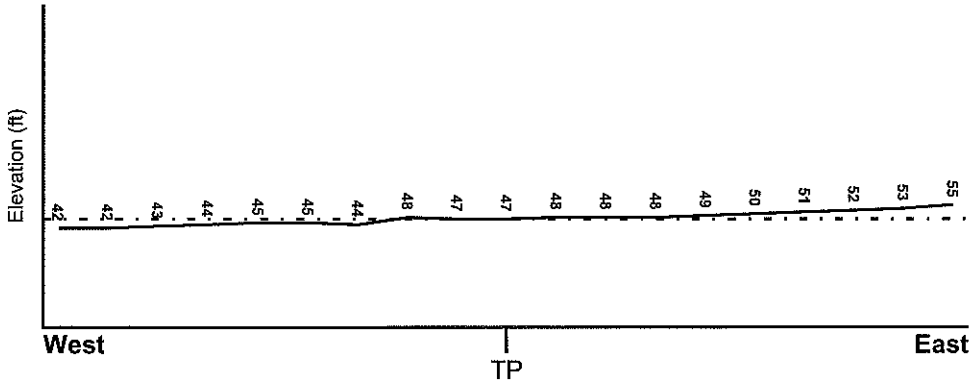
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

USGS Topographic Map:	38121-D3 ELK GROVE, CA
General Topographic Gradient:	General South
Source:	USGS 7.5 min quad index

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 47 ft.

0 1/2 1 Miles

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
SACRAMENTO, CA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 0602620330C

Additional Panels in search area: 0602620310E

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
ELK GROVE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius: 1.25 miles
Status: Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site-specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	SAN JOAQUIN
Soil Surface Texture:	silt loam
Hydrologic Group:	Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.
Soil Drainage Class:	Moderately well drained. Soils have a layer of low hydraulic conductivity, wet state high in the profile. Depth to water table is 3 to 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel:	MODERATE
Depth to Bedrock Min:	> 60 inches
Depth to Bedrock Max:	> 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	16 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 2.00 Min: 0.60	Max: 6.50 Min: 5.60
2	16 inches	19 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.	Max: 0.60 Min: 0.20	Max: 7.30 Min: 6.10
3	19 inches	28 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.06 Min: 0.01	Max: 7.80 Min: 6.10
4	28 inches	60 inches	indurated	Not reported	Not reported	Max: 0.00 Min: 0.00	Max: 0.00 Min: 0.00
5	60 inches	70 inches	stratified	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 0.20 Min: 0.06	Max: 7.80 Min: 6.10

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: loam
sandy loam
clay
fine sandy loam

Surficial Soil Types: loam
sandy loam
clay
fine sandy loam

Shallow Soil Types: clay loam
loam
silty clay loam

Deeper Soil Types: cemented

sandy clay loam
clay loam
loamy sand

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

According to ASTM E 1527-00, Section 7.2.2, "one or more additional state or local sources of environmental records may be checked, in the discretion of the environmental professional, to enhance and supplement federal and state sources... Factors to consider in determining which local or additional state records, if any, should be checked include (1) whether they are reasonably ascertainable, (2) whether they are sufficiently useful, accurate, and complete in light of the objective of the records review (see 7.1.1), and (3) whether they are obtained, pursuant to local, good commercial or customary practice." One of the record sources listed in Section 7.2.2 is water well information. Water well information can be used to assist the environmental professional in assessing sources that may impact groundwater flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	0.625
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	0.625

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS0153513	1/8 - 1/4 Mile NW
2	USGS0153504	1/4 - 1/2 Mile South
3	USGS0153508	1/4 - 1/2 Mile East
4	USGS0153512	1/4 - 1/2 Mile WNW
5	USGS0153582	1/2 - 1 Mile NE
6	USGS0153503	1/2 - 1 Mile SE
7	USGS0153577	1/2 - 1 Mile WNW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

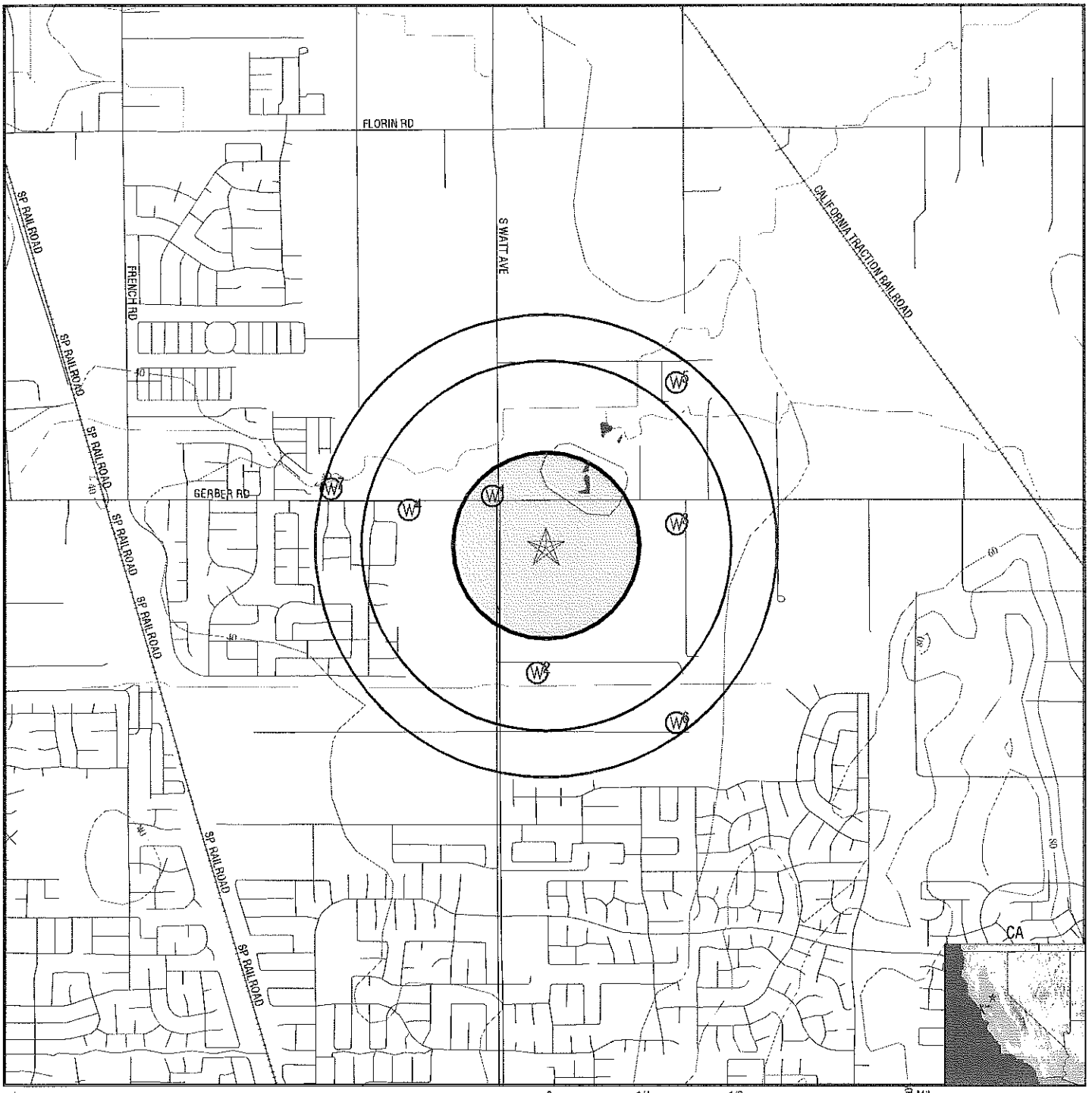
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 1137738.3s



County Boundary
Major Roads
Contour Lines
Earthquake Fault Lines
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

0 1/4 1/2 1 Miles

Groundwater Flow Direction
Indeterminate Groundwater Flow at Location
Groundwater Flow Varies at Location
Closest Hydrogeological Data
Oil, gas or related wells

TARGET PROPERTY:	SEC Elk-Grove Florin/Gerber	CUSTOMER:	NOA Environmental
ADDRESS:	7635 Elk-Grove Florin Road	CONTACT:	Chip Walker
CITY/STATE/ZIP:	Sacramento CA 95829	INQUIRY #:	1137738.3s
LAT/LONG:	38.4799 / 121.3695	DATE:	March 01, 2004 2:20 pm

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Map ID Direction Distance Elevation	Database	EDR ID Number
1 **NW** **1/8 - 1/4 Mile** **Higher**	**FED USGS**	**USGS0153513**

Agency:	USGS	Site ID:	382855121221601
Site Name:	007N005E01R001M		
Dec. Latitude:	38.48185		
Dec. Longitude:	-121.37217		
Coord Sys:	NAD83		
State:	CA		
County:	Sacramento County		
Altitude:	46		
Hydrologic code:	18020106		
Topographic:	Valley flat		
Site Type:	Ground-water other than Spring		
Const Date:	19811105	Inven Date:	19960618
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	100SCMV		
Aquifer type:	Unconfined single aquifer		
Well depth:	260		
Hole depth:	260	Source:	driller
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 2

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1996-06-26	93.43		1996-06-18	92.35	

2 **South** **1/4 - 1/2 Mile** **Lower**	**FED USGS**	**USGS0153504**

Agency:	USGS	Site ID:	382830121220801
Site Name:	007N006E07E001M		
Dec. Latitude:	38.47491		
Dec. Longitude:	-121.36995		
Coord Sys:	NAD83		
State:	CA		
County:	Sacramento County		
Altitude:	43.00		
Hydrologic code:	18020109		
Topographic:	Valley flat		
Site Type:	Ground-water other than Spring		
Const Date:	19760101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	165		
Hole depth:	195	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1976-01-01	132.00	

3
East
1/4 - 1/2 Mile
Higher

FED USGS **USGS0153508**

Agency:	USGS	Site ID:	382851121214301
Site Name:	007N006E07C002M		
Dec. Latitude:	38.48074		
Dec. Longitude:	-121.36301		
Coord Sys:	NAD83		
State:	CA		
County:	Sacramento County		
Altitude:	47.00		
Hydrologic code:	18020109		
Topographic:	Valley flat		
Site Type:	Ground-water other than Spring		
Const Date:	19710515	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	155		
Hole depth:	195	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1971-05-15	85.00	

4
WNW
1/4 - 1/2 Mile
Lower

FED USGS **USGS0153512**

Agency:	USGS	Site ID:	382853121223101
Site Name:	007N005E12B001M		
Dec. Latitude:	38.4813		
Dec. Longitude:	-121.37634		
Coord Sys:	NAD83		
State:	CA		
County:	Sacramento County		
Altitude:	43.00		
Hydrologic code:	18020109		
Topographic:	Valley flat		
Site Type:	Ground-water other than Spring		
Const Date:	19620101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	399		
Hole depth:	399	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID Direction Distance Elevation	Database	EDR ID Number
5 **NE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS0153582**

Agency:	USGS	Site ID:	382911121214301
Site Name:	007N006E06L001M		
Dec. Latitude:	38.4863		
Dec. Longitude:	-121.36301		
Coord Sys:	NAD83		
State:	CA		
County:	Sacramento County		
Altitude:	48.00		
Hydrologic code:	18020109		
Topographic:	Valley flat		
Site Type:	Ground-water other than Spring		
Const Date:	19800715	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	121LGUN		
Aquifer type:	Not Reported		
Well depth:	163		
Hole depth:	320	Source:	driller
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 2

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1982-07-23	106.04		1980-07-15	101.00	

6 **SE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS0153503**

Agency:	USGS	Site ID:	382823121214301
Site Name:	007N006E07L002M		
Dec. Latitude:	38.47296		
Dec. Longitude:	-121.36301		
Coord Sys:	NAD83		
State:	CA		
County:	Sacramento County		
Altitude:	46.00		
Hydrologic code:	18020109		
Topographic:	Valley flat		
Site Type:	Ground-water other than Spring		
Const Date:	19780101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	165		
Hole depth:	225	Source:	Not Reported
Project no:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for SACRAMENTO County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for SACRAMENTO COUNTY, CA

Number of sites tested: 52

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.665 pCi/L	100%	0%	0%
Living Area - 2nd Floor	0.200 pCi/L	100%	0%	0%
Basement	8.350 pCi/L	50%	50%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002. 7.5-Minute DEMs correspond to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW[R] Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STATE RECORDS

California Drinking Water Quality Database
Source: Department of Health Services
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

California Oil and Gas Well Locations for District 2, 3, 5 and 6
Source: Department of Conservation
Telephone: 916-323-1779

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

Page: 1

11/20/2008 5:00:51 PM

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name:

Project Name: Gardner Parke

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2008 TOTALS (lbs/day unmitigated)	14.36	81.52	43.19	0.02	327.08	5.07	332.14	68.32	4.66	72.98	7,332.69
2009 TOTALS (lbs/day unmitigated)	986.61	76.88	108.68	0.10	327.08	4.77	331.84	68.32	4.38	72.70	12,024.41

Biological Resources Assessment

±80-Acre Florin Gap Parcels
Sacramento County, California

Prepared for: Gerry N. Kamilos, LLC

November 3, 2005

Submitted by:

FOOTHILL ASSOCIATES

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1.0 EXECUTIVE SUMMARY

A Foothill Associates' biologist conducted a biological resources assessment on March 31, 2004 on the Florin Gap Parcels site that occurs within Sacramento County, immediately south of the City of Sacramento. The purpose of this document is to summarize the general biological resources on the site, to assess the suitability of the site to support special-status species and sensitive habitat types, and to provide recommendations for regulatory permitting or further analysis required.

The proposed site consists of ±80 acres of land that is currently in annual grassland open space and single family residential housing. Land uses surrounding the project site include annual grassland, residential housing, and commercial buildings. Known or potential biological constraints on the site include:

- Potential foraging habitat for Swainson's hawk, a state-listed species;
- Potential foraging habitat and limited nesting habitat for raptors;
- Potential foraging and burrow habitat for burrowing owl; and
- Seasonal wetland habitat.

2.0 INTRODUCTION

This report summarizes the findings of a biological resources assessment completed for a ±80-acre site, located within Sacramento County, California. This document addresses the onsite physical features, as well as, plant communities present and the common plant and wildlife species occurring, or potentially occurring on the site. Furthermore, the suitability of habitats to support special-status species and sensitive habitats are analyzed and recommendations for any regulatory permitting or further analysis required prior to development activities on the project site.

3.0 REGULATORY FRAMEWORK

The following describes federal, state, and local environmental laws and policies that are relevant to the California Environmental Quality Act (CEQA) review process. The CEQA significance criteria are also included in this section.

3.1 Federal Endangered Species Act

The United States Congress passed the Federal Endangered Species Act (FESA) in 1973 to protect those species that are endangered or threatened with extinction. FESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend.

FESA prohibits the "take" of endangered or threatened wildlife species. "Take" is defined to include harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct (FESA Section 3 [(3)(19)]). Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns (50 CFR §17.3). Harassment is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns (50 CFR §17.3). Actions that result in take can result in civil or criminal penalties.

FESA and Clean Water Act (CWA) Section 404 guidelines prohibit the issuance of wetland permits for projects that jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species. The U.S. Army Corps of Engineers (Corps) must consult with the U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS) when threatened or endangered species under their jurisdiction may be affected by a proposed project. In the context of the proposed project, FESA would be initiated if development resulted in take of a threatened or endangered species or if issuance of a Section 404 permit or other federal agency action could result in take of an endangered species or adversely modify critical habitat of such a species.

3.2 Migratory Bird Treaty Act

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

3.3 California Endangered Species Act

The State of California enacted the California Endangered Species Act (CESA) in 1984. CESA is similar to FESA but pertains to state-listed endangered and threatened species. CESA requires state agencies to consult with the California Department of Fish and Game (CDFG) when preparing California Environmental Quality Act (CEQA) documents. The purpose is to ensure that the lead agency's actions do not jeopardize the continued existence of a listed species or result in the destruction, or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available (Fish and Game Code §2080). CESA directs agencies to consult with CDFG on projects or actions that could affect listed species, directs CDFG to determine whether jeopardy would occur and allows CDFG to identify "reasonable and prudent alternatives" to the project consistent with conserving the species. CESA allows CDFG to authorize exceptions to the state's prohibition against take of a listed species if the "take" of a listed species is incidental to carrying out an otherwise lawful project that has been approved under CEQA (Fish & Game Code § 2081).

3.4 CDFG Species of Concern

In addition to formal listing under FESA and CESA, species receive additional consideration by CDFG and lead agencies during the CEQA process. Species that may be considered for review are included on a list of "Species of Special Concern," developed by the CDFG. It tracks species in California whose numbers, reproductive success, or habitat may be threatened.

3.5 California Native Plant Society

The California Native Plant Society (CNPS) maintains a list of plant species native to California that have low population numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. Potential impacts to populations of CNPS-listed plants receive consideration under CEQA review. The following identifies the definitions of the CNPS listings:

- List 1A: Plants presumed Extinct in California.
- List 1B: Plants Rare, Threatened, or Endangered in California and elsewhere.
- List 2: Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere.
- List 3: Plants about which we need more information – A Review List.
- List 4: Plants of limited distribution – A Watch List.

3.6 Jurisdictional Waters of the United States

3.6.1 Federal Jurisdiction

The Corps regulates discharge of dredged or fill material into waters of the United States under Section 404 of the CWA. "Discharges of fill material" are defined as the addition of fill material into waters of the U.S., including, but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; fill for intake and outfall pipes and subaqueous utility lines [33 C.F.R. §328.2(f)]. In addition, Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a Federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Waters of the U.S. include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. Boundaries between jurisdictional waters and uplands are determined in a variety of ways depending on which type of waters is present. Methods for delineating wetlands and non-tidal waters are described below.

- Wetlands are defined as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" [33 C.F.R. §328.3(b)]. Presently, to be a wetland, a site must exhibit three wetland criteria: hydrophytic vegetation, hydric soils, and wetland hydrology existing under the "normal circumstances" for the site.
- The lateral extent of non-tidal waters is determined by delineating the ordinary high water mark (OHWM) [33 C.F.R. §328.4(c)(1)]. The OHWM is defined by the Corps as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" [33 C.F.R. §328.3(e)].

3.6.2 State Jurisdiction

CDFG is a trustee agency that has jurisdiction under Section 1600 *et seq.* of the California Fish and Game Code. Under Section 1603, a private party must notify the CDFG if a proposed project will "substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds…except when the department has been notified pursuant to Section 1601." If an existing fish or wildlife resource may be substantially adversely affected by the activity, the CDFG may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the parties involved, they may enter into an agreement with CDFG identifying the approved activities and associated mitigation measures.

3.7 Wildlife Migration Corridors

Wildlife migration corridors are important for the movement of migratory wildlife populations. Corridors provide foraging opportunities and shelter during migration. Generally, wildlife migration corridors are established migration routes for many species of wildlife. In wooded areas, these corridors often occur in open meadow or riverine habitats and provide a clear route for migration in addition to supporting ample food and water sources during movement.

3.8 CEQA Significance Criteria

Section 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if the project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and
- Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional or state habitat conservation plan.

An evaluation of whether or not an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA. The reason for this is that

although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish, or result in the permanent loss of, an important resource on a population-wide or region-wide basis.

3.9 County of Sacramento General Plan

In addition to federal and state regulations, the County of Sacramento General Plan (1993) identifies goals, objectives, and policies to provide further protection to biological resources within the County's limits.

Open Space Preservation

Guiding Policies: General

OS-1 Permanently protect, as open space, areas of natural resource value, including wetlands preserves, riparian corridors, woodlands, and floodplains.

OS-2 Maintain open space and natural areas that are interconnected and of sufficient size to protect biodiversity, accommodate wildlife movement and sustain ecosystems.

Implementing Policies: Acquisition

Open Space Easements

OS-8 Open space easements obtained and offered as mitigation shall be dedicated to the County of Sacramento or an open space agency designated by the County to protect and manage the open space. Fee title of land may be dedicated to the County or the open space agency provided it is acceptable to the appropriate department or agency.

OS-11 Permit development clustering in rural areas where grouping units at a higher density would create an open space buffer protecting intensive farming activities, provided that:

a. Clustered residential lots are adjacent to and comparable in lot size to existing agricultural areas.

b. Septic disposal systems are not concentrated in a manner which increases the potential for groundwater contamination.

c. General Plan policies pertaining to floodplain or natural preserves would not preclude development of the proposed use in the area to be protected as open space.

d. The project complies with any applicable development credits transfer ordinance relating to density bonuses.

e. Development rights for the open space area are permanently dedicated and appropriate long-term management is provided for by either a public agency, private homeowners association, or other appropriate entity.

f. The overall average density of the project is comparable to the average lot sizes in the area.

Conservation

Vegetation and Wildlife: Marsh and Riparian Areas

CO-60 Marshland and riparian areas of special significance shall be designated as natural preserves on the General Plan.

CO-61 Natural Preserves shall not include adjacent irrigated pasture or cropland. However, they may include up to 200 feet of adjoining grassland or grazing area, or up to one-fourth mile of grassland between parallel riparian or marsh areas.

CO-62 Ensure no net loss of marsh and riparian woodland acreage, values or functions.

CO-63 Community Plans and specific plans shall include a complete inventory of seasonal and permanent marshland, riparian habitat, and riparian woodland.

CO-65 In any cases where complete or selective removal of riparian woodland or scrub habitat is necessary for channel maintenance, public safety, or installation of infrastructure, it will be planned and carried out, or mitigated, so as to minimize unavoidable impacts upon biological resources.

CO-66 Encroachments within the designated floodway of Sacramento waterways shall be consistent with policies to protect marsh and riparian areas.

CO-67 Parcels shall not be created wherein much of the parcel area would comprise marsh or riparian habitat rendering the parcel unbuildable except when within a floodplain corridor or to be dedicated to and maintained by the County for flood control, drainage, and wetland maintenance.

CO-68 Consistent with overall land use policies, the County shall support and facilitate the creation and biological enhancement of large natural preserves or wildlife refuges by other government entities or by private individuals or organizations. Such areas may, but need not necessarily, function as mitigation banks for other impacts upon biological resources due to development.

Vegetation and Wildlife: Marsh and Riparian Areas - Habitat Restoration

CO-69 Review projects for potential to restore marsh/riparian woodlands, considering effects on vernal pools, ground water, flooding, and proposed fill or removal of marsh and riparian habitat.

CO-70 Public or private projects involving filling or removal of marsh/riparian habitat shall be mitigated outside of natural preserves where on-site mitigation is not desirable or appropriate shall be mitigated through the purchase of mitigation credits for restored wetlands/riparian areas at no net loss.

CO-71 Community and Specific Plans shall identify potential areas, if any, where marsh or riparian habitat restoration/creation can be undertaken.

CO-72 New or restored marsh/riparian woodlands shall be under ownership of a public agency or subject to a permanent conservation easement.

CO-73 Specific restoration/creation areas identified in Community Plans in accordance with Policy CO-71 shall be adequate in characteristics and acreage to accommodate mitigation for likely wetland impacts resulting from development as designated in the respective Community Plans.

Vegetation and Wildlife: Vernal Pools and Ephemeral Wetlands – Vernal Pool Preserves

OS-78 Focus vernal pool preservation in permanent open space areas beyond the Urban Area.

OS-79 Strive to link preserves in the County system and create a network that encompasses all vernal pool types.

CO-80 Select vernal pool preserves based on the following evaluation criteria: representativeness, habitat quality, watershed integrity, defensibility, buffer, preserve size, plant species variety, and presence of special status species.

CO-81 Ensure that vernal pool preserves are large enough to protect vernal pool watersheds, provide an adequate buffer, have sufficient number and extent of pools to support adequate species populations and a range of vernal pool classes.

CO-82 Establish criteria and guidelines addressing the need for siting and management of natural preserves. At a minimum, the following should be considered:

- resource(s) to be lost, restored and/or replaced,
- functional values, and
- mitigation alternatives, including mitigation banks.

Vegetation and Wildlife: Vernal Pools and Ephemeral Wetlands – Development and Vernal Pools

OS-83 Ensure no net loss of vernal pool acreage, and/or values and functions, and mitigate any loss in relation to the values of quality of habitat.

OS-84 Evaluate feasible on-site alternatives in the environmental review process that reduce impacts on vernal pools and provide effective on-site preservation in terms of minimum management requirements, effective size, and evaluation criteria identified in the report "Sacramento County Vernal Pools" (1990).

CO-85 Require in-kind compensation for the type and functional values of vernal pools eliminated by development.

CO-86 When on-site preservation or mitigation is infeasible or undesirable, require off-site mitigation at County-approved mitigation banks within Sacramento County.

CO-87 Mitigation for vernal pool loss shall be considered in the environmental review process, and mitigation shall be required based on information contained within the environmental documents on the quality of those resources and their ability to be sustained within an urban setting.

Vegetation and Wildlife: Vernal Pools and Ephemeral Wetlands – Mitigation Banking Program

OS-88 Foster competitive pricing for mitigation bank credits by allowing government agencies, non-profit organizations, and private landowners to establish vernal pool preserves, designate mitigation areas, create and restore vernal pools, and sell credits to developers for off-site mitigation.

OS-89 Proposed mitigation banks shall be consistent with evaluation and size criteria for vernal pool preserves identified in the report "Sacramento County Vernal Pools" (1990), unless compelling circumstances justify otherwise.

CO-90 Prioritize creation of mitigation banks in areas where sites suitable for creating new vernal pools exist in close proximity to existing vernal pools.

CO-91 The determination of mitigation bank credits shall be based on the ecological values of the area and distinguish between the type of vernal pool. Mitigation bank credits shall also distinguish between the type of mitigation: preservation, restoration, or creation.

CO-92 Mitigation credits for vernal pool creation or restoration shall not be offered for sale by landowners until monitoring of new or restored areas determines that pre-established criteria in the management plan for species diversity, health and stability are met.

CO-93 The landowner shall dedicate development rights to the County for the land area applicable to the sale of mitigation credits at the time of the credit sale.

CO-94 Mitigation bank property owners shall be eligible for tax incentives and/or compensation for income reduction attributable to vernal pool preserve management provided that they:

a) enter into a Williamson Act Contract,

b) prepare and implement a County approved management plan, and

c) document income reduction attributable to vernal pool protection efforts.

Those portions of the mitigation bank for which mitigation credits have been sold shall not be eligible for tax incentives or operation loss compensation.

CO-95 Until such time as mitigation credits consistent with the above policies are available, development entitlements involving filling or removal of vernal pools may be granted provided that the project applicant:

1) Purchase and dedicate the development rights for a vernal pool preserve, the extent of which shall not be less than the acreage of vernal pool and upland watershed necessary to sustain the viability of the pools that are proposed to be developed, and, which, in conjunction with adjoining planned vernal pool preserves, will provide long-term, ecologically viable preserve.

2) Prepare a mitigation and management plan for the preserve area consistent with policies of this section.

3) Enter into a long-term agreement with an agency or organization qualified to create, manage and monitor vernal pools.

4) Post bond guaranteeing the management funding for a minimum of 50 years.

5) Obtains permission from the U.S. Army Corps of Engineers.

6) Demonstrate that no rare, threatened or endangered species occur on the site.

CO-96 Prior to the adoption of the mitigation banking ordinance, utilize on a count-wide basis, the adopted interim wetland mitigation/compensation policy: All wetland acreage proposed to be disturbed by an 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 watershed 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.

Vegetation and Wildlife: Vernal Pools and Ephemeral Wetlands – Vernal Pool Management

CO-97 Limit land uses within established preserves to activities deemed compatible with maintenance of the vernal pool resource, which may include ranching, grazing, passive recreation, scientific study and education.

CO-98 Preserves shall be planned and managed so as to protect adjacent agricultural activities and avoid conflicts.

CO-99 Ensure that minimum management requirements for vernal pool preserves and mitigation banks include protection in perpetuity through acquisition of fee title or a permanent conservation easement; a funding source for long-term operation, maintenance, and management; preparation and implementation of a management plan; and establishment of an interagency oversight committee.

CO-100 The price of mitigation credits offered for sale to compensate for vernal pool losses shall incorporate estimated management costs for a minimum of 50 years.

CO-101 The agency responsible for overseeing the mitigation bank program shall license private individuals or organizations prior to their assuming vernal pool creation and management responsibilities, and establish appropriate license frees to fund periodic monitoring of mitigation bank management.

Vegetation and Wildlife: Vernal Pools and Ephemeral Wetlands – Wetlands Regulation Coordination

CO-102 The County will provide information to applicants with projects in potential wetland areas and provide coordination assistance with the Army Corps of Engineers in order to facilitate the development review and Section 404.

Vegetation and Wildlife: Tree Resources – Oak Revegetation

CO-128 Allow firewood harvesting of oak woodlands only on a sustained yield basis.

CO-129 Protect oak woodlands from adverse effects of grazing.

Vegetation and Wildlife: Tree Resources – Native and Landmark Tree Protection

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.

CO-131 Native trees other then oaks, which cannot be protected shall be replaced with in-kind species in accordance with established tree planting specifications, the combined diameter of which shall equal the combined diameter of the trees removed. In addition, with respect to oaks, a provision for a comparable onsite area for the propagation of oak trees may substitute for replacement tree planting requirements at the discretion of the County Tree Coordinator when removal of a mature oak tree is necessary in accordance with consistent policy.

CO-132 If the project site is not capable of supporting all the required replacement trees a sum equivalent to the replacement cost of the number of trees that cannot be accommodated shall be paid to the County's Tree Preservation Fund. The replacement cost of trees shall be established in accordance with the Council of Tree and Landscape Appraiser's standards for appraising trees.

CO-133 For discretionary projects involving native oaks, ensure no net loss of canopy area by (1) preserving the main, central portions of consolidated and isolated groves constituting the existing healthy and unhealthy native oak canopy <u>and</u> (2) provide an area onsite to mitigate any canopy lost. Native oak mitigation area must be a contiguous area onsite which is equal to the size of canopy area lost and shall be adjacent to existing oak canopy to ensure opportunities for regeneration. If on-site mitigation area is not available due to area limitations, developer shall provide off-site mitigation consistent with policy proposed in CO-136.

CO-134 Mitigate for loss of trees for road expansion and development consistent with County Tree Ordinance and General Plan policies.

CO-135 In 15 years the native oak canopy within on-site mitigation areas shall be 50 percent canopy coverage for valley oak and 30 percent canopy coverage for blue oak and other native oaks.

CO-136 If on-site mitigation is not possible given site limitation, off-site mitigation may be considered. Such a mitigation area must meet all of the following criteria to preserve, enhance, and maintain a natural woodland habitat in perpetuity, preferably by transfer of title to an appropriate public entity. Protected woodland habitat could be used as a suitable site for replacement tree plantings required by ordinances or other mitigations.

a) Equal or greater in area to the total area that is included within a radius of 30 feet of the dripline of all trees to be removed;

b) Adjacent to protected stream corridor or other preserved natural areas;

c) Supports a significant number of native broadleaf trees; and

d) Offers good potential for continued regeneration of an integrated woodland community.

Vegetation and Wildlife: New Urban Trees

CO-137 Increase the number of trees planted within residential lots and within new and existing parking lots.

CO-138 Support private foundations with local funds for their tree planting efforts.

Vegetation and Wildlife: Urban Tree Management

CO-139 Provide funds for education, programs, and materials emphasizing the value and importance of trees.

CO-140 Work cooperatively with local utilities to assure that new trees are planted in locations that will maximize energy conservation and air quality benefits.

Vegetation and Wildlife: Rare and Endangered Species – Management of Rare and Endangered Species Habitat

CO-141 Manage vegetation on public lands with special status species to encourage native species and discourage nonindigenous invasive species.

CO-142 Public land shall be maintained to the extent feasible in a manner that avoids conflicts with privately owned lands and agricultural operations.

CO-143 Control human access to critical habitat areas on public lands to minimize impact upon and disturbance of threatened and endangered species.

CO-144 Protect critical habitat areas on public lands from pesticide and other similar chemical residues.

CO-145 The County shall work with the mosquito abatement district to ensure that mosquito control measures having the least effect on non-target species are implemented in preserved wetlands throughout the county.

CO-146 The proximity of diverse habitat types shall be considered in identifying nondevelopment areas in Community Plans and in identifying potential or preferred natural preserves and mitigation banks.

Vegetation and Wildlife: Rare and Endangered Species – Protection of Rare and Endangered Species Habitat

CO-147 Identify suitable habitat for threatened and endangered species through the Community and Specific Plan process.

CO-148 Habitat conservation plans shall be adopted by the county for any listed species that are year-round inhabitants of the county, are subject to significant cumulative impacts from development, and are not otherwise adequately protected by designated systems of riparian corridors, vernal pool and wetland preserves and mitigation banks, or other nature preservers or wildlife refuges.

CO-149 Acquisition programs for acquiring open space located within natural areas shall, wherever possible, review the significance of obtaining areas known to contain threatened, endangered, and special status species.

CO-150 To the extent feasible, plans for urban development and flood control projects shall incorporate habitat corridors connecting onsite or adjoining areas (if any) not designated for alteration.

Vegetation and Wildlife: Fisheries – Water Flows

CO-151 Provide unobstructed water flows throughout the network of natural waterways by prohibiting blockage, tunneling, or obstruction of contiguous stream channels.

CO-152 Protect and preserve migratory routes for anadromous species.

CO-153 Reduce mortality of migrating fish by requiring screens or similar bypass apparatus on diversion pumps.

Vegetation and Wildlife: Resource Conservation Areas

CO-154 Voluntary cooperative agreements shall involve those lands within Resource Conservation Areas that contain moderate to high value habitat, exhibit likely habitat restoration potential, or provide foraging opportunities.

Swainson's Hawk Ordinance

The County of Sacramento worked with staff of CDFG to develop an ordinance that provides a simplified means for individual development projects to mitigate impacts to Swainson's hawk foraging habitat on a region-wide basis. County Ordinance SCC No. 1093 requires payment of fees per acre of land developed within the County's Urban Services Boundary. The fee is calculated at ratio dependent upon the proximity of the project area to known Swainson's hawk nests, up to a maximum of ten miles. The fees are used by the Nature Conservancy to purchase easements or fee title on property in the Consumnes River and/or Deer Creek corridors. The CDFG has determined this to be suitable mitigation for significant or cumulatively significant impacts to Swainson's hawk foraging habitat if the site is more than one mile from active nests. Where a project

is located within one mile of known hawk nest sites, the impacts are not considered adequately mitigated by the payment of fees, and additional mitigation measures are required. These measures typically consist of providing protected habitat management land elsewhere in the region at a ratio of 1 acre per acre developed, if a portion of the land would be managed for agriculture; one half acre per acre developed if all the habitat management land would be managed specifically for hawk habitat; or alternative mitigation of equal or greater protection as approved by the Environmental Services Division of the CDFG.

4.0 METHODS

Available information pertaining to the natural resources of the region was reviewed. All references reviewed for this assessment are listed in the References section. Site-specific information was reviewed including:

- California Department of Fish and Game (CDFG). *California Natural Diversity Data Base.* (CNDDB: Carmichael, Elk Grove, Florin, and Sacramento East quadrangles, 2004) Sacramento, CA;
- Moore, Don. February 14, 2004. *Geoimagery Aerial Photography.* Photograph of project site. Sacramento, CA;
- Natural Resource Conservation Service (NRCS). 1993. *Soil Survey of Sacramento County, California.* U.S. Department of Agriculture;
- Sacramento County. 1993. *County of Sacramento General Plan.* Planning and Community Development Department; and
- U.S. Fish and Wildlife Service. 2004. Federal Endangered and Threatened Species that may be affected by Projects in the Carmichael, Elk Grove, Florin, and Sacramento East 7.5 minute series quadrangles. Sacramento, CA.

A Foothill Associates' biologist conducted field surveys on the site on March 31, 2004. The site was systematically surveyed on foot with binoculars to ensure total search coverage, with special attention given to identifying those portions of the site with the potential for supporting special-status species and sensitive habitats. During the field surveys, the biologist recorded plant and animal species observed, as well as characterized biological communities occurring onsite.

As part of this assessment, the Foothill Associates biologist conducted a wetland delineation to determine presence of any wetlands subject to U.S. Army Corps jurisdiction on the project site. The detailed results of that wetland delineation are provided under separate cover. The results are summarized in this biological resource assessment.

5.0 RESULTS

5.1 Site Location and Description

The site consists of ±80 acres of land that is currently annual grassland open space. Some of the annual grassland is divided into pastures by fencing. Land uses surrounding the site include residential areas, a commercial complex and, pasture to the north, annual grassland and residential areas to the east, annual grassland and agricultural fields to the south, and residential areas and annual grassland to the west. The site is located in Sacramento County immediately south of the City of Sacramento city limits. The site is located within Township 7 north, Range 5 east, Section 1 of the USGS 7.5-minute series Carmichael, Elk Grove, Florin, and Sacramento East quadrangles (**Figure 1**).

5.2 Physical Features

5.2.1 Topography and Drainage

Topography on the site is level with elevations ranging from 40 to 45 feet above mean sea level. Surface runoff most likely accumulates onsite and percolates into the groundwater. There is a small roadside ditch immediately to the east of the project site along Elk Grove-Florin Road that could accommodate some surface runoff. This roadside ditch is approximately 2 to 3 feet wide with an unvegetated bottom.

5.2.2 Soils

The Natural Resources Conservation Service (NRCS), previously known as the Soil Conservation Service, has mapped one soil unit on the site (**Figure 2**). The soil unit that occurs onsite is San Joaquin silt loam, 0 to 1 percent slopes. General characteristics associated with this soil type are described below.

- **San Joaquin silt loam, 0 to 1 percent slope**: San Joaquin silt loams are moderately deep and moderately well drained soils found on low terraces. Permeability of San Joaquin silt loam is very slow. This soil type typically supports rangeland or dryland grass species. This soil series contains one named hydric inclusion that is found in depressions (Soil Conservation Service 1992).

5.3 Biological Communities

Two biological communities occur on the Florin Gap Parcels site including annual grassland and seasonal wetland. These communities provide habitat to a number of common species of wildlife and may provide potentially suitable habitat for special-status species. Each of the biological communities including associated common plant and wildlife species observed, or that are expected to occur in within these communities are described below.

5.3.1 Annual Grassland

Annual grassland covers the entire project site. This vegetation community is characterized primarily by an assemblage of non-native grasses and forbs. The annual grassland onsite is generally in good condition with little evidence of disturbance. Much of the vegetation in these communities is common to the Central Valley. Dominant grass species consists of ryegrass (*Lolium multiflorum*), barley (*Hordeum marinum*), ripgut brome (*Bromus diandrus*), wild oat (*Avena fatua*), quaking grass (*Briza minor*), and soft chess (*Bromus mollis*). Common dominant herbaceous non-natives onsite include red-stemmed filaree (*Erodium cicutarium*), curly dock (*Rumex crispus*), dandelion (*Taraxacum officinale*), bindweed (*Convolvulus arvensis*), vetch (*Vicia sativa*), lupine (*Lupinus* sp.), meadowfoam (*Limnanthes alba*), and butter and eggs (*Triphysaria eriantha*).

Annual grassland habitat supports breeding, foraging, and shelter habitat for several species of wildlife. Species expected to occur in this habitat include savannah sparrow (*Passerculus sandwichensis*), western meadowlark (*Sturnella neglecta*), black-tailed jackrabbit (*Lepus californicus*), and gopher snake (*Pituophis melanoleucus*). Other wildlife observed onsite in this community include black phoebe (*Sayornis nigricans*), white-tailed kite (*Elanus leucurus*), barn swallow (*Hirundo rustica*), ring-necked pheasant (*Phasianus colchicus*), northern mockingbird (*Mimus polyglottos*), and yellow-billed magpie (*Pica nuttalli*).

5.3.2 Seasonal Wetland

The project site contains a small area with two seasonal wetland depressions within the annual grassland onsite. These areas have formed from seasonal ponding of water in low collection areas. These areas cover a total area of approximately 0.09 acre. Plant species within the seasonal wetlands include spikerush (*Eleocharis macrostachya*), buttercup (*Ranunculus bonariensis*), and popcornflower (*Plagiobothrys stipitatus*).

5.4 Special-status Species

Special-status species are plant and animal species that have been afforded special recognition by federal, state, or local resource agencies or organizations. Listed and special-status species are of relatively limited distribution and may require specialized habitat conditions. Listed and special-status species are defined as:

- Listed or proposed for listing under the state or Federal Endangered Species acts;
- Protected under other regulations (e.g. Migratory Bird Treaty Act);
- CDFG Species of Special Concern;
- Listed as species of concern by CNPS or USFWS; or
- Receive consideration during environmental review under CEQA.

Special-status species considered for this analysis are based on field survey results, review of the CNDDB occurrence records of species, review of the USFWS lists for special-status species occurring in the region, and CNPS literature (**Table 1**). The locations of special-status species occurrences in the project vicinity are shown in **Figure 3**, which is from a search of the CNDDB. **Table 1** includes, the common name and scientific name for each species, regulatory status (federal, state, local, CNPS), habitat descriptions, and potential for occurrence on the project site. The following set of criteria has been used to determine each species potential for occurrence on the site:

- **Present**: Species known to occur on the site, based on CNDDB records, and/or was observed to occur onsite during the field survey(s).
- **High**: Species known to occur on or near the site (based on CNDDB records within 8 km or 5 mi, and/or based on professional expertise specific to the site or species) and there is suitable habitat onsite.
- **Low**: Species known to occur in the vicinity of the site, and there is marginal habitat onsite.-**OR**-Species are not known to occur in the vicinity of the site, however there is suitable habitat onsite.
- **None**: Species are not known to occur on or in the vicinity of the site and there is no suitable habitat for the species onsite.-**OR**-Species were surveyed for during the appropriate season with negative results for the species occurrence onsite.

Only those species that are known to be present or that have a high or low potential for occurrence will be discussed further following **Table 1**.

Table 1 — Listed and Special-Status Species Potentially Occurring on the Site or in the Vicinity

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Plants			
Ahart's rush *Juncus leiospermus var. ahartii*	--;--;--;1B	Margins of vernal pools.	**None**; there is no potential habitat for this species on the site.
Boggs Lake hedge-hyssop *Gratiola heterosepala*	--;CE;--;1B	Shallow ponds and margins of vernal pools.	**None**; there is no potential habitat for this species on the site.
Dwarf downingia *Downingia pusilla*	--;--;--;2	Vernal pools and roadside ditches.	**None**; there is no potential habitat for this species on the site.

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Legenere *Legenere limosa*	--;--;--;1B	Moist areas and vernal pools.	**None**; the small seasonal wetlands onsite provide marginal potential habitat, but the species was not observed during the biological assessment or during the subsequent wetland delineation.
Sanford's arrowhead *Sagittaria sanfordii*	--;--;--;1B	Shallow ponds and ditches.	**None**; the small seasonal wetlands onsite provide marginal potential habitat, but the species was not observed during the biological assessment or during the subsequent wetland delineation.
Slender orcutt grass *Orcuttia tenuis*	FT;CE;--;1B	Vernal pools.	**None**; there is no potential habitat for this species on the site.
Wildlife			
Invertebrates			
Antioch Dunes anthicid beetle *Anthicus antiochensis*	FSC;--;--;--	Sand dune habitat.	**None**; there is no potential habitat for this species on the site.
California linderiella *Linderiella occidentalis*	FSC;--;--;--	Vernal pools, swales, and ephemeral freshwater habitat.	**None**; there is no potential habitat for this species on the site.
Midvalley fairy shrimp *Branchinecta mesovallensis*	FSC;--;--;--	Vernal pools, swales, and ephemeral freshwater habitat.	**None**; there is no potential habitat for this species on the site.
Sacramento anthicid beetle *Anthicus sacramento*	FSC;--;--;--	Loose sand deposited by wind, water, or human activities.	**None**; there is no potential habitat for this species on the site.
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	FT;--;--;--	Riparian areas with blue elderberry shrubs.	**None**; there is no potential habitat for this species on the site.
Vernal pool fairy shrimp *Branchinecta lynchi*	FT;--;--;--	Vernal pools, swales, and ephemeral freshwater habitat.	**None**; there is no potential habitat for this species on the site.
Vernal pool tadpole shrimp *Lepidurus packardi*	FE;--;--;--	Vernal pools, swales, and ephemeral freshwater habitat.	**None**; there is no potential habitat for this species on the site.
Amphibians/Reptiles			
California horned lizard *Phrynosoma coronatum frontale*	FSC;CSC;--;--	Open woodlands, grasslands, and scrub habitats with some open ground and loose soil for burrowing.	**None**; the high ground cover of grasses onsite probably excludes this species.

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
California red-legged frog *Rana aurara draytonii*	FT; CSC;--;--	Requires a permanent water source and is typically found along quiet slow moving streams, ponds, or marsh communities with emergent vegetation.	**None**; there is no potential habitat for this species on the site.
California tiger salamander *Ambystoma californiense*	FPT;CSC;--;--	Ponded water required for breeding. Adults spend summer in small mammal burrows.	**None**; there is no potential breeding habitat for this species on the site.
Giant garter snake *Thamnophis gigas*	FT; CT; --; --	Agricultural wetlands and other wetlands such as irrigation and drainage canals, low gradient streams, marshes, ponds, sloughs, small lakes, and their associated uplands.	**None**; there is no potential breeding habitat for this species on the site.
Southwestern pond turtle *Emmys marmorata pallida*	FSC;CSC;--;--	Agricultural wetlands and other wetlands such as irrigation and drainage canals, low gradient streams, marshes, ponds, sloughs, small lakes, and their associated uplands.	**None**; there is no potential breeding habitat for this species on the site.
Northwestern pond turtle *Emmys marmorata marmorata*	FSC;CSC;--;--	Agricultural wetlands and other wetlands such as irrigation and drainage canals, low gradient streams, marshes, ponds, sloughs, small lakes, and their associated uplands.	**None**; there is no potential breeding habitat for this species on the site.
Western spadefoot toad *Spea hammondii*	FSC;CSC;--;--	Open grasslands and woodlands. Requires vernal pools or seasonal wetlands for breeding.	**None**; there is no potential habitat for this species on the site.
Fish			
Central Valley fall/late fall-run chinook salmon *Oncorhynchus tshawytscha*	FC; CSC;--;--	Sacramento and San Joaquin Rivers and their tributaries.	**None**; there is no potential habitat for this species on the site.
Central Valley steelhead *Oncorhynchus mykiss*	FT;--;--;--	Rivers and streams tributary to the Sacramento-San Joaquin Rivers and Delta ecosystems.	**None**; there is no potential habitat for this species on the site.
Central Valley winter-run Chinook salmon *Oncorhynchus tshawytscha*	FE;CE;--;--	Sacramento and San Joaquin Rivers and their tributaries.	**None**; there is no potential habitat for this species on the site.

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Delta smelt *Hypomesus transpacificus*	FT;CT;--;--	Rivers and streams tributary to the Sacramento-San Joaquin Rivers and Delta ecosystems.	**None**; there is no potential habitat for this species on the site.
Green sturgeon *Acipenser medirostris*	FC;CSC;--;--	Anadromous species that spawns in Sacramento-San Joaquin Rivers and Delta ecosystems.	**None**; there is no potential habitat for this species on the site.
Kern brook lamprey *Lampetra hubbsi*	FSC;CSC;--;--	Rivers and streams tributary to the Sacramento-San Joaquin Rivers and Delta ecosystems.	**None**; there is no potential habitat for this species on the site.
Longfin smelt *Spirinchus thaleichthys*	FSC;CSC;--;--	Rivers and streams tributary to the Sacramento-San Joaquin Rivers and Delta ecosystems.	**None**; there is no potential habitat for this species on the site.
Pacific lamprey *Lampetra tridentata*	FSC;--;--;--	Rivers and streams tributary to the Sacramento-San Joaquin Rivers and Delta ecosystems.	**None**; there is no potential habitat for this species on the site.
River lamprey *Lampetra ayresi*	FSC;CSC;--;--	Rivers and streams tributary to the Sacramento-San Joaquin Rivers and Delta ecosystems.	**None**; there is no potential habitat for this species on the site.
Sacramento splittail *Pogonichthys macrolepidotus*	FSC;CSC;--;--	Rivers and streams tributary to the Sacramento-San Joaquin Rivers and Delta ecosystems.	**None**; there is no potential habitat for this species on the site.
Birds			
Aleutian Canada goose *Branta Canadensis leucopareia*	FD (FSC); CSC; (Wintering);--;--	California winter resident of agricultural lands.	**None**; project site is not typical agricultural lands used by wintering Canada geese.
American peregrine falcon *Falco peregrinus anatum*	FD(FSC);CE;--;--	Nests on high cliffs, banks, dunes, or mounds in woodland, forest, and coastal habitats near permanent water sources.	**None**; no suitable nesting habitat for this species occurs on the project site.
Bald eagle *Haliaeetus leucocephalus*	FT;CE;--;--	Nesting restricted to the mountainous habitats near permanent water sources in the northernmost counties of California, the Central Coast Region, and on Santa Catalina Island. Winters throughout most of California at lakes, reservoirs, river systems, and coastal wetlands.	**None**; there is no potential habitat for this species on the site.

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Bank swallow *Riparia riparia*	FSC; CT;--;--	Nests in riverbanks and forages over riparian areas and adjacent uplands.	**None**; there is no potential habitat for this species on the site.
Cooper's hawk *Accipiter cooperii*	--;CSC;--;--	Nests in riparian corridors. Forages in woodlands and riparian areas.	**None**; may occur as a casual visitor onsite but no suitable nesting habitat is present onsite and the site does not contain typical foraging habitat for this species.
Ferruginous hawk *Buteo regalis*	FSC;CSC;--;--	A winter resident of open habitats in California including grasslands, shrubsteppes, sagebrush, deserts, saltbush-greasewood shrublands, and outer edges of pinyon-pine and other forests.	**Low**; the project site provides marginal wintering cover for the species.
Greater sandhill crane *Grus Canadensis tabida*	FSC;CT;--;--	Nests in wet meadows interspersed with emergent marsh habitat. Winters in agricultural croplands and irrigated pastures.	**None**; marginal wintering habitat for this species occurs on the project site, and the project site is not a known wintering site.
Lawrence's goldfinch *Carduelis lawrencei*	FSC;--;--;--	Nests in open oak or other arid woodland and chaparral habitats near water.	**None**; there is no potential habitat for this species on the site.
Lewis' woodpecker *Melanerpes lewis*	FSC;--;--;--	Coniferous forests and oak woodlands.	**None**; there is no potential habitat for this species on the site.
Little willow flycatcher *Empidonax traillii brewsteri*	FSC;CE;--;--	Nests in dense riparian vegetation such as willows, alders, up to 18 feet	**None**; there is no potential habitat for this species on the site.
Loggerhead shrike *Lanius ludovicianus*	FSC; CSC;--;--	Found in a variety of woodland and grassland habitats throughout California.	**High**; project site contains suitable foraging habitat for the species but does not contain suitable nesting habitat.
Long-billed curlew *Numenius americanus*	FSC;CSC;--;-- (nesting)	Mudflats and shallow marsh areas.	**None**; there is no potential habitat for this species on the site.
Marbled godwit *Limosa fedoa*	FSC;--;--;--	Mudflats and shallow marsh areas.	**None**; there is no potential habitat for this species on the site.
Mountain plover *Charadrius montanus*	FSC;CSC;--;--	Winters in California in agricultural fields and grasslands.	**None**; marginal wintering habitat for this species occurs on the project site, and the project site is not a known wintering site.

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Nuttall's woodpecker *Picoides nuttallii*	--;--;SLC;--	Permanent resident of low-elevation riparian deciduous and oak habitats.	**None**; there is no potential habitat for this species on the site.
Oak titmouse *Baeolophus inornatus*	FSC;--;--;--	Oak savannah and oak woodlands.	**None**; there is no potential habitat for this species on the site.
Rufous hummingbird *Selasphorus rufus*	--;CSC;--;--	Nests within berry tangles, shrubs, and conifers in areas north of California and in the Trinity Mountains of Trinity and Humboldt County.	**None**; project area is outside the known breeding area for the species.
Swainson's hawk *Buteo Swainsoni*	FSC; CT; --;-- (nesting)	Nests in isolated trees or riparian woodlands adjacent to suitable foraging habitat (agricultural fields, grasslands, etc.).	**Low**; there is no suitable nesting habitat onsite. The project site contains suitable raptor foraging habitat for some raptors including Swainson's hawk.
Tricolored blackbird *Agelaius tricolor*	FSC;CSC;--;--	Nests in dense blackberry, cattail, tules, willow, or wild rose within emergent wetlands throughout the Central Valley and foothills surrounding the valley.	**None**; there is no potential habitat for this species on the site.
Vaux's swift *Chaetura vauxi*	FSC;CSC (nesting);--;--	Nests within large hollow trees and snags in redwood and Douglas-fir habitats.	**None**; there is no potential nesting habitat for this species on the site.
Western burrowing owl *Athene cunicularia hypugaea*	FSC;CSC; (burrow sites);--; --	Nests in burrows in the ground, often in old ground squirrel burrows or badger, within open dry grassland and desert habitat.	**Low**; the species was not observed onsite. However, the annual grassland habitat onsite is appropriate habitat for burrowing owl.
White-faced ibis *Plegadis chihi*	FSC;CSC;--;--	Nests colonially in riparian areas with large trees.	**None**; there is no potential nesting habitat for this species on the site.
White-tailed kite *Elanus leucurus*	FSC;CFP;--;--	Nests in isolated trees or woodland areas with suitable open foraging habitat.	**Present**; observed foraging onsite during biological assessment.
Other Raptors (Hawks, Owls and Vultures)	MBTA and §3503.5 Department of Fish and Game Code	Nests in a variety of communities including cismontane woodland, mixed coniferous forest, chaparral, montane meadow, riparian, and urban communities.	**Present**; observed foraging onsite during biological assessment.
Mammals			
Long-legged myotis bat *Myotis volans*	FSC; --; --; --	Roost in a wide variety of habitats (i.e., riparian, scrub, woodland), in abandoned buildings, and bridges.	**None**; no suitable roosting habitat for these species occurs on the project site.

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Pacific western big-eared bat *Corynorhinus townsendii townsendii*	FSC;--;--;--	Roost in a wide variety of habitats (i.e., riparian, scrub, woodland), in abandoned buildings, and bridges.	**None**; no suitable roosting habitat for these species occurs on the project site.
Riparian brush rabbit *Sylvilagus bachmani riparius*	FE;CE;--;--	Riparian forests and woodlands with dense shrub cover.	**None**; there is no potential nesting habitat for this species on the site.
Riparian woodrat *Neotoma fuscipes riparia*	FE;CSC;--;--	Riparian forests and woodlands with dense shrub cover.	**None**; there is no potential nesting habitat for this species on the site.
Small-footed myotis bat *Myotis ciliolabrum*	FSC;--;--;--	Roost in a wide variety of habitats (i.e., riparian, scrub, woodland), in abandoned buildings, and bridges.	**None**; no suitable roosting habitat for these species occurs on the project site.
San Joaquin pocket mouse *Perognathus inornatus*	FSC;--;--;--	Annual grassland and scrub habitats with fine-textured soil conditions.	**None**; soil conditions onsite are not preferable for species to occur.
Yuma myotis bat *Myotis yumanensis*	FSC; CSC; --; --	Reside in open forests and woodland habitats with sources of water over which to feed. Roost in buildings, mines, caves, and crevices	**None**; no suitable roosting habitat for these species occurs on the project site.

Federally Listed Species:		**California State Listed Species:**	**CNPS* List Categories:**
FE = federal endangered	FC = candidate	CE = California state endangered	1A = plants presumed extinct in California
FT = federal threatened	PT = proposed threatened	CT = California state threatened	1B = plants rare, threatened, or endangered in California and elsewhere
FSC = federal species of concern	FPD = proposed for delisting	CR = California state rare	2 = plants rare, threatened, or endangered in California, but common elsewhere
	FD = delisted	CSC = California Species of Special Concern	3 = plants about which we need more information
			4 = plants of limited distribution
			Other Special-status Listing:
			SLC = species of local or regional concern or conservation significance

Source: Foothill Associates

5.4.1 Listed and Special-status Plants

Based on a records search of the CNDDB and the USFWS list, suitable habitat for special-status plant species occurs onsite. Based on field observations, literature review specific to the special-status animals listed in **Table 1**, the potential for occurrence has been determined for each species. Sanford's arrowhead (*Sagittaria sanfordii*) and legenere (*Legenere limosa*) were originally considered to have a low potential to occur onsite. However, surveys for these species were conducted on the site with negative results. Therefore, this species is not expected to occur on the site.

5.4.2 Listed and Special-status Animals

Based on a records search of the CNDDB and the USFWS list, suitable habitat for special-status animal species occurs onsite. Based on field observations, literature review specific to the special-status animals listed in **Table 1**, the potential for occurrence has been determined for each species. Species that are known to be present or that are considered to have a high potential to occur onsite include: loggerhead shrike (*Lanius ludovicianus*), white-tailed kite, as well as other raptor species. The species that are considered to have a low potential onsite include ferruginous hawk (*Buteo regalis*), Swainson's hawk (*Buteo swainsoni*), and western burrowing owl (*Athene cunicularia hypugaea*).

Loggerhead shrike

The loggerhead shrike utilizes open habitats with scattered shrubs and trees, posts, fences, utility lines, and occurs often in cropland (Zeiner *et. al.* 1990). This species nests from March to May, building twig nests within the dense foliage of shrubs or trees that conceal the nest. There are no CNDDB records for loggerhead shrike within five miles of the project area. However, based on the existence of potential foraging habitat in the annual grasslands and some marginal nesting habitat along the fencerows on the project site, there is a high potential for this species to forage on the site but a low potential for the species to nest on the site. The proposed project is not expected to negatively impact the local or regional population of this species because of the general lack of nesting habitat on the site. Therefore, no significant impact to this species is expected and no mitigation for this species is considered to be necessary.

White-Tailed Kite

The white-tailed kite is a medium sized raptor that is a yearlong resident in coastal and valley lowlands in California. White-tailed kite are monogamous and breed from February to October, peaking from May to August (Zeiner *et. al.*, 1990). This species nests near the top of dense oak, willow, or other large trees. One kite was observed foraging along the western portion of the project site during the biological assessment. There are three CNDDB records of white-tailed kite listed within five miles of the project site. Therefore, there is a high potential for this species to forage onsite. There is also some limited nesting habitat available onsite for raptor species including white-tailed kite.

Other Raptor Species

Other raptor species forage and nest in a variety of habitats throughout Sacramento County. Raptor nests are protected under the MBTA and Section 3503.5 of the California Fish and Game Code, which makes it illegal to destroy any active raptor nest. Large trees onsite and in the vicinity of the project area may provide potential nesting habitat for raptor species. Suitable raptor nesting trees are limited on the project site. Potential foraging habitat for raptors occurs within the annual grassland community on the project site. A white-tailed kite and red-tailed hawks were observed foraging on the site during the biological assessment. Consequently, raptors have a high potential to

forage on the site, but a low likelihood to nest on the site based on limited nesting habitat available.

Ferruginous Hawk

Ferruginous hawk is a winter resident and migrant of California. Ferruginous hawks migrate to California in September and return to their breeding grounds that extend from Oregon into southern Canada, by mid-April (Zeiner *et. al.*, 1990). Rabbits (*Lepus* sp.), ground squirrels (*Spermophilus beecheyi*), and mice are the primary prey consumed by ferruginous hawks. There are no CNDDB records of ferruginous hawk occurring within five miles of the project site. However, there is potential wintering and foraging habitat for this species within the annual grassland community. Therefore, there is a low potential for ferruginous hawk to occur within the project site during the winter season.

Western Burrowing Owl

Western burrowing owl is a small ground-dwelling owl that occurs in western North America from Canada to Mexico, and east to Texas, and Louisiana. Although in certain areas of its range western burrowing owls are migratory, these owls are predominantly non-migratory in California (Zeiner *et. al.*, 1990). The western burrowing owl is an opportunistic forager, foraging on large arthropods, mainly beetle and grasshoppers, small mammals, reptiles, birds, and carrion. The breeding season for western burrowing owls occurs from March to August, peaking in April and May (Zeiner *et. al.*, 1990). Western burrowing owls nest in burrows in the ground, often in old ground squirrel burrows. This owl is also known to use artificial burrows including pipes, culverts, and nest boxes. There are five CNDDB records of occurrences for this species within five miles of the plan area (CNDDB, 2004). No western burrowing owls were observed during the biological assessment. Additionally, very few potential burrow sites that could be utilized by western burrowing owl were observed during the field surveys. Although there are limited burrowing sites within the plan area, this species is known to occur in the vicinity. Consequently, this species has a low potential to occur within the annual grassland community.

Swainson's Hawk

Swainson's hawk migrates from their wintering grounds in the La Pampas Region in Argentina to their breeding ground in east-central Alaska, southwest Canada, eastern Washington and Oregon, and the Central Valley of California from early March through early April (Bloom and De Water 1994). On breeding grounds Swainson's hawk prefer open habitats including mixed and short grass grasslands, with scattered trees or shrubs for perching; dry grasslands; irrigated meadows, and edges between two habitat types. Breeding occurs from late March to late August, peaking in late May through July (Zeiner *et. al.* 1990). In the Central Valley of California, Swainson's hawk nest in stands with few trees in juniper-sage flats, riparian woodlands and oak woodlands. This species nests in close proximity to suitable foraging habitat. Swainson's hawks leave their breeding grounds to return to their wintering grounds in late August or early September (Bloom and De Water 1994). There are two CNDDB records of occurrences for this

species within five miles of the plan area (CNDDB, 2004). Potential foraging habitat for this species occurs within the annual grassland community onsite. There are limited trees suitable in size for raptor species, including Swainson's hawk, to utilize as nest trees. Consequently this species has a low potential to occur onsite.

5.5 Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies or those that are protected under CEQA, Section 1600 of the California Fish and Game Code, or Section 404 of the Clean Water Act. Sensitive habitats within the site include seasonal wetland habitats (**Figure 4**).

5.5.1 Potential Jurisdictional Waters of the U.S.

Potential jurisdictional waters of the U.S. within the project area total approximately 0.09 acre of seasonal wetlands **(Figure 4).** Potential wetland areas in the project area have been formally delineated. The Corps has not verified these acreages. Jurisdictional Waters of the U.S. include jurisdictional wetlands as well as all other waters of the U.S. such as creeks, ponds, and intermittent drainages. Wetlands are defined as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (Corps 1987). The majority of jurisdictional wetlands in the United States meet three wetland assessment criteria: hydrophilic vegetation, hydric soils, and wetland hydrology, Jurisdictional waters of the U.S. can also be defined by exhibiting a defined bed and bank and ordinary high water mark (OHWM). As discussed in Regulatory Framework, jurisdictional waters of the U.S. are subject to Section 404 of CWA and are regulated by the Corps.

On January 9, 2001 the U.S. Supreme Court rendered a decision that has potentially reduced the Corps of Engineer's ability to regulate isolated wetland/waters (some vernal pools, depressional seasonal wetlands, etc.) under the federal Clean Water Act. Based on review of that decision and other relevant documents, although the mapped wetlands onsite met the jurisdictional criteria in effect prior to the Supreme Court's decision, the seasonal wetlands on the site appear to be precluded from regulation by the Corps. However, note that the Corps has not yet issued formal policy guidance based on the Supreme Court's decision. Until such guidance is issued, the federal jurisdictional status of these wetlands remains unclear.

6.0 DISCUSSION AND RECOMMENDATIONS

As discussed, the site consists of ±80 acres of land that supports primarily annual grassland. Known or potential biological constraints on the site include:

- Potential foraging habitat for Swainson's hawk, a state-listed species;
- Potential foraging and limited nesting habitat for raptors;
- Potential wintering habitat for ferruginous hawk;
- Seasonal wetland habitats; and
- Potential habitat for western burrowing owl.

6.1 Swainson's Hawk

Although no Swainson's Hawks were observed on the property, the site may be considered potential foraging habitat for this species since they are known to nest within 5 miles of the site. Currently, the CDFG recommends that impacts to suitable Swainson's hawk foraging habitat within 10 miles of an active nest should be mitigated by securing a conservation easement or fee title on suitable Swainson's hawk foraging habitat in the region. Currently, this translates to the following: (1) for projects within a one-mile radius of an active nest site, the project proponent should preserve 1.0 acre of similar habitat for each acre lost within a ten-mile radius of the project site, (2) for projects within a one to five-mile radius of an active nest site, the project proponent should preserve 0.75 acre of similar habitat for each acre lost within a ten-mile radius of the project site, and (3) for projects within a five to ten-mile radius of an active nest site, the project proponent should preserve 0.5 acre of similar habitat for each acre lost within a ten-mile radius of the project site. For this particular project site, the CNDDB has two records of Swainson's hawk between one and five miles of the project site (**Figure 3**).

In the case of a conservation easement, the applicant should prepare and implement a Swainson's hawk mitigation plan to the satisfaction of the California Department of Fish and Game that includes the preservation of Swainson's hawk foraging habitat on the appropriate amount of foraging acreage.

In the case of fee payment, several projects are currently submitting payment of a Swainson's hawk foraging habitat mitigation fee per acre impacted to the Department of Planning and Community Development in the amount as set forth in Chapter 16.130 of the Sacramento County Code. Currently, this fee is approximately $750/acre of Swainson's hawk foraging habitat impacted.

6.2 Raptors

As discussed earlier, several species of raptors forage onsite and have limited potential to nest on the site. A red-tailed hawk (*Buteo jamaicensis*), and a white-tailed kite were observed foraging on the site at the time the biological assessment was performed. Active raptor nests are protected by the California Fish and Game code Section 3503.5 and the MBTA. For this reason, if project construction is expected to occur during the nesting season (February-August), a pre-construction raptor survey is recommended to determine the activity status of any raptor nests found on the site. The survey should be conducted by a qualified biologist no more than 30 days prior to the onset of construction. If nests are found and considered to be active, construction activities should not occur within 500 feet of the nests until the young have fledged. If construction activities are proposed to occur during non-breeding season (August-January), a survey is not required and no further studies are necessary.

6.3 Ferruginous Hawk

As previously discussed, suitable wintering habitat for ferruginous hawk occurs on the project site. Because ferruginous hawk is a winter resident in California, ferruginous hawk is not likely to occur on the project site during the construction season and therefore no further studies would be required. However, if this species was to move on to the site during construction, they would only likely forage and not be directly affected by construction activities.

6.4 Seasonal Wetlands

The site contains a total of 0.09 acre of potentially jurisdictional waters of the U.S. in the form of seasonal wetlands (**Figure 4**). These areas may be regulated by the Corps. Additionally, these areas are protected under the Sacramento County General Plan. The project proponent shall notify the Corps and Sacramento County of any anticipated impacts to these features including any mitigation prescribed by the County of Sacramento. Any waters of the U.S. that would be lost or disturbed should be replaced or rehabilitated on a "no-net-loss" basis in accordance with the Corps' and County of Sacramento's mitigation guidelines. Habitat restoration, rehabilitation, and/or replacement should be at a location and by methods agreeable to the Corps and the County.

6.5 Burrowing Owl

Although burrowing owls were not observed during the biological assessment, the site contains annual grassland that is potentially suitable habitat for burrowing owl. For this reason, it is recommended that a burrowing owl survey be conducted no more than 30 days prior to the onset of construction. Burrowing owls can be present during all times of the year in California, so this survey is recommended regardless of the time construction activities occur. If active owl burrows are located during the preconstruction survey, it is recommended that a 250-foot buffer zone be established around each burrow with an

active nest until the young have fledged and are able to exit the burrow. In the case of occupied burrows without active nesting, active burrows after the young have fledged, or if development commences after the breeding season (typically February-August), passive relocation of the birds should be performed. Passive relocation involves installing a one-way door at the burrow entrance, which encourages the owls to move from the occupied burrow. CDFG should be consulted as to suggested guidelines for passive relocation of any owls found onsite. Mitigation acreage may be required for project impacts that result in impacts to active burrows and foraging habitat. CDFG recommends 6.5 acres of foraging habitat for burrowing owl be preserved for each active burrow that would be impacted by project activities. These mitigation measures would only apply in the event that active owl burrows were encountered during the preconstruction survey.

7.0 REFERENCES

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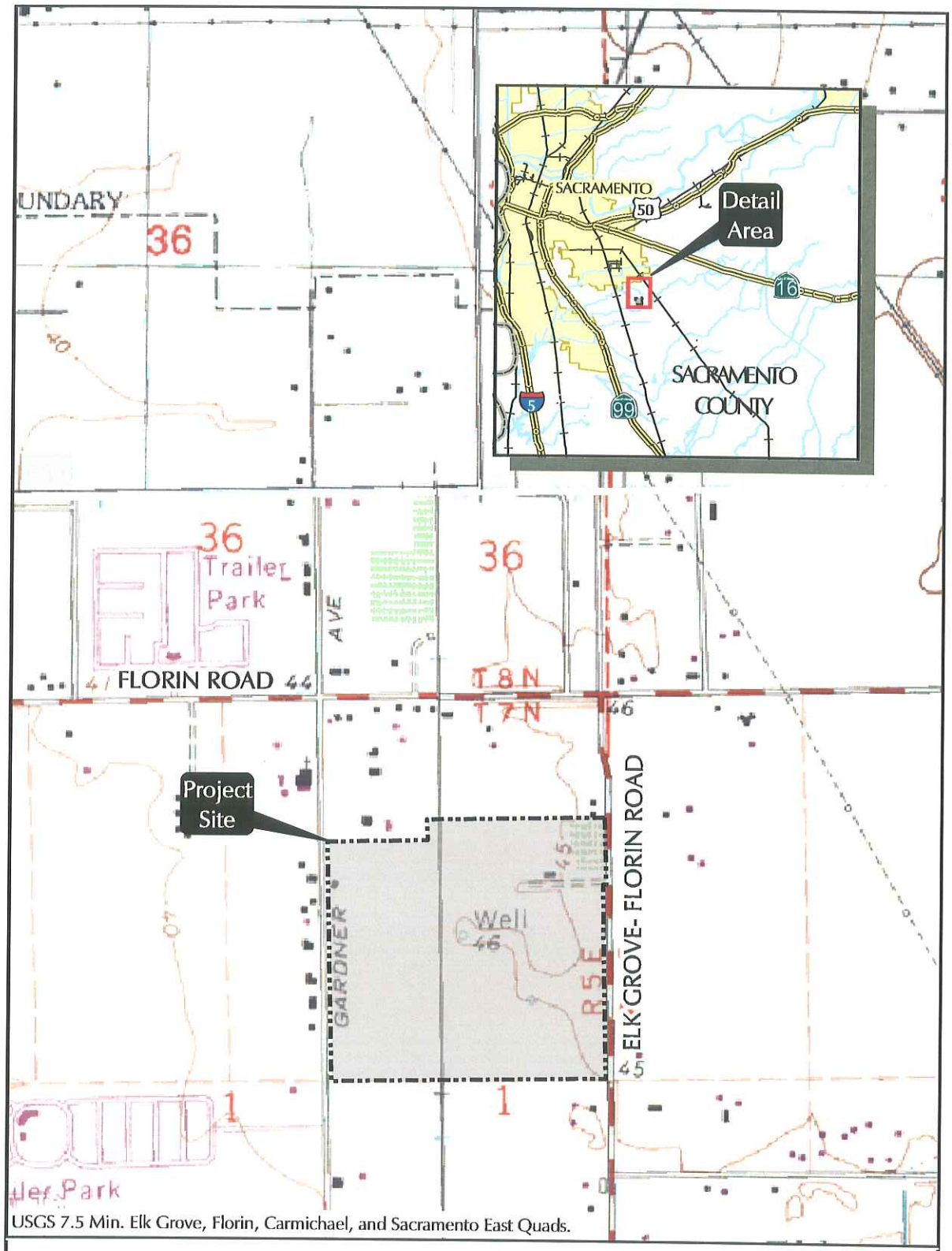


USGS 7.5 Min. Elk Grove, Florin, Carmichael, and Sacramento East Quads.

SITE AND VICINITY

FOOTHILL ASSOCIATES
ENVIRONMENTAL CONSULTING • PLANNING
LANDSCAPE ARCHITECTURE

N

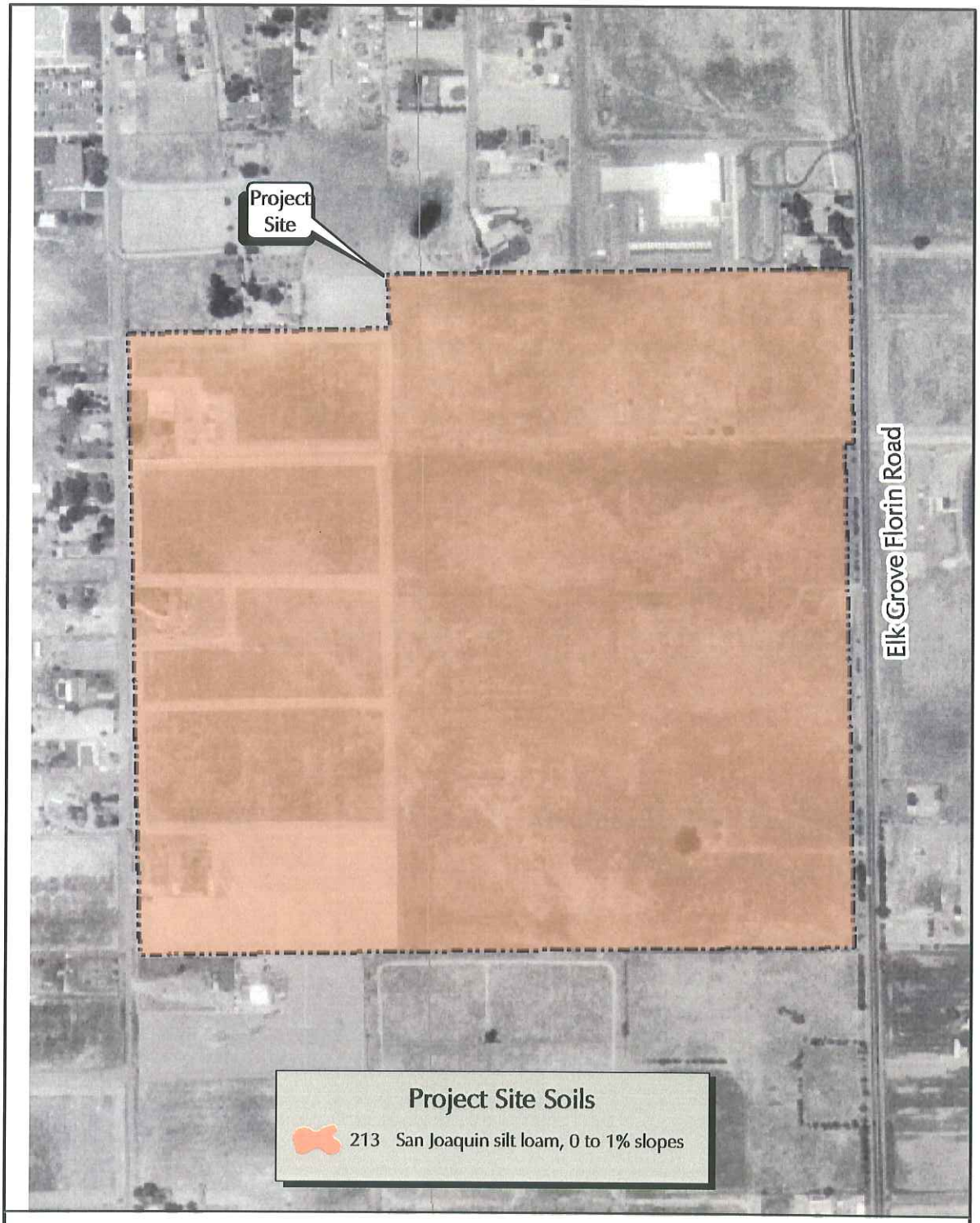
0 500 1000
SCALE IN FEET

Drawn By: ARB
Date: 03/12/04

FIGURE 1

FLORIN GAP

site_and_vicinity.mxd
© 2004



USDA, Soil Conservation Service, digital soil data derived from SSURGO data, Sacramento County, California, 1998.
3.75 Min. DOQQ Digital base data provided by USGS for Elk Grove NW, 1993.

SOILS

FOOTHILL ASSOCIATES
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LANDSCAPE ARCHITECTURE

N

0 200 400
SCALE IN FEET

Drawn By: ARB
Date: 03/19/04

FIGURE 2

FLORIN GAP

soil.mxd
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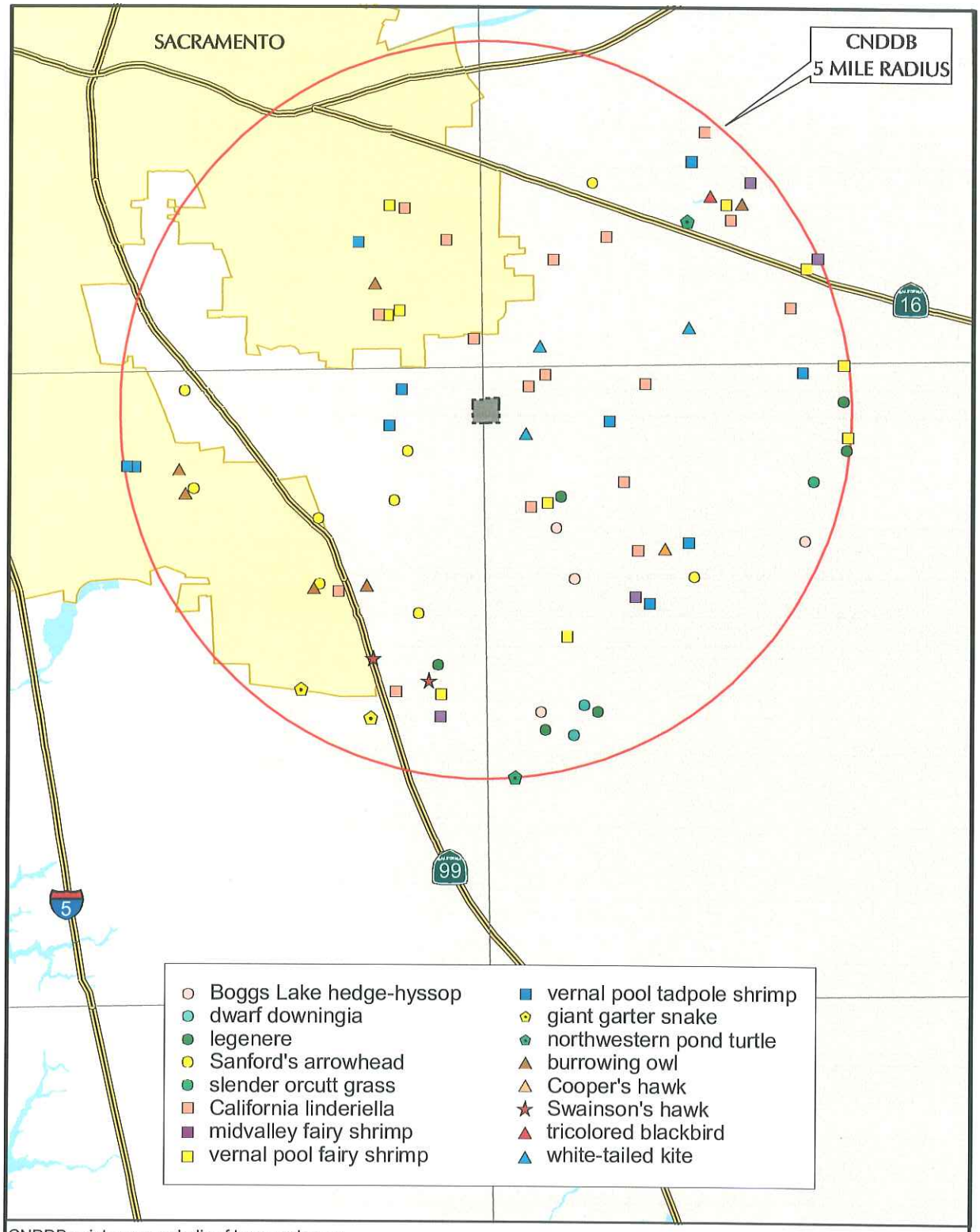

CNDDB points are symbolic of larger polygons.

CNDDB

FOOTHILL ASSOCIATES
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LANDSCAPE ARCHITECTURE

N

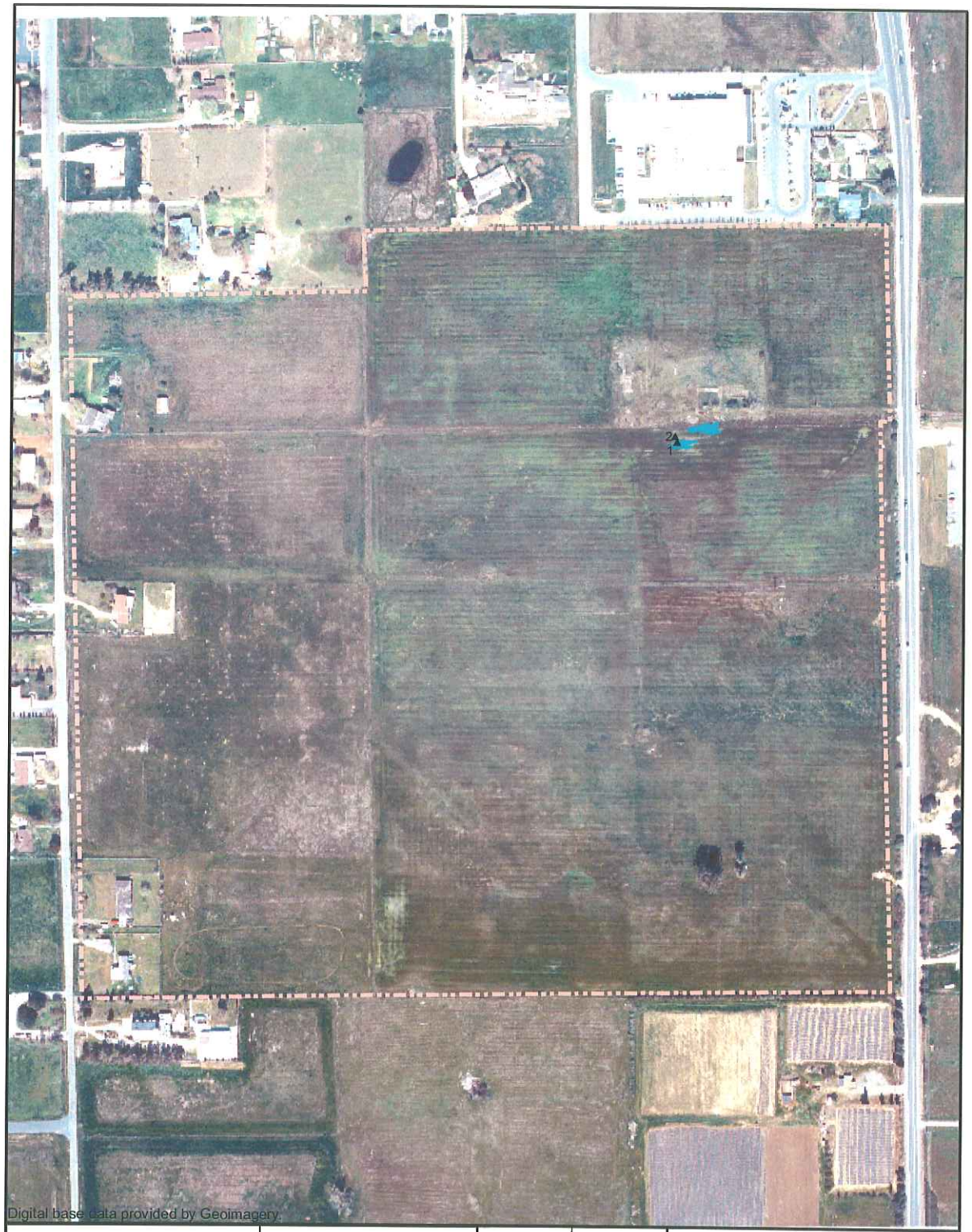
0 1 2
SCALE IN MILES

FIGURE 3

FLORIN GAP

SOURCE: CNDDB, 2/5/04

© 2004



POTENTIAL WATERS OF THE U.S.		OTHER FEATURES		BIOLOGICAL CONSTRAINTS
CLASSIFICATION	ACREAGE	▲ Data Points	N	FLORIN GAP
DEPRESSIONAL WETLANDS		Project Boundary	0 175 350 SCALE IN FEET	FOOTHILL ASSOCIATES ENVIRONMENTAL CONSULTING • PLANNING LANDSCAPE ARCHITECTURE © 2004
Seasonal Wetland	.05	Entire site is potential foraging area for Swainson's hawk and other raptors.	Figure 4	DATE: 04/02/04 FILE NAME: bio_constraints.mxd DRAWN BY: ARB
TOTAL	.05			

Kamilos 80-Florin Gap ±80-Acre Site

Wetland Delineation Report

Prepared for: Gerry Kamilos LLC

November 10, 2004

Submitted by:

FOOTHILL ASSOCIATES

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Appendix A — Wetland Delineation Data Sheets

1.0 INTRODUCTION

The purpose of this document is to present the results of a formal wetland delineation that depicts jurisdictional waters of the United States, including wetlands, on the ±80-acre Gardner Park/Florin Gap-A site located in Sacramento County, California (**Figure 1**).

This report presents the results of Foothill Associates' review of aerial photographs, topographic maps, soil surveys, and fieldwork on the site. The findings are summarized to show the jurisdictional waters delineated following the Corps' multi-parameter methodology for delineating jurisdictional waters of the U.S.

The methodology is described in Section 2.0 of this report and the results of the delineation are described in Section 3.0. Details on soils (**Figure 2**), topography, hydrology, and vegetation are summarized in the results section. Wetland datasheets are provided at the end of the report (**Appendix A**). A detailed wetland delineation map depicts all of the waters of the U.S. found within the site (**Figure 3**).

2.0 METHODS

Available information pertaining to the natural resources of the region was reviewed. All references reviewed for this delineation are listed in Section 4.0. Pertinent site-specific reports and general references were reviewed, including:

- Gretag Macbeth. 2000. *Munsell Soil Color Charts*. New Windsor, NY;
- Hickman, James C. 1993. *The Jepson Manual: Higher Plants of California.* University of California Press, Berkeley, CA.;
- Reed, P.B., Jr. 1988. *National List of Plant Species That Occur in Wetlands:* California (Region O); U.S. Fish & Wildlife Service;
- U.S. Army Corps of Engineers. 1987. *Corps of Engineers Wetlands Delineation Manual*. U.S. Army Corps of Engineers Waterways Experiment Station. Vicksburg, MS;
- USDA, NRCS (Natural Resource Conservation Service). 1993. *Soil Survey of Sacramento County, California*. USDA, NRCS;
- USDA, NRCS. 2003. *Field Indicators of Hydric Soils in the United States*, Version 5.01. G.W. Hurt, P.M. Whited, and R.F. Pringle (eds). USDA, NRCS in cooperation with the National Committee for Hydric Soils. Fort Worth, TX;
- U.S. Geological Survey. 1968 (Photorevised 1979). *Elk Grove, California.* 7.5 - minute series topographic quadrangle. U.S. Department of the Interior;
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- U.S. Geological Survey. 1992. *Carmichael, California.* 7.5 -minute series topographic quadrangle. U.S. Department of the Interior; and
- U.S. Geological Survey. 1992. *Sacramento East, California.* 7.5 -minute series topographic quadrangle. U.S. Department of the Interior.

Foothill Associates' wetland biologists reviewed aerial photographs, topographic maps, and soils maps before conducting a site visit on September 8th, and October 29, 2004. The wetland delineation utilized the Corps' 1987 three-parameter methodology to delineate jurisdictional waters of the U.S. This methodology requires the collection of data on vegetation, soils, and hydrology to establish the jurisdictional edge of waters of the U.S., including wetlands.

Wetlands biologists visually inspected the entire site and collected data on vegetation, hydrology, and soils. Correlations were developed between the three parameters to make wetland determinations. The location of each wetland data point is depicted in **Figure 3**.

Data points were evaluated to determine the percent dominance of hydrophytic vegetation, as determined by the U.S. Fish and Wildlife Service *National List of Plant Species that Occur in Wetlands*: 1988 California (Region 0). Soils were examined for hydric attributes and observations were made and recorded for both direct evidence of hydrology and for hydrologic indicators. These data are presented in **Appendix A**.

Boundaries of wetlands and other waters of the U.S. within the site were mapped with a Trimble GeoXT GPS (Global Positioning System) handheld unit. This is a mapping-grade GPS unit capable of real-time differential correction and sub-meter accuracy. GPS data were downloaded from the unit and differentially corrected utilizing Trimble Pathfinder Office software and appropriate base station data, and converted to ESRI ® shape file format. Data are typically exported to the Geographic Information System (GIS) software in the State Plane coordinate system (NAD 83). All wetland shape files were then merged to create a single wetland file for the entire site and acreages are calculated for all wetlands and other waters of the U.S. These results are presented in **Figure 3**.

3.0 RESULTS

3.1 Site Description and Location

The site consists of ±80 acres of land that is currently annual grassland. Some of the annual grassland is divided into pastures by fencing. Land uses and vegetation communities surrounding the site include residential areas, a commercial complex and pasture to the north, annual grassland and residential areas to the east, annual grassland and agricultural fields to the south, and residential areas and annual grassland to the west. The site is located in Sacramento County immediately south of the City of Sacramento within Township 7 North, Range 5 East, and Section 1 of the USGS 7.5-minute series Carmichael, Elk Grove, Florin, and Sacramento East quadrangles (**Figure 1**).

3.2 Physical Features

3.2.1 Soils

The Natural Resources Conservation Service (NRCS), previously known as the Soil Conservation Service, has mapped one soil unit on the site (**Figure 2**). The soil unit that occurs on the site is **San Joaquin silt loam, 0 to 1 percent slopes**. General characteristics associated with this soil type are described below.

- **San Joaquin silt loam, 0 to 1 percent slopes:** This soil series contains soils that are deep and moderately well drained. These soils are generally found on low terraces. These soils are formed in alluvium derived from mixed granitic rocks. Permeability is very slow. This soil series contains one named hydric inclusion that is found in depressions

3.2.2 Topography

Topography on the site is level with elevations ranging from 40 to 45 feet above mean sea level.

3.2.3 Hydrology

Surface runoff most likely accumulates on the site and percolates into the groundwater table. There is a small roadside ditch immediately to the east of the project site along Elk Grove-Florin Road that could accommodate some surface runoff. This roadside ditch is approximately 2 to 3 feet wide and does not contain vegetation.

3.3 Vegetation

Dominant grass species consists of ripgut brome (*Bromus diandrus*), wild oat (*Avena* sp.), and soft chess (*Bromus mollis*). Common herbaceous species on the site include red-stemmed filaree (*Erodium cicutarium*), curly dock (*Rumex crispus*), bindweed

(*Convolvulus arvensis*), vetch (*Vicia sativa*), lupine (*Lupinus* sp.), and butter and eggs (*Triphysaria eriantha*).

3.4 Classification of Waters of the United States

Jurisdictional waters of the U.S. are classified into multiple types based on topography, edaphics (soils), vegetation, and hydrologic regime. Jurisdictional wetland types found within the site include depressional seasonal wetlands. A description of the jurisdictional features mapped on the site is provided below.

3.4.1 Depressional Seasonal Wetland

A total of 0.09 acre of depressional seasonal wetlands has been mapped within the site (**Figure 3**). Depressional seasonal wetlands are defined by a hydrologic regime that is dominated by saturation, rather than inundation. Depressional seasonal wetlands inundate for short periods of time following a storm event but the primary hydrologic regime is one of saturation. Depressional seasonal wetlands were identified on the site as depressions within the topography with a hydrologic regime dominated by saturation and capable of supporting hydrophytic plant species and hydric soils. Plant species found within depressional seasonal wetlands are adapted to withstand short periods of inundation but will not withstand prolonged periods of inundation, as is typical in vernal pools. Plant species found within these wetland communities on the site include: annual hairgrass (*Deschampsia danthonioides*), nutsedge (*Cyperus eragrostis*), spikerush (*Eleocharis macrostachya*), rush (*Juncus xiphoides*), and rabbits foot grass (*Polypogon monspeliensis*).

Table 1 below summarizes the type of waters of the U.S. on the site.

Table 1 — Waters of the U.S.: Acreage According to Feature

CLASS	TOTAL
Depressional Seasonal Wetlands	**0.09**
Total	**0.09**

4.0 REFERENCES

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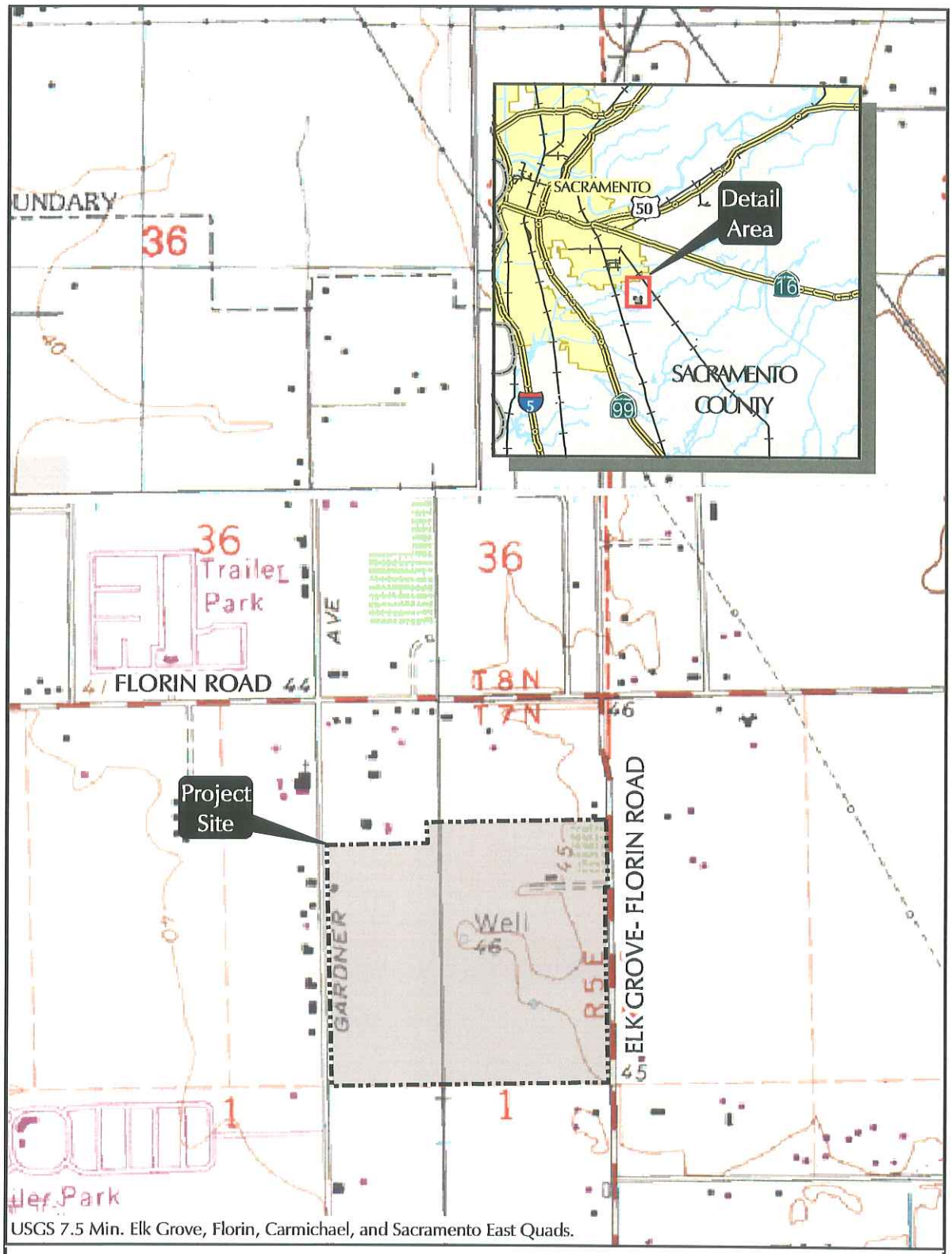

USGS 7.5 Min. Elk Grove, Florin, Carmichael, and Sacramento East Quads.

SITE AND VICINITY

FOOTHILL ASSOCIATES
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LANDSCAPE ARCHITECTURE

N

0 500 1000
SCALE IN FEET

Drawn By: ARB
Date: 03/12/04

FIGURE 1

FLORIN GAP

site_and_vicinity.mxd
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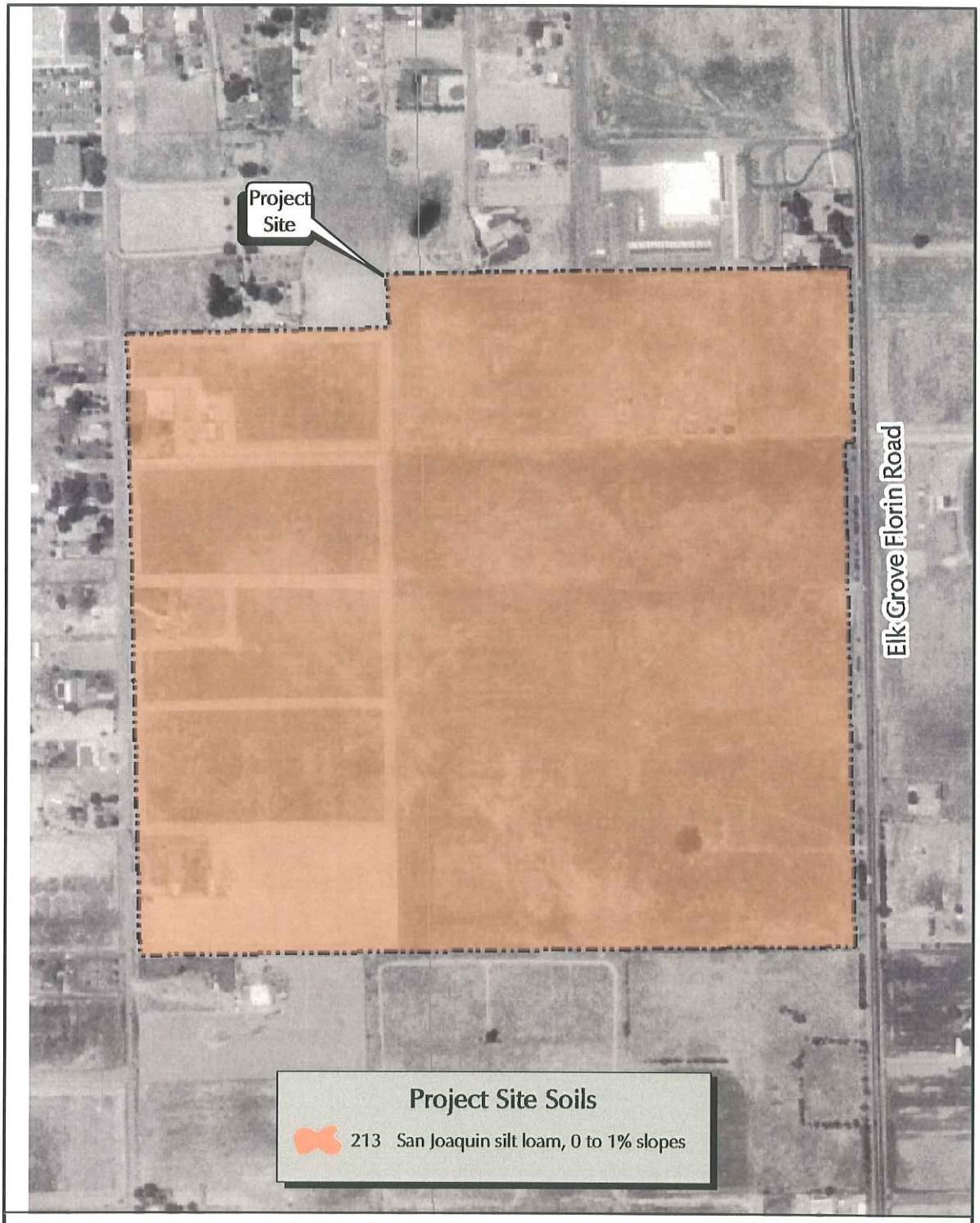

USDA, Soil Conservation Service, digital soil data derived from SSURGO data, Sacramento County, California, 1998.
3.75 Min. DOQQ Digital base data provided by USGS for Elk Grove NW, 1993.

SOILS

FOOTHILL ASSOCIATES
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N

0 200 400
SCALE IN FEET

Drawn By: ARB
Date: 03/19/04

FIGURE 2

FLORIN GAP

soil.mxd
©2004

Appendix A — Wetland Delineation Data Sheets

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Gardner Park Applicant/Owner: Kamilos LLC Investigator: Cristian Singer, David Bise	Date: 09/08/2004 County: Sacramento State: CA
Do Normal Circumstances exist on the site? ◉ Yes ○ No Is the site significantly disturbed (Atypical Situation)? ○ Yes ◉ No Is the area a potential Problem Area? ○ Yes ◉ No (If needed, explain on reverse.)	Community ID: DSW Transect ID: 1 Plot ID: A

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Juncus xiphioides 95	HERB	OBL	9.		
2.			10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100 %

Remarks: Meets criteria.

HYDROLOGY

- [x] Recorded Data (Describe in Remarks):
  - [ ] Stream, Lake, or Tide Gauge
  - [x] Aerial Photographs
  - [ ] Other
- [ ] No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 (in.)

Depth to Free Water in Pit: N/A (in.)

Depth to Saturated Soil: N/A (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- [ ] Inundated
- [ ] Saturated in Upper 12 Inches
- [ ] Water Marks
- [ ] Drift Lines
- [ ] Sediment Deposits
- [ ] Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- [x] Oxidized Root Channels in Upper 12 Inches
- [ ] Water-Stained Leaves
- [x] Local Soil Survey Data
- [ ] FAC-Neutral Test
- [ ] Other (Explain in Remarks)

Remarks: Meets criteria. Site is in a topographical depression.

Example Data Forms

SOILS

Map Unit Name
(Series and Phase): San Joaquin silt loam

Drainage Class: _____

Taxonomy (Subgroup): _____

Field Observations
Confirm Mapped Type? ○ Yes ○ No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A	10 YR 3/4	N/A	N/A	silt loam

Hydric Soil Indicators:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☑ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks: Meets criteria.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	⊙ Yes	○ No
Wetland Hydrology Present?	⊙ Yes	○ No
Hydric Soils Present?	⊙ Yes	○ No

Is this Sampling Point Within a Wetland? ⊙ Yes ○ No

Remarks: Meets all 3 criteria.

Approved by HQUSACE 3/92

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Gardner Park Applicant/Owner: Kamilos LLC Investigator: Cristian Singer, David Bise	Date: 09/08/2004 County: Sacramento State: CA
Do Normal Circumstances exist on the site? ◉ Yes ○ No Is the site significantly disturbed (Atypical Situation)? ○ Yes ◉ No Is the area a potential Problem Area? ○ Yes ◉ No (If needed, explain on reverse.)	Community ID: UPL Transect ID: 1 Plot ID: B

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Lolium multiflorum 75	HERB	FAC	9.		
2. Convolvulus arvensis 20	HERB	NI	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 50 %

Remarks: Meets criteria. Lolium is a marginal fac species.

HYDROLOGY

☑ Recorded Data (Describe in Remarks):
- ☐ Stream, Lake, or Tide Gauge
- ☑ Aerial Photographs
- ☐ Other

☐ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 (in.)

Depth to Free Water in Pit: N/A (in.)

Depth to Saturated Soil: N/A (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ☑ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Remarks: Site is not in a topographical depression. Does not meet criteria.

Example Data Forms

SOILS

Map Unit Name
(Series and Phase): San Joaquin silt loam

Drainage Class: _____

Taxonomy (Subgroup): _____

Field Observations
Confirm Mapped Type? ○ Yes ○ No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A	10 YR 3/6	N/A	too small,faint	silt loam

Hydric Soil Indicators:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks: Does not meet criteria.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	○ Yes	○ No
Wetland Hydrology Present?	○ Yes	⊙ No
Hydric Soils Present?	○ Yes	⊙ No

Is this Sampling Point Within a Wetland? ○ Yes ⊙ No

Remarks: Does not meet criteria.

Approved by HQUSACE 3/92

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Gardner Park Applicant/Owner: Kamilos LLC Investigator: Cristian Singer, David Bise	Date: 09/08/2004 County: Sacramento State: CA
Do Normal Circumstances exist on the site? ◉ Yes ○ No Is the site significantly disturbed (Atypical Situation)? ○ Yes ◉ No Is the area a potential Problem Area? ○ Yes ◉ No (If needed, explain on reverse.)	Community ID: DSW Transect ID: 2 Plot ID: A

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Eleocharis macrostachya 35	HERB	OBL	9.		
2. Plagiobothrys stipitatus 20	HERB	OBL	10.		
3. Cyperus eragrostis 15	HERB	FACW	11.		
4. Lolium multiflorum	HERB	FAC	12.		
5. Polypogon monspeliensis 5	HERB	FACW+	13.		
6. Deschampsia danthonioides 5	HERB	FACW	14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100 %

Remarks: Meets criteria. Overall estimate of vegetative cover used to determine percent dominance.

HYDROLOGY

☑ Recorded Data (Describe in Remarks):
- ☐ Stream, Lake, or Tide Gauge
- ☑ Aerial Photographs
- ☐ Other

☐ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 (in.)

Depth to Free Water in Pit: N/A (in.)

Depth to Saturated Soil: N/A (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ☑ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☑ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Remarks: Meets criteria. Site is located in topographical depression.

Example Data Forms

SOILS

Map Unit Name
(Series and Phase): San Joaquin silt loam

Drainage Class: _____
Field Observations
Confirm Mapped Type? ○ Yes ○ No

Taxonomy (Subgroup): _____

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-5	A	10 YR 5/8	5 YR 5/8	few, fine, faint	silt loam
5-10	A	10 YR 3/6	5 YR 5/8	few, fine, faint	silt loam

Hydric Soil Indicators:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☑ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks: Meets criteria (hydric inclusions in depressions)

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	⊙ Yes	○ No
Wetland Hydrology Present?	⊙ Yes	○ No
Hydric Soils Present?	⊙ Yes	○ No

Is this Sampling Point Within a Wetland? ⊙ Yes ○ No

Remarks: Meets criteria.

Approved by HQUSACE 3/92

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Gardner Park Applicant/Owner: Kamilos LLC Investigator: Cristian Singer, David Bise	Date: 09/08/2004 County: Sacramento State: CA
Do Normal Circumstances exist on the site? ◉ Yes ○ No Is the site significantly disturbed (Atypical Situation)? ○ Yes ◉ No Is the area a potential Problem Area? ○ Yes ◉ No (If needed, explain on reverse.)	Community ID: UPL Transect ID: 2 Plot ID: B

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Lolium multiflorum 75	HERB	FAC	9.		
2. Vulpia sp. 20	HERB	NI	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 50 %

Remarks: Meets criteria. Lolium is a marginal fac species.

HYDROLOGY

☑ Recorded Data (Describe in Remarks):
- ☐ Stream, Lake, or Tide Gauge
- ☑ Aerial Photographs
- ☐ Other

☐ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 (in.)

Depth to Free Water in Pit: N/A (in.)

Depth to Saturated Soil: N/A (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ☑ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Remarks: Does not meet criteria.

Example Data Forms

SOILS

Map Unit Name
(Series and Phase): San Joaquin silt loam

Drainage Class: _____
Field Observations
Confirm Mapped Type? ○ Yes ○ No

Taxonomy (Subgroup): _____

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A	10 YR 4/4	N/A	few, too faint to rea	silt loam

Hydric Soil Indicators:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks: Site is not in a topographical depression. Does not meet criteria.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	○ Yes	○ No
Wetland Hydrology Present?	○ Yes	⊙ No
Hydric Soils Present?	○ Yes	⊙ No

Is this Sampling Point Within a Wetland? ○ Yes ⊙ No

Remarks: Does not meet criteria.

Approved by HQUSACE 3/92

Gardner Parke
04-0218

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& ASSOCIATES INC.

Geotechnical Engineering
Engineering Geology
Environmental Consulting
Remediation Services
Construction Inspection
Materials Testing

March 31, 2004

Mr. Gerry Kamilos
Mr. Rick Kerr
Gerry N. Kamilos, LLC
11249 Gold Country Blvd., Suite 190
Gold River, CA 95670

Phase 1 Environmental Site Assessment
Update, Reliance Letter & Addition of Property
FLORIN GAP PROPERTY
Sacramento County, California
WKA No. 5951.02

Gentlemen,

As you requested, we have completed a Phase 1 Environmental Site Assessment Update for the subject property (Plates 1 and 2). The updating workscope was selected in lieu of a fullscope Phase 1 report given our firm's October 1999 *Phase 1 Environmental Site Assessment* that was completed for all of the subject property except for APNs 065-0070-028 and 065-0042-062. Our previous report had been performed for a school site that had been considered for the property by the Elk Grove Unified School District. The purpose of this letter, then, is threefold:

1. Update our original site assessment report
2. Offer official reliance on our original report to the entity named in the title block
3. Add two parcels to this site assessment that were not covered by our original report.

We completed our updating and parcel-addition field reconnaissance yesterday. The updating workscope items completed for this letter were performed in accordance with the *American Society of Testing and Materials (ASTM) Standard E 1527-00 for Environmental Assessments*. Our scope of updating work included the following:

- a field reconnaissance of the property, with emphasis on changes in field conditions relative to the previous site and vicinity work by our firm

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West Sacramento
CA 95691
Tel 916.372.1434
Fax 916.372.2565

ROCKLIN OFFICE
500 Menlo Drive
Suite 100
Rocklin, CA 95765
Tel 916.435.9722
Fax 916.435.9822

STOCKTON OFFICE
3410 West Hammer Lane
Suite F
Stockton, CA 95219
Tel 209.234.7722
Fax 209.234.7727

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- a "windshield survey" and summary discussion of the immediate property surroundings
- a review of federal, state and county regulatory agency lists indicating any known instances of hazardous materials contamination and registered underground and aboveground storage tanks (USTs/ASTs) on or near the property
- color photography of the property (included in our original report).

Laboratory testing for hazardous materials in the soil and groundwater beneath the property and surveys of the existing buildings for asbestos and lead-based paint were beyond the scope of this site assessment update.

Reliance

This letter will serve as the consent of Wallace ▪ Kuhl & Associates, Inc. and acknowledgment that Gerry N. Kamilos, LLC may rely upon the information presented in our October 1999 *Phase 1 Environmental Site Assessment*, and addressed to the Elk Grove Unified School District (EGUSD). Gerry N. Kamilos, LLC may assume the same rights as EGUSD for errors and omissions, and Wallace ▪ Kuhl & Associates, Inc. agrees to be bound to Gerry N. Kamilos, LLC by the same workscope, liability, limitation of liability and indemnity provisions as set forth in the proposal and contract with EGUSD.

Additionally, and based on the findings of our referenced report and this current letter which included a new field reconnaissance, in our opinion site assessment updating activities beyond this letter are not justified. The ASTM site assessment standard contains provision for use of a prior assessment even if the prior assessment is older than 180 days (reference sections 4.7 thru 4.7.5 of *Standard E 1527-00)*. Between now and the time of our previous report, we have not become aware of any new or changed conditions that would lead us to revise the conclusions contained in our referenced site assessment report. Our current field reconnaissance revealed no new concerns from the hazardous materials perspective. Therefore, in the case of the subject property, it is appropriate to invoke provisions 4.7 thru 4.7.5 of the site assessment standard.

Site Description

The majority-area of the subject property was described in detail in our original 1999 site assessment report. We stand behind our previous site description.

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The two added parcels are described in this and the following paragraph. APN 065-0042-062 is comprised of approximately 6.6 net acres located at the southwest corner of Florin Road and Elk Grove-Florin Road. Parcel 62 is unremarkable from the potential hazardous materials perspective. Parcel 62 is a relatively flat undeveloped land area free of standing structures, old building foundations, visible water supply wells, active agricultural cultivation, aboveground or underground storage tanks, drop inlets, pits or depressions, burn piles, trash heaps or anything else of concern from the hazardous materials perspective. Parcel 62 is bounded to the south by a United States Post Office. No electrical transformers, capacitors or overhead electrical lines at transmission voltage are located on this parcel. Parcel 62 is bounded to the west by a private driveway for trucks that connects Florin Road to the rear delivery area of the Post Office. A rural residential site is west beyond the driveway. The adjacent Post Office does not have fueling or truck maintenance facilities. A Shell fueling station and convenience store is located diagonally across the street from Parcel 62, located at the northeast corner of Florin and Elk Grove-Florin Roads. The Shell station is further discussed in the Agency Records Review section of this report.

The other land area being added to our original site assessment report is APN 065-0070-028, located at 7415 Gardner Avenue. Parcel 28 contains a white two-story barn-style residence and a one-story car-parking garage with enclosed storage area. We did not observe any obvious evidence of heavy automotive-related maintenance in connection with the garage/storage building, nor did we observe any containers of open powertrain fluids or waste oil. No floor drains, mechanic's pits or subfloor hydraulic lifts were observed within the car-parking portion of the garage/storage building. The garage/storage building has a concrete floor. The parcel's domestic water supply well is located east of the dwelling, between the dwelling and the garage/storage building. At least one septic system exists on this parcel, as evidenced by a metal manhole/cover plate located within a concrete slab area on the north side of the garage/storage building. We observed a few empty five-gallon latex paint containers also located between the dwelling and garage/storage building. No stained or odoriferous soils, or stressed vegetation were observed on this parcel. The majority land area of Parcel 28 (east of the garage/storage building) consists of fallowed land that was covered with dense green grasses and weeds on the date of our field reconnaissance. Parcel 28 is a relatively flat undeveloped land area free of active agricultural cultivation, aboveground or underground fuel or oil storage tanks, drop inlets, burn piles, burn pits, trash heaps or anything else of any obvious concern from the hazardous materials

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perspective. No electrical transformers, capacitors or overhead electrical lines at transmission voltage are located on this parcel.

Windshield Survey

The property is located in an area that consists predominantly of rural residential development, although various retail or commercial uses occur in the immediate vicinity. Denser single-family residential subdivisions are encroaching the area of the subject property from the west.

Historical Data

Specific to the subject property, we double-checked the historical USGS topographic maps and stereoscopic aerial photographs that were first reviewed in our original (1999) site assessment report for the formerly proposed school site. From the hazmat perspective and specific to the added parcels of the subject property, nothing new or noteworthy was observed on these historical resources, which dated back to 1909.

In the 1963 aerial photographs, Parcel 62 consists of a vacant field that remained that way in each of the subsequent aerial photographs reviewed (1968, 1976, 1981, 1991 and 1999). Parcel 62 has seen remarkable stasis during the past 41 years, considering that rural residential and urban development encroached the area of the property during that same timeframe. In the earlier years of available air photo coverage Parcel 62 was irrigated pasture, dry-farmed and/or a haycrop field. In the later years Parcel 62 was simply fallowed grassland.

Parcel 28 is part of a larger irrigated pasture, dry-farmed and/or haycrop field in the 1963, 1968 and 1976 aerial photographs. A single-family dwelling first appears on Parcel 28 in the 1981 aerial photographs. The existing garage/storage building first appears on Parcel 28 in the 1991 air photos. The parcel appears much as it does today in the 1999 air photos. Throughout the years of reviewed aerial photography, the majority land area of Parcel 28 remains as irrigated pasture, dry-farmed, haycrop and/or fallowed field.

The 1909, 1953, 1968, 1975 and 1979 USGS topographic maps revealed Parcels 28 and 62 as vacant undeveloped land. Gardner Avenue was first mapped on the 1953 topo sheet. No ASTs or fueling islands connected to USTs, or pits, ponds or lagoons, junkyards, farm equipment staging or maintenance locations, livestock working areas or corrals, or *former* structures (excluding the existing buildings on Parcel 28) were observed in the reviewed historical resources.

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Agency Database Review

We have reviewed databases regarding hazardous materials contamination on or near the subject property that are prepared by the following agencies:

- United States Environmental Protection Agency (EPA)
- California Environmental Protection Agency (Cal-EPA)
- Cal-EPA Department of Toxic Substances Control (DTSC)
- Cal-EPA Office of Environmental Health Hazard Assessment (OEHHA)
- Cal-EPA Regional Water Quality Control Board (RWQCB)
- Cal-EPA Integrated Waste Management Board (CIWMB)
- California State Water Resources Control Board (SWRCB)
- California Department of Health Services (DHS)
- Cal-DHS Office of Drinking Water (ODW)
- California Division of Oil and Gas (DOG)
- Sacramento County Environmental Management Department (SCEMD).

EDR, Inc. used the ASTM standard search radii during review of the required regulatory agency databases (Plate 3). In summary, we identified no confirmed state or federal "Superfund" sites located on or within one mile of the subject property during review of the former DHS's *Bond Expenditure Plan*, U.S. EPA's *National Priorities List (NPL),* and Cal-EPA's *Active Annual Workplan Sites* database. No potential federal Superfund sites appeared on or within one-half mile of the property on U.S. EPA's *Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)*. The subject property and adjacent land areas do not contain facilities that are listed as *Resource Conservation and Recovery Act (RCRA) Generators*, nor does the property appear in U.S. EPA's *Emergency Response Notification System (ERNS)* database. No RCRA *Treatment, Storage or Disposal (TSD)* facilities are located on or within one-half mile of the property. No hazardous materials business plans, storage tank registrations or hazardous materials incident responses were on file for Parcels 28 and 62 of the subject property with the Sacramento County EMD. Parcels 28 and 62 of the subject property are not agency-listed sites, based on our EDR database search.

EDR's search of various state and County databases using the ASTM-designated search radii revealed no known contaminated municipal groundwater wells or active or inactive landfills located on, adjacent to, or within one-half mile of the subject property. The EDR database search

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reveals a couple of registered businesses within one-half mile of the property that use or store reportable quantities of hazardous materials during their normal operations. The nearest registered UST site (Shell Food Mart at 7149 S. Watt Avenue) is operated with three 10,000-gallon double-walled USTs. The reviewed aerial photographs reveal that the Shell station is a "modern" facility, having been constructed sometime after 1999. The Shell station does not appear on any of the reviewed agency databases as a site known to have experienced UST or UST system's leakage (Plate 3). A couple of other agency-listed sites in the property neighborhood are not considered hazardous materials threats to the subject property, based on our firm's previous research and the current agency database listings for said sites.

Regional Groundwater

The subject property is located within the Sacramento River Hydrologic Basin, as defined by the California Department of Water Resources (DWR). Groundwater elevations for the area of the property are estimated through review of the July 2003 Sacramento County Department of Public Works *Groundwater Elevations Map.* The referenced map indicates that the first occurrence of groundwater is estimated at approximately 80 feet below the land surface of the subject property. Regional groundwater flow direction in the area of the subject property is predicted to be southerly. Historical data regarding groundwater trends including a *Hydrograph* for the subject property and its area were already presented in our original site assessment report (referenced above).

CONCLUSIONS

Our field reconnaissance and review of agency records indicate no obvious evidence of any significant hazardous materials contamination on or adjacent to the subject property. The site history research contained within our previous Phase 1 site assessment confirms that the property has consisted of rural residential and irrigated pasture, dry-farmed, fallowed and/or haycrop land for the past approximate century. Our prior assessment already addressed the potential for environmentally persistent pesticides to exist in site soils, with no adverse findings made. Therefore, we recommend no further assessment in this regard.

We observed no evidence of bulk storage or production of hazardous materials during our windshield survey of the immediate property surroundings, except for the existing Shell Fueling Station and Food Mart at the northeast corner of Florin Road and South Watt Avenue (Elk Grove-Florin Road). The Shell station does **not** appear on the reviewed regulatory agency databases as a known hazmat leak or spill site. We identified no federal Superfund sites within a

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one-mile radius of the subject property, or State Superfund sites within one-half mile of the property. We have encountered no off-site locations that might have affected the subject property in terms of potential hazardous materials contamination. We identified no known *regional* impairments to groundwater quality beneath or in the vicinity of the subject property during review of the regulatory agency databases described in this report. The remaining agricultural water supply wells and/or domestic wells that might be taken out of service must be properly destroyed. This procedure requires an abandonment permit from the Sacramento County Environmental Health Division, and the work must be performed by a licensed C-57 driller.

In summary, we have performed an Environmental Site Assessment Update and Addition of Property, workscope items of which were performed in conformance with the scope and limitations of ASTM Standard Practice E 1527-00. Our work was completed for the Florin Gap Property located in Sacramento County, California. We have made no exceptions to, or deletions from, the Standard Practice with respect to the selected ASTM workscope items completed during this report. This site assessment update and addition of property has revealed no evidence of Recognized Environmental Conditions in connection with the subject property.

Closing

The statements and conclusions in this updating and property-addition report are based upon the scope of work described above and on observations made only on the date of our current field reconnaissance, March 30, 2004. This updating letter shall be considered an extension of our previous, referenced environmental site assessment report and shall be subject to the standard project *Limitations* contained therein.

Please call if you have any questions or require additional information. Thanks for this opportunity to have provided updating environmental site assessment services.

Wallace ▪ Kuhl & Associates, Inc.

David Von Aspern
Director, Site Assessment Group

REGISTERED ENVIRONMENTAL ASSESSOR
DAVID L. VON ASPERN
No. 05430
Exp. 6/05
STATE OF CALIFORNIA

Attachments

H:\Dept7\Archives\5951-02.upd

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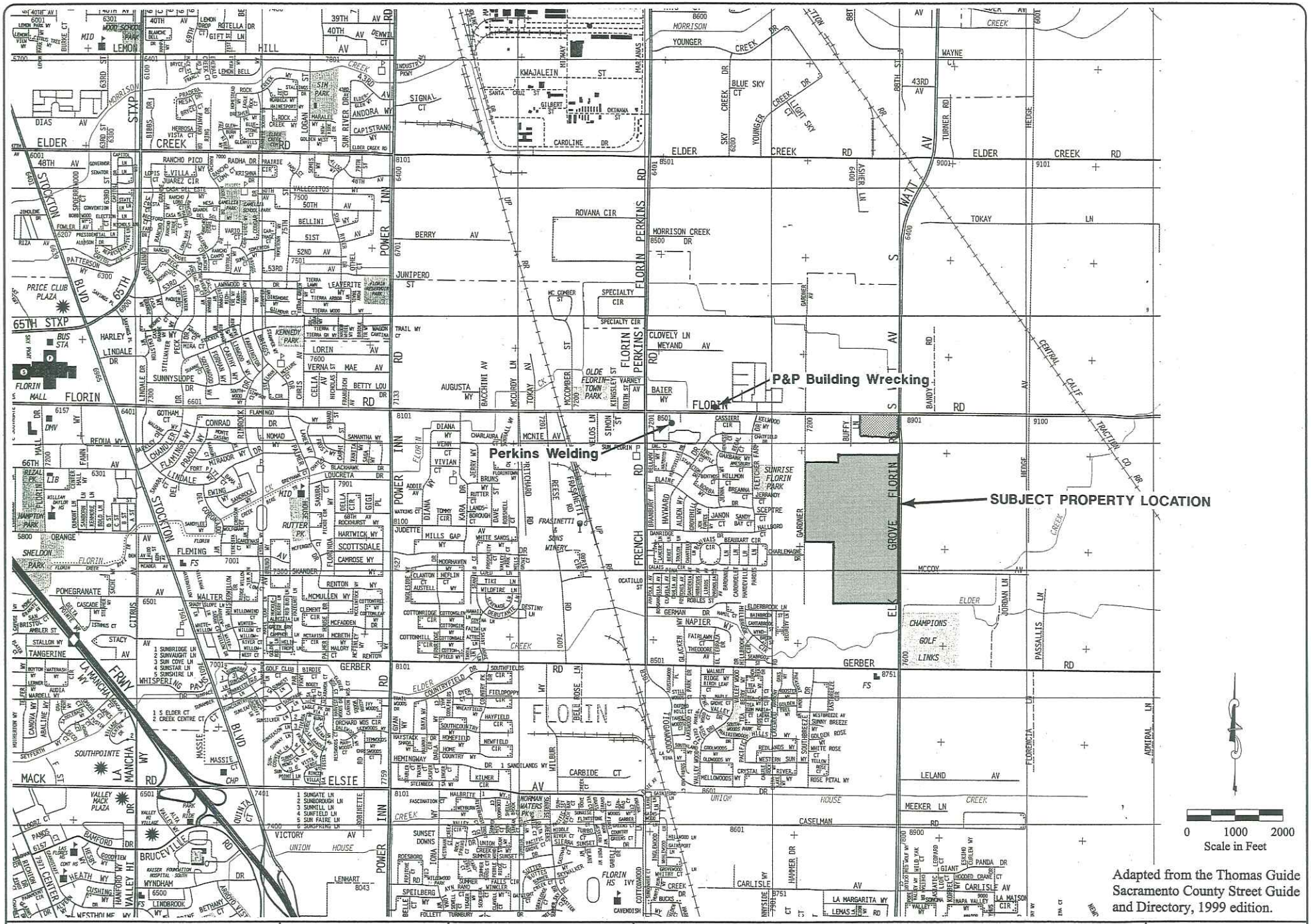

Adapted from the Thomas Guide Sacramento County Street Guide and Directory, 1999 edition.

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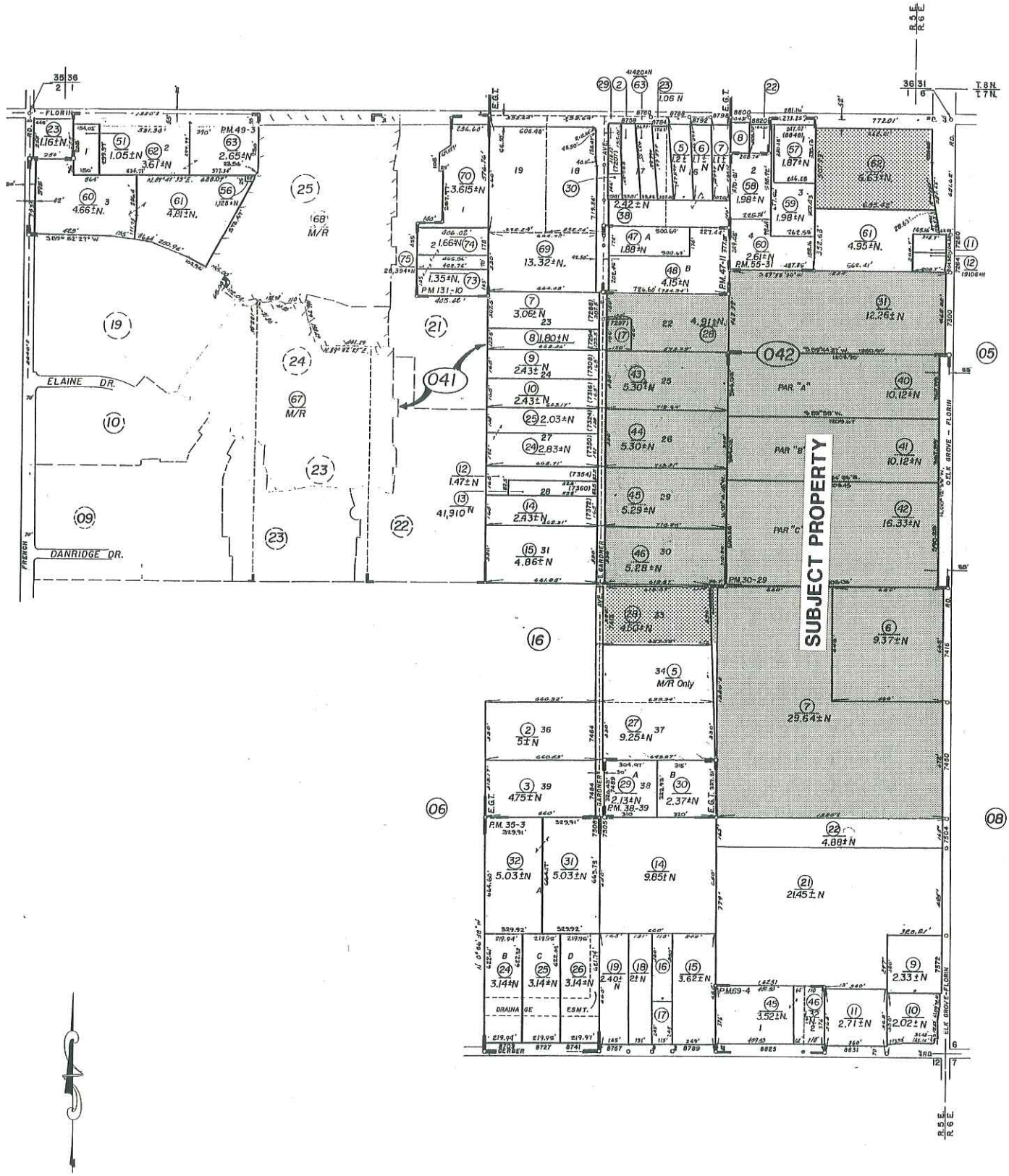
DRAWN BY: HLA
CHECKED BY: AJD

VICINITY MAP
FLORIN GAP PROPERTY
Sacramento County, California

WKA NO: 5951.02
DATE: 3/04
PLATE NO: 1



0 400 800
Scale in Feet

Adapted from the Sacramento County Assessor's map book 65, pages 4 & 7.

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PARCEL MAP

FLORIN GAP PROPERTY

Sacramento County, California

WKA NO: 5951.02

DATE: 3/04

PLATE NO: 2

NATIONAL PRIORITIES LIST (EPA)
(Run Date January 29, 2004)
(Updated by EDR contact of February 6, 2004)

None

CERCLIS LIST (EPA)
(Run Date November 17, 2003)
(Updated by EDR contact of March 22, 2003)

None

FEDERAL RESOURCE CONSERVATION AND RECOVERY INFO SYSTEM (RCRIS)
[TSD Facilities]
(Run Date January 12, 2004)
(Updated by EDR contact of January 19, 2004)

None

RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM (EPA)
[RCRA Generators]
(Run Date January 12, 2004)
(Updated by EDR contact of January 19, 2004)

None

EMERGENCY RESPONSE NOTIFICATION SYSTEM (ERNS-EPA)
(Run Date December 31, 2003)
(Updated by EDR contact of January 26, 2004)

None

1989 BOND EXPENDITURE PLAN (DHS)
(Run Date January 10, 1990)

None

ACTIVE ANNUAL WORKPLAN SITES, FY 2002-2003 (DTSC)
(Run Date March 2, 2004)
(Updated by EDR contact of March 3, 2004)

None

CALSITES DATABASE (DTSC)
(Run Date March 2, 2004)
[Formerly ASPIS]

None

HAZARDOUS WASTE AND SUBSTANCES SITES LIST (OEHHA)
[Formerly CORTESE]
(Run Date April 1, 2001)
(Updated by EDR contact of January 29, 2004)

P&P Building Wrecking – 8589 Florin Road
Perkins Welding Works, Inc. – 8524 Florin Road

CENTRAL VALLEY TANK TRACKING SYSTEM (RWQCB)
(Run Date January 1, 2004)
(Updated by EDR contact of January 6, 2004)

None

SPILLS, LEAKS, INVESTIGATIONS & CLEANUPS LIST (RWQCB)
(Run Date January 8, 2004)

None

TOXIC PITS CLEANUP ACT (RWQCB)
(Run Date July 1, 1995)
(Updated by EDR contact of February 2, 2004)

None

LANDFILLS DATABASES (CIWMB)
(Run Date November 14, 2003)
(EDR Update contact March 16, 2004)

Closed and Inactive Sites

None

LANDFILLS DATABASES (CIWMB)

(Run Date November 14, 2003)
(EDR Update contact March 16, 2004)

Active Landfills

None

Proposed Landfills

None

Transfer/Processing Stations and Material Recovery Facilities

None

Transformation Facilities

None

Composting Facilities

None

RANKED SOLID WASTE DISPOSAL LIST (SWRCB)

Solid Waste Assessment Test (SWAT) Program
(Run Date April 1, 2000)
(Updated by EDR contact of March 11, 2004)

None

ASSEMBLY BILL 1803 CONTAMINATED WELLS (DHS-ODW)

Small Systems
(Run Date June 1990)

None

Large Systems
(Run Date April 1986)

None

WELL INVESTIGATION PROGRAM LIST OF POLLUTED WELLS (RWQCB)
(Run Date January 1992)

None

CALIFORNIA DIVISION OF OIL AND GAS (DOG)
(Map 614 Published October 21, 2003)

None

HAZARDOUS WASTE INFORMATION SYSTEM – HAZNET (CAL-EPA)
[Manifest-derived Information]
(Run Date December 31, 2002)
(Updated by EDR contact of February 9, 2004)

None

SACRAMENTO COUNTY TOXISITE CLEANUP PROGRAM SITE-SPECIFIC REPORT (EMD)*
(Run Date July 17, 2003)
(Updated by EDR contact of February 2, 2004)

None

SACRAMENTO COUNTY REGULATORY COMPLIANCE MASTER LIST (EMD)**
(Run Date February 3, 2004)

C Enterprises – 7288 Gardner Avenue
I.T.C. Thermodyne – 8950 McCoy Avenue
Richard Heaps Electrical Contractor – 8909 Florin Road
Javan Shell Food Mart – 7149 South Watt Avenue

NOTES: The ASTM-required search radius for NPL, Bond Expenditure, and Active Annual Workplan sites is one mile from the subject property; it is one-half mile for CERCLIS, TSD and for most other facilities; and, the search radius for RCRA Large and Small Generators and HAZNET is the subject and adjacent properties.

* Facilities listed include sites where unauthorized hazardous materials release(s) are known to have occurred. The ASTM-required search radius for these sites is one-half mile.

** Facilities listed include sites where underground storage tanks are registered as present or registered as removed. The ASTM-required search radius for these sites is one-quarter mile.

Page: 1

12/19/2008 1:37:23 PM

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name:

Project Name: 04-0226 Taylor Properties2

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5
2009 TOTALS (lbs/day unmitigated)	7.91	49.40	28.49	0.01	100.04	3.14	103.17	20.90	2.89	23.78
2010 TOTALS (lbs/day unmitigated)	171.11	64.85 (64.11)*	51.14	0.02	100.10	4.23	104.32	20.92	3.89	24.80

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	52.23	60.57	702.44	0.56	89.34	17.27	55,675.02

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	52.23	60.57	702.44	0.56	89.34	17.27	55,675.02

*Urbemis initially calculated NOx for 2010 at 64.11 lbs/day, which is reflected in the text. NOx amount shown in this Urbemis summary is a slightly higher figure of 64.85 lbs/day. However, both figures are below the threshold of 65 lbs/day.

Appendix C

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Prediction Worksheet

Project Information:

Job Number: 04-0226
Project Name: FHWA Model
Roadway Name: Gerber Road East to Bradshaw Road

Traffic Data:

Year:	Future
Average Daily Traffic Volume:	21,500
Percent Daytime Traffic:	80
Percent Nighttime Traffic:	20
Percent Medium Trucks (2 axle):	2
Percent Heavy Trucks (3+ axle):	2
Assumed Vehicle Speed (mph):	45
Intervening Ground Type (hard/soft):	**Soft**

Traffic Noise Levels:

				----------L_{dn}, dB----------			
Location:	**Description**	**Distance**	**Offset (dB)**	**Autos**	**Medium Trucks**	**Heavy Trucks**	**Total**
1	Nearest Backyard	100	0	66	57	61	67
2	Nearest Backyard	100	0	66	57	61	67
3	Nearest Backyard	100	0	66	57	61	67
4	Nearest Backyard	100	0	66	57	61	67
5	Nearest Backyard	100	0	66	57	61	67
6	Nearest Backyard	100	0	66	57	61	67
7	Nearest Backyard	100	0	66	57	61	67

Traffic Noise Contours (No Calibration Offset):

L_{dn} Contour, dB	Distance from Centerline, (ft)
75	31
70	67
65	144
60	310

Notes:

PRELIMINARY DELINEATION OF WATERS OF UNITED STATES INCLUDING WETLANDS AT THE SOUTHWEST CORNER OF GERBER AND BRADSHAW ROAD SACRAMENTO COUNTY, CALIFORNIA

RECEIVED
JUL 23 2007
DEPARTMENT OF ENVIRONMENTAL REVIEW AND ASSESSMENT

PREPARED FOR:
Taylor Properties
1425 River Park Drive, Suite 201
Sacramento, CA 95815
Contact: Lux Taylor
Phone: (916) 923-0200

PREPARED BY:
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P.O. Box 1156
Walnut Grove, CA 95690
Contact: Bill Roper
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September 2003

INTRODUCTION

This report describes the results of a delineation of waters of the United States, including wetlands, potentially occurring at the southwest corner of Gerber and Bradshaw Road in Sacramento County, California. The corner of Gerber and Bradshaw is located south of the City of Sacramento and northeast of Elk Grove, Sacramento County (Figure 1 and 2).

"Waters of the United States" is the encompassing term for areas that qualify for federal regulation under Section 404 of the Clean Water Act. Waters of the United States include "wetlands" and "other waters of the United States". For regulatory purposes, wetlands are defined as:

> *areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (33 CFR 328.3, CFR 230.3).*

Wetlands potentially subject to U.S. Army Corps of Engineers (Corps) jurisdiction generally must have field indicators of the following (Environmental Laboratory 1987):

- **a prevalence of hydrophytic vegetation** (i.e., "water loving" species with "obligate," "facultative wetland," or "facultative" wetland indicator status in Reed [1988]);
- **hydric soils** (i.e., hydric soils listed by National Resource Conservation Service [NRCS] [formally Soil Conservation Service] [1991] and unclassified soils that are saturated or flooded during the growing season long enough to develop hydric soil indicators caused by soil morphogenesis); and
- **wetland hydrology** (i.e., permanent or periodic inundation, or soil saturation to the surface for greater than 7% of the growing season [>17.5 days in a 250-day growing season)(Soil Conservation Service 1993).

Other waters of the United States, as used in this report, refer to unvegetated waterways and other water bodies with a defined bed and bank, such as drainages, creeks, rivers, and lakes. This approximately translates to the bank-to-bank portion of waterbodies, up to the ordinary high water mark. Other waters typically lack hydrophytic vegetation and may also lack hydric soils.

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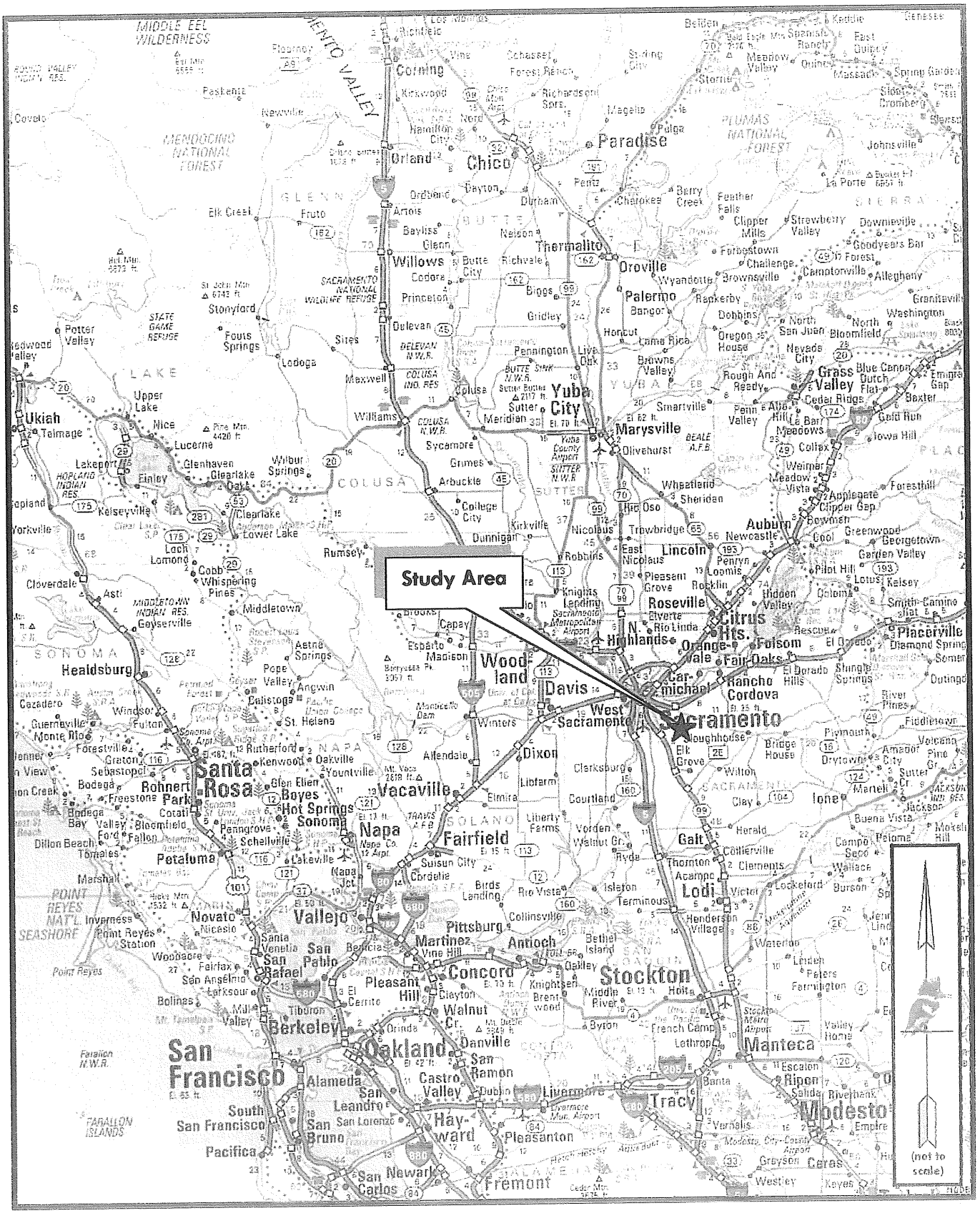

Figure 1. Study Area Vicinity
(Source: Rand McNally Road Atlas and Vacation Guide, 1993)

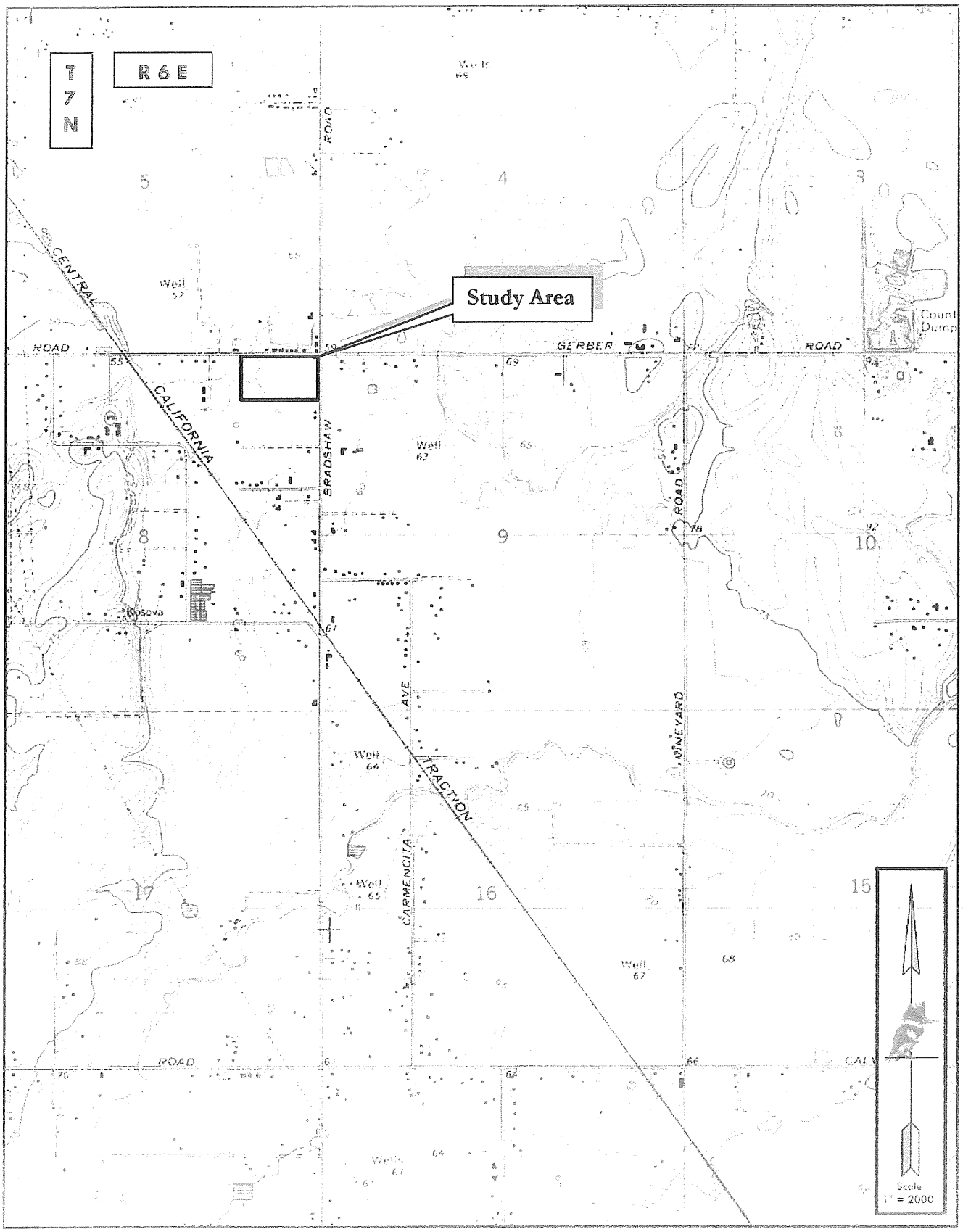

Figure 2. Project location.
(Base Map: Elk Grove 7.5-minute USGS Quadrangle maps)

METHODS

May & Associates, Inc. senior biologist reviewed aerial photographs and the Elk Grove 7 ½-minute U.S. Geological Survey quadrangle before conducting fieldwork to identify potential wetland and/or drainage areas.

The routine onsite determination method, based on mandatory technical criteria and field indicators of the 1987 Wetlands Delineation Manual (Environmental Laboratory 1987), was used as a basis for identifying candidate wetlands. The wetland indicator status of plants was determined based on Reed (1988). Non-wetland areas potentially subject to federal jurisdiction were evaluated and mapped according to various regulatory guidance letters issued by the U.S. Army Corps of Engineers (Corps).

All of the study area was surveyed on foot to evaluate the extent and types of potential wetlands and other waters present and to determine appropriate locations for sample data points. Potential wetlands were initially identified by assessing whether hydrophytic vegetation was prevalent or would be expected to be prevalent under normal circumstances and normal conditions (as these terms are defined in Environmental Laboratory [1987]). Sites with a prevalence of hydrophytic vegetation were further evaluated for wetland hydrology and hydric soils.

The boundaries of other waters of the U.S. (i.e., creeks and streams) were determined based on the presence of the ordinary high water mark (OHWM). Indicators of the OHWM included drift lines, scour lines in the stream bank, or scoured areas on tree trunks within a channel. Ordinary high water is interpreted as the high water level that is attained within a stream, creek, lake etc. on a 2-year recurrence interval (i.e., occurs in at least 50 out of every 100 years). Streams were mapped to portray their bank-to-bank width at the OHWM.

Wetland boundaries were determined for each wetland in the field. The last point on the gradient where evidence of all three parameters was present determined the upper limits of the wetland boundaries. Waters of the U.S. were mapped on black line copies of black and white aerial photographs at a scale of 1 inch = 200 feet, surveyed in the field using a Trimble Geo-Explorer XT GPS unit, and differentially corrected and process using ARCGIS 8.0.

RESULTS

Site Description

May & Associates, Inc. senior biologist and wetland specialist conducted field visit to observed hydrology on February 20, 2003 and conducted surveys to investigate and map potential jurisdictional areas on August 7, 2003. The 19.649-acre study area is within the County of Sacramento, northeast of Elk Grove (Figure 1 and Figure 2).

The study area shows evidence of extensive human disturbance (i.e., agricultural use). The majority of the study area is in oat-hay production.

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The Soil Survey of Sacramento County (Soil Conservation Service 1993) indicates that the study area contains two similar soil mapping units: San Joaquin silt loam leveled 0-1% and San Joaquin silt loam, 0-3% (Figure 3).

San Joaquin silt loam is formed in alluvium derived from mixed granitic rocks. The permeability is very slow and during winter months, heavy rainfall may cause standing water above the claypan. The representative profile of the surface layer is strong brown silt loam about 23 inches thick and a subsoil claypan of yellowish red clay loam about 5 inches thick. The vegetation in uncultivated areas is mainly annual grasses and forbs and crops grown in this soil typically are corn, wheat, rice, barley, milo, alfalfa, and ladino clover for seed (Soil Conservation Service 1993).

The study area contains two San Joaquin silt loam mapping units; leveled 0 to 1% and 1 to 3% slope.

Non-Wetlands (Uplands)

Non-wetland, or upland, areas encompass the majority of the site. The vegetation, hydrology, and soils of the site are characteristic of upland agricultural (oat-hay production) practices. This community is described below.

Agricultural (oat-hay). The dominant habitat found on the study site is an oat-hay field. There are no signs of irrigation within the study area during the February 20 or August 7, 2003 site visit (Appendix A [DP-B, DP-D, DP-F, DP-G]).

> ***Vegetation.*** The vegetation within the upland area is predominately oats (*Avena sativa*) (UPL). Other vegetation observed included tarweed (*Hemizonia fitchii*) (UPL), holocarpha (*Holocarpha virgata*) (UPL), capped rush (*Juncus capitatus*) (FACU), toad rush (*Juncas bufonius*) (FACW), hawkbit (*Leontodon taraxacoides*) (UPL), bindweed (*Convolvulus arvensis*) (UPL), Italian ryegrass (*Lolium multiflorum*) (FAC), soft chess (*Bromus hordeaceus*) (FACU).
>
> ***Hydrology.*** No indicators of wetland hydrology were observed.
>
> ***Soils.*** Only one non-wetland data point (DP-D) exhibited indicators of hydric soils (e.g. chroma 2 with redoximorphic features). However, based on a lack of hydrophytic vegetation, and lack of wetland hydrologic indicators, these soils are likely due to historic conditions of long-term or frequent saturation that no longer exist. No other indicators of hydric soils were observed in the other non-wetland data points (DP-B, DP-F, and DP-G).

Areas Meeting The Definition of Wetlands

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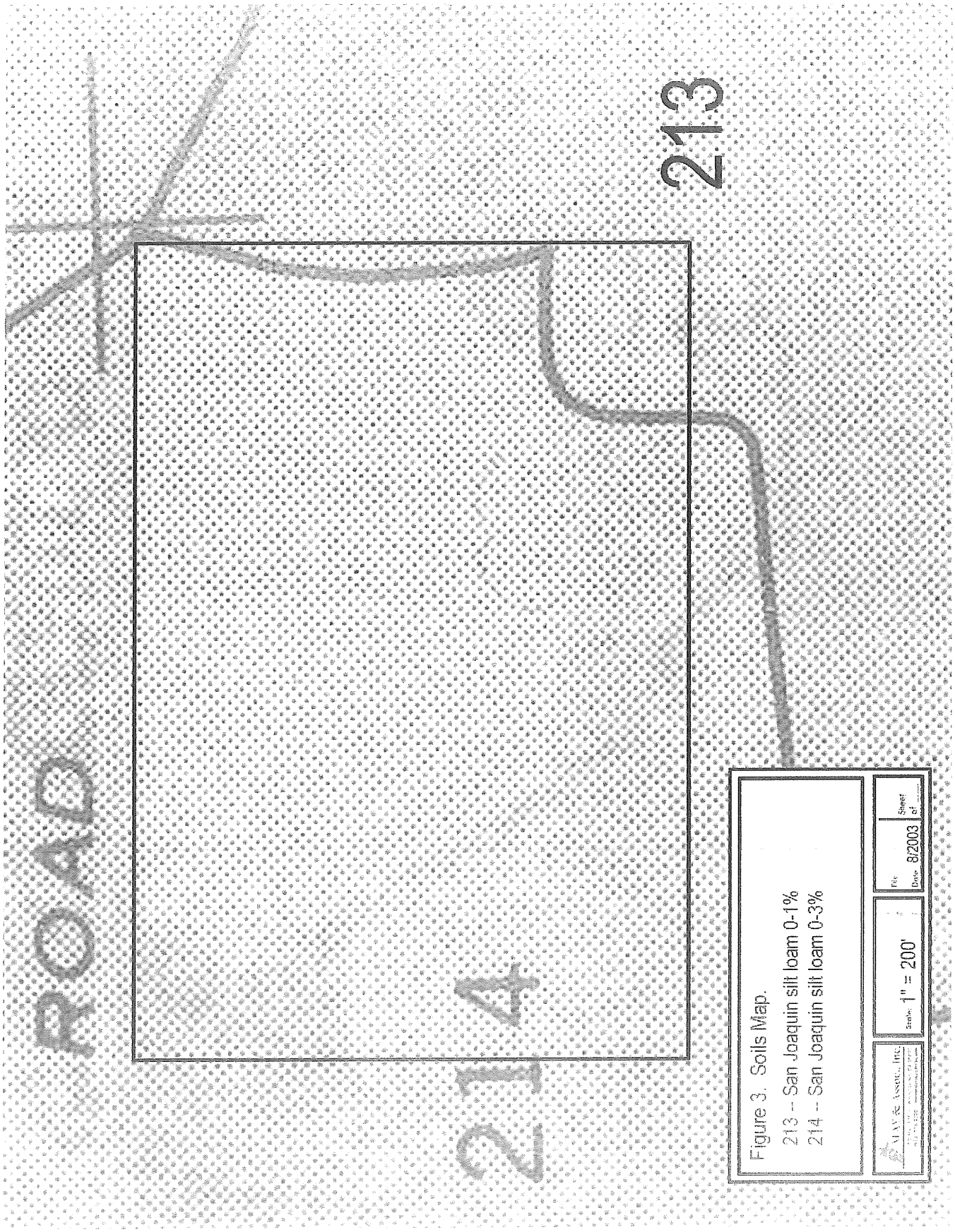
Rd 80
Rd 81
213
Figure 3. Soils Map.
213 -- San Joaquin silt loam 0-1%
214 -- San Joaquin silt loam 0-3%
Scale: 1" = 200'
Date: 8/2003
Sheet of

There are three wetland habitats (seasonal wetland, seasonal swale, and vernal pool) that comprise 0.766-acre of the study area. These communities are described below.

Seasonal Wetlands. Seasonal wetlands are the prevalent wetland community found within the study area. The seasonal wetlands comprise 0.313-acre of the study area (Figure 5) (Appendix A [DP-A, DP-C, DP-H]).

Vegetation. The seasonal wetlands are vegetated with tall flatsedge (*Cyperus eragrostis*) (FACW), curly dock (*Rumex crispus*) (FACW), annual rabbit-foot grass (*Polypogon monspeliensis*) (FACW), coyote-thistle (*Eryngium castrense*) (FACW), Italian ryegrass (*Lolium multiflorum*) (FAC), toad rush (*Juncus bufonius*) (FACW), hawkbit (*Leontodon taraxacoides*) (FACU), hyssop loosestrife (*Lythrum hyssopifolia*) (FACW), creeping spikerush (*Eleocharis macrostachya*) (OBL), and barnyard grass (*Echinochloa crusgalli*) (FACW).

Hydrology. Seasonal wetland areas exhibited primary and secondary indicators of wetland hydrology.

Soils. Seasonal wetland areas exhibited indicators of hydric soils (e.g. chroma 2 with redoximorphic features) (Appendix A [DP-A, DP-C, and DP-H]).

Seasonal Swale. The seasonal swales comprise 0.255-acre of the study area (Figure 5) (Appendix A [DP-I]).

Vegetation. The seasonal swales are vegetated with annual rabbit-foot grass (*Polyogon monspeliensis*) (OBL), bractless hedge hyssop (*Gratiola ebracteata*) (OBL), Italian ryegrass (*Lolium multiflorum*) (FAC), dwarf woolly-heads (*Psilocarphus brevissimus*) (OBL), tarweed (*Hemizonia fitchii*) (UPL), and butter-cup (*Ranunculus bonariensis*) (OBL).

Hydrology. Seasonal swale areas exhibited primary and secondary indicators of wetland hydrology. Inundation of seasonal swale SS4 was directly observed in February 2003.

Soils. The seasonal swale areas exhibited indicators of hydric soils (e.g. chroma 2 with redoximorphic features) (Appendix A [DP-I]).

Vernal Pool. Vernal pools comprise 0.198-acre of the study area (Figure 5) (Appendix A [DP-E]).

Vegetation. The vernal pools are vegetated with butter-cup (*Ranunculus bonariensis*) (OBL), Slender popcorn-flower (*Plagiobothrys stipitatus micranthus*) (OBL), annual hairgrass (*Deschampsia danthonioides*) (OBL), and annual rabbit-foot grass (*Polyogon monspeliensis*) (OBL).

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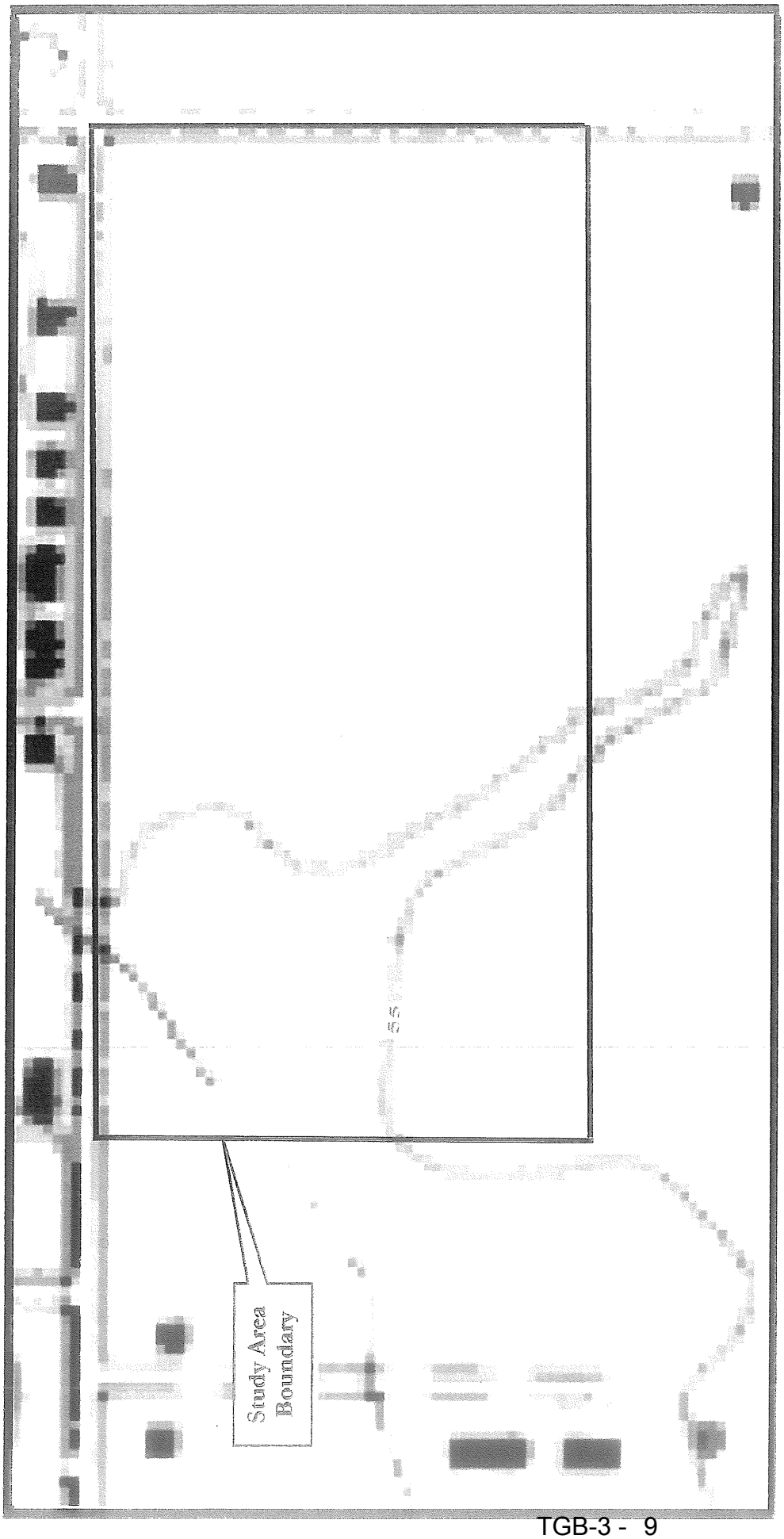

Figure 4. Study Area Topography

Note: No other topographic information is currently available for this site.

Source: Elk Grove 7.5-minute USGS quadrangle map.

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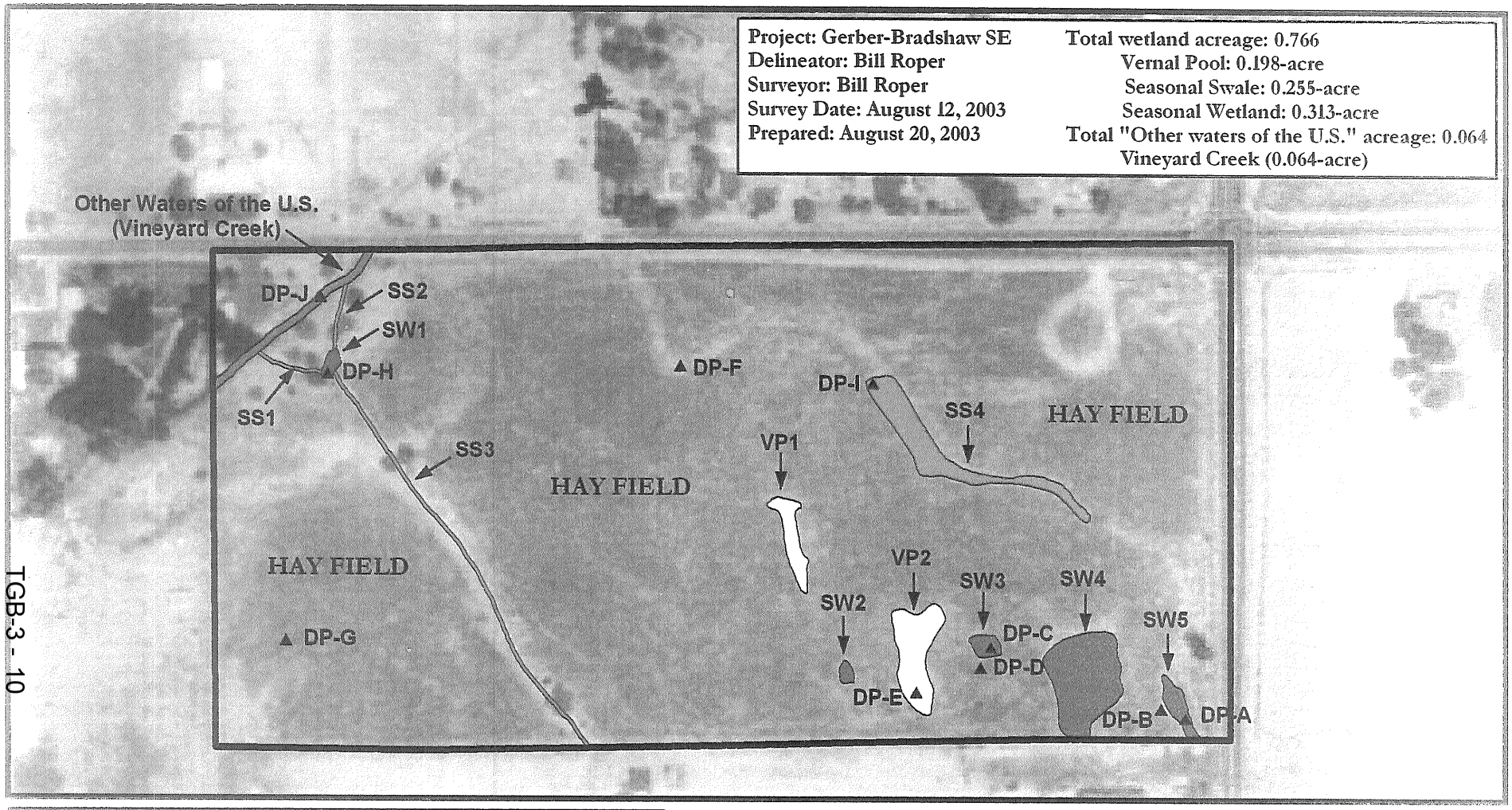
Scale: 1" = 200'
File: Figure4.jpg

Date:
September 2003



LEGEND

Study Area Boundary

▲DP-A Wetland Determination Data Point

Waters of the U.S.

Vernal Pool

Seasonal Swale

Seasonal Wetland

Other Waters of the U.S.

Upland Habitats

Hay Field

0 50 100 200 Feet

Figure 5. Location of Waters of the United States, including wetlands, at the Gerber Bradshaw SE Study Area, Sacramento County, California

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Scale: 1" = 200'
File: Figure5.jpg

Date:
August 2003

Hydrology. Vernal pool areas exhibited primary and secondary indicators of wetland hydrology. Inundation of vernal pools VP-1 and VP-2 was directly observed in February 2003.

Soils. The vernal pool areas exhibited indicators of hydric soils (e.g. chroma 2 with redoximorphic features) (Appendix A [DP-E]).

Areas Meeting The Definition of "Other Waters"

Only one feature meeting the definition of "Other Waters" of the U.S. is found within the study area (Vineyard Creek). This community is described below.

Vineyard Creek. Vineyard Creek transects the study area on the northwest corner of the study area, flowing northeast to southwest. Vineyard Creek comprises 0.064-acres of the study area (Figures 4 and 5) (Appendix A [DP-J]).

Vegetation. The area within the Ordinary High Water Mark of Vineyard Creek is mostly unvegetated, with sparse cattail (Typha sp.) (OBL) and yellow pond weed (Ludwigia peploides) (OBL) (absolute cover is much less than 15%).

Hydrology. Vineyard Creek is an intermittent creek. The hydrology of the creek is based on seasonal flow (i.e., rainfall) and runoff from surrounding development.

Soils. No soil data was collected due to inundation of the creek.

Isolation from Other Waters of the United States.

Vineyard creek is a tributary of Elder Creek which flows into Morrison Creek which terminates at Stone Lakes.

Seasonal swales SS1, SS2, SS3, and seasonal wetland SW1 likely have a direct, seasonal hydrologic connectivity to Vineyard Creek. Seasonal swale SS4 and seasonal wetlands SW4 and SW5 appear to eventually drain into the roadside ditches along Gerber Road and Bradshaw Road. These ditches appear to flow into Vineyard Creek. Seasonal wetlands SW2 and SW3 and vernal pools VP1 and VP2 do not appear to be directly connected to Vineyard Creek or the roadside ditches along Gerber Road and Bradshaw Road (Figures 4 and 5).

Interstate or Foreign Commerce

There is no apparent connection between Vineyard Creek and foreign or interstate commerce. There is no apparent connection between the wetland features within the study area and foreign or interstate commerce, other than potential use by migratory waterfowl.

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CONCLUSIONS

Vineyard Creek (0.064-acres), is an intermittent drainage that is directly connected to other waters of the U.S. and is would likely be considered a jurisdictional drainage by the U.S. Army Corps of Engineers.

The seasonal wetlands (0.313-acres), seasonal swales (0.255-acres), and vernal pools (0.198-acres) located within the study area meet the mandatory technical criteria and field indicators for wetlands outlined in the 1987 Wetlands Delineation Manual (Environmental Laboratory 1987). While these wetlands meet the mandatory technical for wetlands, the Corps determines the jurisdictional status of wetlands on a case-by-case basis and may or may not take jurisdiction on some or all of these wetland features.

REFERENCES

Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. (Technical Report YL-87-1.) U.S. Army Corps of Engineers, Waterways Experiment Station. Vicksburg, MS.

Soil Conservation Service. 1993. Soil survey of Sacramento County, California. United States Department of Agriculture. 399 pp.

Reed, P. B., Jr. 1988. National List of Plant Species that Occur in Wetlands: California Region 0. (Biological Report 88[26.10]). U.S. Fish and Wildlife Service. Fort Collins, Colorado.

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APPENDIX A.

Corps. Data Forms

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DATA FORM

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site [illegible]	Date 7 Aug 03
Applicant / Owner	County SAC
Investigator Gauer, Hope	State CA
Do Normal Circumstances exist on the site? (YES) NO	Community ID SW
Is the site significantly disturbed (Atypical Situation)? YES (NO)	Transect ID
Is the area a potential Problem Area? (If needed, explain on reverse) (YES) NO	Plot ID A

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 Cyperus eragrostis	H	FACW	9		
2 Rumex crispus	H	FACW	10		
3 Polygonum monspeliensis	H	FACW	11		
4 Elymus caput-medusae	H	FACU	12		
5 Lolium multiflorum	H	FAC	13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) 100 %

Remarks

HYDROLOGY

☐ Recorded Data (Describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☐ Aerial Photographs
- ☐ Other

☒ No Recorded Data Available

FIELD OBSERVATIONS		
Depth of Surface Water	None	(in)
Depth to Free Water in Pit	None	(in)
Depth to Saturated Soil	>12	(in)

WETLAND HYDROLOGY INDICATORS

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☒ Sediment Deposits
- ☒ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):
- ☒ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

SOILS

Map Unit Name (Series and Phase): San Joaquin silt loam	Drainage Class:
Taxonomy (Subgroup)	Field Observations Confirm Mapped Type? YES NO

PROFILE DESCRIPTION

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-12		7.5YR4/2	7.5YR5/6	C2d	loam

HYDRIC SOIL INDICATORS:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☒ Listed on Local Hydric Soils List – in depressions
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	YES NO	Is this Sampling Point Within a Wetland? YES NO
Wetland Hydrology Present? Dam	YES NO	
Hydric Soils Present?	YES NO	

Remarks

DATA FORM

UPL - A-6

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site	Date 7 Aug 03
Applicant / Owner	County SAC
Investigator	State CA
Do Normal Circumstances exist on the site? (YES) NO	Community ID UPL - A-6
Is the site significantly disturbed (Atypical Situation)? YES (NO)	Transect ID
Is the area a potential Problem Area? (If needed, explain on reverse) YES (NO)	Plot ID B

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 Bromus hordeaceus	H	FACU	9		
2 Lolium multiflorum	H	FAC	10		
3 Lactuca serriola	H	FAC+	11		
4 Lotus purshianus	H	UPL	12		
5 Rumex acetosella	H	FAC-	13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) 40 %

Remarks

HYDROLOGY

☐ Recorded Data (Describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☐ Aerial Photographs
- ☐ Other

☑ No Recorded Data Available

FIELD OBSERVATIONS

Depth of Surface Water	None	(in)
Depth to Free Water in Pit	None	(in)
Depth to Saturated Soil	>12	(in)

WETLAND HYDROLOGY INDICATORS

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):
- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

No hydrology observed in Feb 2003

UPL

SOILS

Map Unit Name (Series and Phase):	Drainage Class:
Taxonomy (Subgroup)	Field Observations Confirm Mapped Type? YES NO

PROFILE DESCRIPTION

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-12		7.5YR 4/2	None	—	loam

HYDRIC SOIL INDICATORS:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	YES (NO)	Is this Sampling Point Within a Wetland? YES (NO)
Wetland Hydrology Present?	YES (NO)	
Hydric Soils Present?	YES (NO)	

Remarks

Annual grassland upland between two seasonal wetlands

DATA FORM

SW

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site	Date 7 Aug 03
Applicant / Owner	County SAC
Investigator Grose, Roger	State CA
Do Normal Circumstances exist on the site? (YES) NO	Community ID SW
Is the site significantly disturbed (Atypical Situation)? YES (NO)	Transect ID
Is the area a potential Problem Area? (If needed, explain on reverse) (YES) NO	Plot ID C

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 Juncus bufonius		FACW	9		
2 Polypogon monsp.		FACW	10		
3 Leersia hexandra		FACW	11		
4 Lythrum hyssopifolium		FACW	12		
5			13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) 75%

Remarks

HYDROLOGY

☐ Recorded Data (Describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☐ Aerial Photographs
- ☐ Other

☐ No Recorded Data Available

FIELD OBSERVATIONS

Depth of Surface Water	None	(in)
Depth to Free Water in Pit	None	(in)
Depth to Saturated Soil	>12	(in)

WETLAND HYDROLOGY INDICATORS

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):
- ☒ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☒ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☒ Other (Explain in Remarks)

Deep tire ruts here

SOILS

Map Unit Name (Series and Phase): San Joaquin Silt loam	Drainage Class:
Taxonomy (Subgroup)	Field Observations Confirm Mapped Type? (YES) NO

PROFILE DESCRIPTION

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
		7.5YR3/2	7.5YR5/6	C 2d	loam

HYDRIC SOIL INDICATORS:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(YES)	NO	Is this Sampling Point Within a Wetland? (YES) NO
Wetland Hydrology Present? indirect	YES	NO	
Hydric Soils Present?	(YES)	NO	

Remarks

Slight depression. Deep tractor ruts

DATA FORM

Appendix TGB-3

UPL A6

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site	Date 7 Aug 03
Applicant / Owner	County SAC
Investigator Bouse, Roper	State CA
Do Normal Circumstances exist on the site? YES NO	Community ID UPL-A6
Is the site significantly disturbed (Atypical Situation)? YES NO	Transect ID
Is the area a potential Problem Area? (If needed, explain on reverse) YES NO	Plot ID

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 Holocarpha virgata	H	UPL	9		
2 Lolium multiflorum	H	FAC	10		
3 Leontodon taraxacoides	H	FACU	11		
4 Bromus hordeaceus	H	FACU	12		
5			13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) 25%

Remarks

HYDROLOGY

☐ Recorded Data (Describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☐ Aerial Photographs
- ☐ Other

☒ No Recorded Data Available

FIELD OBSERVATIONS	
Depth of Surface Water	None (in)
Depth to Free Water in Pit	(in)
Depth to Saturated Soil	(in)

WETLAND HYDROLOGY INDICATORS

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):
- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

SOILS

Map Unit Name (Series and Phase): Sam Jacinto SiL loam	Drainage Class:
Taxonomy (Subgroup)	Field Observations Confirm Mapped Type? (YES) NO

PROFILE DESCRIPTION

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-12		7.5YR3/2	7.5YR5/6	F2d	loam

HYDRIC SOIL INDICATORS:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	YES (NO)	Is this Sampling Point Within a Wetland? YES (NO)
Wetland Hydrology Present?	YES (NO)	
Hydric Soils Present?	(YES) NO	

Remarks

DATA FORM

VP

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site	Date 7 Aug 03
Applicant / Owner	County SAC
Investigator GAUSE, Robin	State CA
Do Normal Circumstances exist on the site? (YES) NO	Community ID VP
Is the site significantly disturbed (Atypical Situation)? YES (NO)	Transect ID
Is the area a potential Problem Area? (If needed, explain on reverse) (YES) NO	Plot ID E

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 Ranunculus bonariensis	H	OBL	9		
2 Plagiobothrys stipitatus	H	OBL	10		
3 Deschampsia danthonioides	H	OBL	11		
4 Polypogon monspeliensis	H	FACW	12		
5			13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) 100 %

Remarks

HYDROLOGY

☐ Recorded Data (Describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☐ Aerial Photographs
- ☐ Other

☒ No Recorded Data Available

FIELD OBSERVATIONS

Depth of Surface Water	None	(in)
Depth to Free Water in Pit	>12	(in)
Depth to Saturated Soil	>12	(in)

WETLAND HYDROLOGY INDICATORS

Primary Indicators:
- ☒ Inundated March 2003
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☒ Sediment Deposits
- ☒ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):
- ☒ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

SOILS

Map Unit Name (Series and Phase): San Joaquin	Drainage Class:
Taxonomy (Subgroup)	Field Observations Confirm Mapped Type? YES NO

PROFILE DESCRIPTION

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-12		7.5YR4/2	7.5YR5/6	C2d	loam

HYDRIC SOIL INDICATORS:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☒ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	YES NO	Is this Sampling Point Within a Wetland? YES NO
Wetland Hydrology Present?	YES NO	
Hydric Soils Present?	YES NO	

Remarks

DATA FORM

UPL

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site	Date 7 Aug 03
Applicant / Owner	County SAC
Investigator Gaure Popla	State CA
Do Normal Circumstances exist on the site? (YES) NO	Community ID
Is the site significantly disturbed (Atypical Situation)? YES (NO)	Transect ID
Is the area a potential Problem Area? (If needed, explain on reverse) YES (NO)	Plot ID B

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 Hemizonia fitchii	H	UPL	9		
2 Avena sativa	H	UPL	10		
3 Juncus bufo.	H	FACW	11		
4 Leontodon taraxacoides	H	UPL	12		
5 Convolvulus arvensis		UPL	13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) 20%

Remarks

HYDROLOGY

☐ Recorded Data (Describe in Remarks)

- ☐ Stream, Lake, or Tide Gauge
- ☐ Aerial Photographs
- ☐ Other

☑ No Recorded Data Available

FIELD OBSERVATIONS

Depth of Surface Water	None	(in)
Depth to Free Water in Pit	>12	(in)
Depth to Saturated Soil	>12	(in)

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

SOILS

Map Unit Name (Series and Phase): Sam Jammin silt loam	Drainage Class:
Taxonomy (Subgroup)	Field Observations Confirm Mapped Type? YES NO

PROFILE DESCRIPTION

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-12	-	7.5YR 4/3	7.5YR 5/6	Fld	loam

HYDRIC SOIL INDICATORS:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	YES (NO)	Is this Sampling Point Within a Wetland? YES (NO)
Wetland Hydrology Present?	YES (NO)	
Hydric Soils Present?	YES (NO)	

Remarks

DATA FORM

UPL

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site	Date 7 Aug 03
Applicant / Owner	County [illegible]
Investigator Gauge, Roger	State CA
Do Normal Circumstances exist on the site? YES (YES) NO	Community ID UPL - A-6
Is the site significantly disturbed (Atypical Situation)? YES (NO)	Transect ID
Is the area a potential Problem Area? (If needed, explain on reverse) YES (NO)	Plot ID G

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 Avena sativa		UPL	9		
2 Hemizonia fitchii		FACU	10		
3 Heterotheca villosa		UPL	11		
4 Juncus capitatus		FACU	12		
5			13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) 0

Remarks

HYDROLOGY

☐ Recorded Data (Describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☐ Aerial Photographs
- ☐ Other

☑ No Recorded Data Available

FIELD OBSERVATIONS		
Depth of Surface Water	None	(in)
Depth to Free Water in Pit	7/2	(in)
Depth to Saturated Soil	7/2	(in)

WETLAND HYDROLOGY INDICATORS

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):
- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

SOILS

Map Unit Name (Series and Phase):	Drainage Class:
Taxonomy (Subgroup)	Field Observations Confirm Mapped Type? YES NO

PROFILE DESCRIPTION

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-12		7.5YR4/3	7.5YR5/6	f/d	None

HYDRIC SOIL INDICATORS:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	YES (NO)	Is this Sampling Point Within a Wetland? YES NO
Wetland Hydrology Present?	YES (NO)	
Hydric Soils Present?	YES (NO)	

Remarks

DATA FORM

SW

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site			Date 7 Aug 03
Applicant / Owner			County SAC
Investigator Gause + Roper			State CA
Do Normal Circumstances exist on the site?	YES	NO	Community ID SW
Is the site significantly disturbed (Atypical Situation)?	YES	NO	Transect ID
Is the area a potential Problem Area? (If needed, explain on reverse)	YES	NO	Plot ID H

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 Eleocharis macrostachya	H	OBL	9		
2 Echinodorus cras-galli	H	FACW	10		
3 Lolium multiflorum	H	FAC	11		
4			12		
5			13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-)

Remarks

HYDROLOGY

- ☐ Recorded Data (Describe in Remarks)
  - ☐ Stream, Lake, or Tide Gauge
  - ☐ Aerial Photographs
  - ☐ Other
- ☐ No Recorded Data Available

FIELD OBSERVATIONS

Depth of Surface Water	None	(in)
Depth to Free Water in Pit	>12	(in)
Depth to Saturated Soil	>12	(in)

WETLAND HYDROLOGY INDICATORS

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☑ Sediment Deposits
- ☑ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):
- ☑ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

SOILS

Map Unit Name (Series and Phase):	Drainage Class:
Taxonomy (Subgroup)	Field Observations Confirm Mapped Type? YES NO

PROFILE DESCRIPTION

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-12		7.5YR3/2	7.5YR5/6	C2d	loam

HYDRIC SOIL INDICATORS:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(YES) NO	Is this Sampling Point Within a Wetland? (YES) NO
Wetland Hydrology Present?	(YES) NO	
Hydric Soils Present?	(YES) NO	

Remarks

Abandoned channel of Vineyard Ck.

DATA FORM

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Seasonal Swale

Project/Site			Date 7 Apr 03
Applicant / Owner			County SAC
Investigator Gauna, Rowe			State CA
Do Normal Circumstances exist on the site?	YES	NO	Community ID VS
Is the site significantly disturbed (Atypical Situation)?	YES	NO	Transect ID
Is the area a potential Problem Area? (If needed, explain on reverse)	YES	NO	Plot ID 1

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 Polygonum monspeliensis		OBL	9		
2 Grindelia ebracteata		OBL	10		
3 Lolium multiflorum		FAC	11		
4 Psilocarphus brev.		OBL	12		
5 Hemizonia fitchii		UPL	13		
6 Ranunculus bonariensis		OBL	14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) >90%

Remarks

HYDROLOGY

- ☐ Recorded Data (Describe in Remarks)
  - ☐ Stream, Lake, or Tide Gauge
  - ☐ Aerial Photographs
  - ☐ Other
- ☐ No Recorded Data Available

FIELD OBSERVATIONS

Depth of Surface Water	None	(in)
Depth to Free Water in Pit	>12	(in)
Depth to Saturated Soil	>12	(in)

WETLAND HYDROLOGY INDICATORS

Primary Indicators:
- ☒ Inundated Mar 2003
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☒ Sediment Deposits
- ☒ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):
- ☒ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

SOILS

Map Unit Name (Series and Phase): San Joaquin silt loam	Drainage Class:
Taxonomy (Subgroup)	Field Observations Confirm Mapped Type? YES NO

PROFILE DESCRIPTION

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-12		7.5YR4/3	7.5YR5/6	mzd	loam

HYDRIC SOIL INDICATORS:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	YES NO	Is this Sampling Point Within a Wetland? YES NO
Wetland Hydrology Present?	YES NO	
Hydric Soils Present?	YES NO	

Remarks

ATTACHMENT 2

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

July 19, 2007

Regulatory Branch (200300626)

Lux Taylor
Taylor Properties
1425 River Park Drive, Suite 201
Sacramento, California 95815-4513

Dear Mr. Taylor:

We are responding to your consultant's request for an approved jurisdictional determination for the SWC Bradshaw-Geber site (referred to previously as the "Taylor Properties at Southwest Gerber & Bradshaw Road site"). This approximately 19.6 acre site is located on Gerber Creek in Section 8, Township 7 North, Range 6 East, MDB&M, in Sacramento County, California. This verification supersedes the October 21, 2003, jurisdictional determination for this site.

Based on available information, we concur with the estimate of waters of the United States, as depicted on the "Jurisictional Determination SWC Bradshaw-Gerber" drawing, dated March 13, 2007, prepared by Gibson and Skordal, LLC. Approximately 1.0645 acres of waters of the United States, including wetlands, are present within the survey area. These waters are regulated under Section 404 of the Clean Water Act since they are tributary to Gerber Creek.

This verification is valid for five years from the date of this letter, unless new information warrants revision of the determination before the expiration date. This letter contains an approved jurisdictional determination for your subject site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331.

A Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form is enclosed. If you request to appeal this determination you must submit a completed RFA form to the South Pacific Division Office at the following address: Administrative Appeal Review Officer, Army Corps of Engineers, South Pacific Division, CESPD-PDS-O, 1455 Market Street, San Francisco, California 94103-1399, Telephone: 415-503-6574, FAX: 415-503-6646.

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete; that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within 60 days of the NAP. Should you decide to submit an RFA form, it must be received at the above address by 60 days from the date of this letter. It is

not necessary to submit an RFA form to the Division Office if you do not object to the determination in this letter.

You should provide a copy of this letter and notice to all other affected parties, including any individual who has an identifiable and substantial legal interest in the property.

This determination has been conducted to identify the limits of Corps of Engineers' Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

Please refer to identification number 200300626 in any correspondence concerning this project. If you have any questions, please contact Andrea Jones at our Sacramento Office, 1325 J Street, Room 1480, email andrea.j.jones@usace.army.mil, or telephone 916-557-7745. You may also use our website: www.spk.usace.army.mil/regulatory.html.

Sincerely,

ORIGINAL SIGNED

Anna Sutton
Chief, Sacramento Office

Enclosure

Copy furnished without enclosure:

✓Jim Gibson, Gibson and Skordal, LLC, 2277 Fair Oaks Blvd., Suite 105, Sacramento, California 95825-5599
U.S. Fish and Wildlife Service, Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, California 95825-3901
Planning and Community Development Department, County of Sacramento, 827 7th Street, Room 230, Sacramento, California 95814-2406
William Marshall, Storm Water and Water Quality Certification Unit, Central Valley Regional Water Quality Control Board, 11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114
Water Quality Certification Unit, California State Water Resources Control Board, 1001 I Street, Sacramento, California 95814

SPECIAL STATUS SPECIES EVALUATION

SWC GERBER-BRADSHAW PROPERTY

SACRAMENTO COUNTY, CALIFORNIA

SEPTEMBER 2004

Prepared For:

TAYLOR/VILLAGE SACRAMENTO INVESTMENTS LP
1425 River Park Drive #201
Sacramento, California 95815

Prepared By:

GIBSON & SKORDAL, LLC
Wetland Consultants
2277 Fair Oaks Blvd., Suite 395
Sacramento, California 95825

INTRODUCTION

The purpose of this report is to present the results of a special status species evaluation conducted for the SWC Gerber-Bradshaw Property.

LOCATION

The study area is a ± 19.6-acre parcel located immediately south of Gerber Road and west of Bradshaw Road in the Florin-Vineyard Community Plan development area. It lies in the northeast ¼ of Section 8, Township 7 North, and Range 6 East of Sacramento County, California (Latitude 38° 29' North, Longitude 121° 20' West). Figure 1 is a vicinity map.

METHODOLOGY

Field studies were conducted on May 7 and September 5, 2004 for the purpose of identifying and evaluating potential special status species and their habitats in the study area.

This special status species evaluation includes those species identified as having relative scarcity and/or declining populations by the United States Fish & Wildlife Service (USFWS) or California Department of Fish & Game (CDFG). Special status species include those formally listed as threatened or endangered, those proposed for formal listing, candidates for Federal listing, and those considered to be Species of Concern by USFWS or Species of Special Concern by CDFG. In addition to these, we also included those species considered to be "special animals" or "fully protected" by the CDFG and those plant species considered to be rare, threatened or endangered in California by the California Native Plant Society (CNPS).

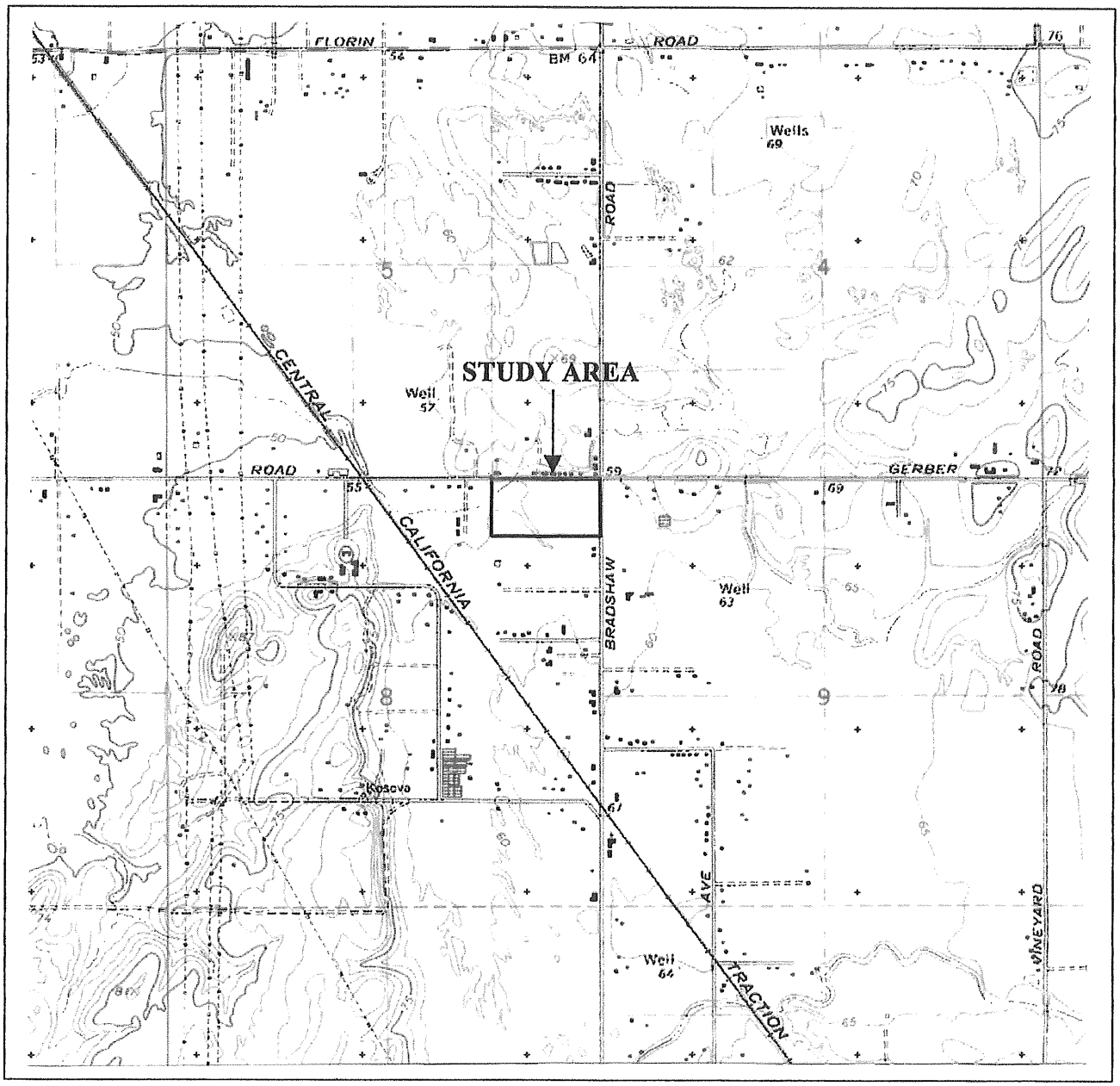
In our evaluation, we considered those special status species documented by the California Natural Diversity Database (CNDDB) as occurring in the vicinity of the study area. A record search of the CNDDB was conducted for the Elk Grove, Florin, Carmichael, and Sloughhouse 7.5 Minute USGS quadrangles to identify all documented sightings of special status species in the vicinity of the study area. In addition to these species, we included other special status species that may have some potential for occurring in the study area based on historical range data and/or the presence of suitable habitat.

GENERAL SITE CONDITIONS AND HABITATS

The study area consists of gently undulating to rolling terrain bordered by existing roads to the north and east, and a mix of ranchettes and open grassland/pasture to the west and south. The

FIGURE 1

VICINITY MAP



↑
N
(Scale: 1 Inch = 2000 Feet)

Source: Elk Grove 7.5 Minute USGS Topographic Quadrangle

study area has been historically altered by farming and grazing activities, and it has most recently been utilized for winter hay/oats production. Prior to the initial field study conducted in May of 2004, the grassland/pasture in the study area was freshly mowed.

At the time of the second field survey conducted in September 2004, a majority of the study area supported disturbed annual grassland dominated by oats (*Avena sp.*), soft chess (*Bromus mollis*), rip-gut brome *(Bromus diandrus*), tarweed (*Holocarpha virgata*), perennial rye (*Lolium perenne*), and little quaking grass (*Briza minor*). Other common associates observed at that time include Mediterranean barley (*Hordeum hystrix*), hairy hawkbit (*Leontondon leysseri*), clover (*Trifolium sp.*), rat-tail fescue (*Vulpia myuros*), Fitch's spikeweed (*Hemizonia fitchii*), filaree (*Erodium sp*), canarygrass (*Phalaris sp.*), and toadrush (*Juncus bufonius*). Sparse trees observed in the study area include valley oak (*Quercus lobata*), California walnut (*Juglans californica*), olive (*Olea europaea*), Fremont cottonwood (*Populus fremontii*), almond (*Prunus dulcis*), and a variety of ornamentals.

Soils in the study area are mapped as San Joaquin silt loams, leveled, 0 to 1 percent slopes; and San Joaquin silt loams, 0 to 3 percent slopes. San Joaquin soils are moderately deep, moderately well-drained soils typically mapped on low terrace features.

EXISTING WATERS AND WETLANDS

A jurisdictional delineation of waters of the United States including wetlands was conducted for the subject property by May & Associates, Inc. in September 2003, and later verified by the Corps of Engineers in a letter dated October 21, 2003. Based on the verified delineation, there is a total of 0.83 acre of jurisdictional waters and wetlands present in the study area including 0.198 acre of vernal pools, 0.313 acre of seasonal wetlands, 0.255 acre of seasonal swales, and 0.064 acre of intermittent drainage/creek (Vineyard Creek).

Based on our field observations, a majority of the areas mapped as vernal pools (VP1-VP2) and seasonal wetlands (SW1-SW5) support wetland plant communities typically associated with vernal pool habitats. They all sustain seasonal ponding and saturated soil conditions that persist for long-duration in the winter before drying up in the spring. Some of the wetlands, including SW4 and SW5, have been altered by seasonal irrigation run-off from the adjacent property to the south.

The deeper wetland habitats, including SW5, are dominated by creeping spikerush (*Eleocharis macrostachya*), slender popcorn flower (*Plagiobothrys stipitatus*), and coyote thistle *(Eryngium vaseyi*). The medium depth wetlands, such as SW4, are more typically dominated by slender

popcorn flower, annual rabbit-foot grass (*Polypogon monspeliensis*), and Carter's buttercup (*Ranunculus aveolatus*). Other common associates in the medium to deep wetlands include smooth goldfields (*Lasthenia glaberrima*), common tarweed (*Hemizonia pungens*), bractless hedge-hyssop (*Gratiola ebracteata*), and hairy flower bentgrass (*Agrostis avenacea*).

The shallow-medium depth wetlands, such as VP1 and VP2, tend to support wetland plant communities dominated by purple hairgrass (*Deschampsia danthonioides*), annual rabbit-foot grass, Fremont's goldfields (*Lasthenia fremontii*), and slender popcorn flower. The mapped seasonal swales generally occur in sloping depressions and/or drainages that sustain a mix of wetland species typically associated with seasonal wetland habitats. Typical vegetation in the swales includes perennial rye, annual rabbit-foot grass, hairy flower bentgrass, toad rush, Bermuda grass, and curly dock (*Rumex crispus*).

An intermittent drainage, locally known as Vineyard Creek, bisects the northwest corner of the study area. The creek generally sustains seasonal flows and/or ponding conditions that persist into early summer in most years. The creek channel in the study area, which is confined to a deeply incised channel bed and bank, supports associated emergent wetlands and seasonal wetland vegetation. Common species observed in the channel include floating primrose (*Ludwigia peploides*), broad-leaf water plantain (*Alisma plantago-aquatica*), bearded sprangle-top (*Leptochloa fascicularis*), barnyard grass (*Echinochloa crusgalli*), smartweed (*Polygonum sp.*), tall flatsedge (*Cyperus eragrostis*), and dallis grass (*Paspalum dilatatum*).

SPECIAL STATUS SPECIES

Table 1 provides a list of special status species that were evaluated including their listing status, habitat associations, and whether potential habitats occur in the study area. Of the twenty-four special status species evaluated in Table 1, ten species including bank swallow, Bogg's Lake hedge-hyssop, California tiger salamander, giant garter snake, Sacramento orcutt grass, slender orcutt grass, Swainson's hawk, valley elderberry longhorn beetle, vernal pool fairy shrimp, and vernal pool tadpole shrimp are Federal and/or State listed threatened and/or endangered species. The following is a detailed summary of special status species and their habitats as they relate to the study area.

Swainson's Hawk and Other Raptors

Swainson's hawk (*Buteo swainsoni*) is a raptor species currently listed as threatened in California by the CDFG. They typically nest in tall cottonwoods, valley oaks, or willows associated with riparian corridors with adjacent grassland, pasture, and/or cropland with a high density of

TABLE 1

EVALUATION OF SPECIAL STATUS SPECIES HABITATS

	State Status	Federal Status	CNPS Listing	Habitat Association	Potential Habitat In Study Area
Birds					
Accipiter cooperi (Cooper's hawk)	Species of Special Concern	None		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes -sutiable foraging & marginal nesting habitat
Accipiter striatus (sharp-shinned hawk)	Species of Special Concern	None		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes -sutiable foraging & marginal nesting habitat
Agelaius tricolor (tricolored blackbird)	Species of Special Concern	Species of Concern		Colonial nester in cattails, bullrush, or blackberries associated with marsh habitats.	No
Athene cunicularia (burrowing owl)	Species of Special Concern	Species of Concern		Nests in abandoned ground squirrel burrows associated with open grassland habitats.	Yes -marginal habitat present
Buteo swainsoni (Swainson's hawk)	Threatened	None		Nests in tall cottonwoods, valley oaks or willows. Forages in fields, cropland, irrigated pature, and grassland near large riparian corridors.	Yes -sutiable foraging & marginal nesting habitat
Circus cyaneus (northern harrier)	Species of Special Concern	None		Forages in open grasslands, nests on ground in shrubby vegetation.	Yes -foraging only
Elanus leucurus (white-tailed kite)	Fully Protected	None		Nests in riparian corridors along streams and rivers, and forages in nearby grasslands and fields.	Yes -suitable foraging & nesting habitat
Riparia riparia (bank swallow)	Threatened	Species of Concern		Colonial nester in vertical cliffs and banks associated with riparian zones along streams, rivers, and lakes.	No
Amphibians & Reptiles					
Ambystoma trigrinum californiense (California tiger salamander)	Species of Special Concern	Threatened		Breeds in ponds or other deeply ponded wetlands, and uses gopher holes and ground squirrel burrows in adjacent grasslands for upland refugia/foraging.	Yes -marginal habitat present, but not highly suitable for CTS
Clemmys marmorata marmorata (northwestern pond turtle)	Species of Special Concern	Species of Concern		Ponds, rivers, streams, wetlands, and irrigation ditches with associated marsh habitat.	Yes -potential habitat in creek
Scaphiopus hammondii (western spadefoot)	Species of Special Concern	Species of Concern		Breeds in vernal pools, seasonal wetlands and associated swales. Forages and hibernates in adjacent grasslands.	Yes
Thamnophis gigas (giant garter snake)	Threatened	Threatened		Rivers, canals, irrigation ditches, rice fields, and other aquatic habitats with slow moving water and heavy emergent vegetation.	Yes - marginal habitat in creek, but not highly suitable for GGS.

TABLE 1

(Continued)

	State Status	Federal Status	CNPS Listing	Habitat Association	Potential Habitat In Study Area
Invertebrates					
Branchinecta lynchi (vernal pool fairy shrimp)	None	Threatened		Vernal pools and other seasonally ponded wetlands.	Yes - potential habitat in VP's & SW's
Branchinecta mesovallensis (midvalley fairy shrimp)	None	None		Vernal pools and other seasonally ponded wetlands.	Yes - potential habitat in VP's & SW's
Desmocerus californicus dimorphus (valley elderberry longhorn beetle)	None	Threatened		Dependent upon elderberry plant (Sambucus mexicana) as primary host species	No
Lepidurus packardi (vernal pool tadpole shrimp)	None	Endangered		Vernal pools and other deeply ponded seasonal wetlands.	Yes - potential habitat in VP's & SW's
Linderiella occidentalis (California linderiella)	None	None		Vernal pools and other seasonally ponded wetlands.	Yes - potential habitat in VP's & SW's
Plants					
Downingia pusilla (dwarf downingia)	None	None	CNPS-2	Vernal pools	Yes - potential habitat in VP's & SW's
Gratiola heterosepala (Bogg's Lake hedge-hyssop)	Endangered	None	CNPS-1B	Vernal pools and margins of lakes/ponds	Yes - potential habitat in VP's & SW's
Juncus leiospermus var. ahartii (Ahart's dwarf rush)	None	Species of Concern	CNPS-1B	Vernal pools	Yes - potential habitat in VP's & SW's
Legenere limosa (legenere)	None	Species of Concern	CNPS-1B	Vernal pools	Yes - potential habitat in VP's & SW's
Orcuttia tenuis (slender orcutt grass)	Endangered	Threatened	CNPS-1B	Vernal pools	Yes -but no plants were found in field surveys.
Orcuttia viscida (Sacramento orcutt grass)	Endangered	Threatened	CNPS-1B	Vernal pools	Yes -but no plants were found in field surveys.
Sagittaria sanfordii (Sanford's arrowhead)	None	Species of Concern	CNPS-1B	Deep aquatic habitats associated with canals, drainages, and ditches.	Yes -but no plants were found in field surveys.

rodents. The Central Valley population typically breeds and nests in late spring through early summer before migrating to Central America and South America for the fall and winter seasons.

Based on CNDDB sighting records, active Swainson's hawk nests have been documented within a 4 to 5-mile radius of the study area including several nests along the east side of Highway 99 between Calvine Road and Sheldon Road, and multiple nests within the Cosumnes River corridor to the south. Given this, the grassland/pasture habitat in the study area provides potential foraging habitat for Swainson's hawk. Additionally, there is suitable foraging habitat present for a variety of other raptors including white-tailed kite, northern harrier, red-tailed hawk, sharp-shinned hawk, and Cooper's hawk. The sparse trees in the study area provide only marginal nesting potential for most of these raptors.

Burrowing owl (*Athene cunicularia*) is a ground nesting raptor species afforded protection by CDFG as a species of special concern due to potentially declining populations in the Central Valley of California. They typically inhabit open grassland habitats where they nest in abandoned ground squirrel burrows and other nesting cavities associated with raised mounds, levees, or soft berm features. Although there is marginal nesting and foraging habitat available for burrowing owls, we did not observe any potential nesting burrows or other indicators of current burrowing owl activity at the site.

Tricolored Blackbird

Tricolored blackbirds (*Agelaius tricolor*) are afforded protection by CDFG as a species of special concern due to declining populations in the region. They are colonial nesters preferring to nest in dense stands of cattails and/or bullrush, but they also commonly nest in blackberry thickets associated with drainages, ditches, and canals. There have been a number of documented sightings of tricolored blackbird nesting colonies in the Florin and Elk Grove quadrangles, but the locations have been excluded from CNDDB records for protection issues.

However, the absence of suitable nesting habitat in the study area would eliminate any reasonable potential for tricolored blackbirds to nest at the site.

California Tiger Salamander

The California tiger salamander (*Ambystoma trigrinum californiense*) is a Federal threatened species and a California Species of Special Concern that typically breeds in seasonal or permanent ponds. California tiger salamander (CTS) may also breed in deeper ponded vernal pools, seasonal wetlands and/or other seasonal pools within swales or channels. They typically

spend a majority of their life cycle living below ground in ground squirrel burrows or pocket gopher burrows in grasslands situated adjacent to suitable breeding sites.

The deeper wetlands in the study area, including SW4-SW5, may provide some potential for seasonal use by CTS. However, given the absence of suitable breeding habitat located in or adjacent to the study area and given the absence of documented sightings in the vicinity, the potential for CTS to occur at the site appears to be very low.

Giant Garter Snake

Giant garter snake (GGS) is designated as a Federal threatened and State threatened species afforded special protection by USFWS and CDFG. GGS is generally associated with larger canals, irrigation ditches, and other semi-permanent to permanent aquatic sites with slow moving water and an abundance of emergent vegetation.

Although GGS has been documented within Elk Grove Creek and lower Morrison Creek situated to the west of Highway 99, there have not been any documented GGS sightings along the east side of Highway 99 including the reach of Vineyard Creek in or near the study area. Given this, the reach of Vineyard Creek in the study area provides only low (i.e. marginal) potential for use by GGS.

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (*Desmocerus californicus*) is a Federal threatened species that is dependent upon the elderberry plant (*Sambucus sp.*) as a primary host species. Elderberry shrubs are a common component of riparian areas throughout the Sacramento Valley region, and they have been documented as occurring at numerous locations in the vicinity of the study area.

Given the absence of elderberry shrubs in the study area, there is no potential for valley elderberry longhorn beetle to occur at the site.

Vernal Pool Branchiopods

Federally listed vernal pool branchiopods including the threatened vernal pool fairy shrimp (*Branchinecta lynchi*) and the endangered vernal pool tadpole shrimp (*Lepidurus packardi*) have been documented as occurring in Elk Grove and Florin USGS quadrangles. Other non-listed branchiopods known to occur in the region include California linderiella (*Linderiella occidentalis*) and midvalley fairy shrimp (*Branchinecta mesovallensis*).

The branchiopod species listed above are generally restricted to vernal pools and/or other seasonally ponded wetlands that sustain inundation during the winter before drying up in the late spring. Given this, all or most of the existing vernal pools and seasonal wetlands in the study area provide potential habitat for special status branchiopods. However, protocol surveys to determine presence or absence of Federally listed branchiopods have not been conducted for this site at this time.

Special Status Plants

Special status plant species identified on the CNDDB as occurring in the vicinity of the study area, or may potentially occur in the area, include Ahart's dwarf rush (*Juncus leiospermus ahartii*), Bogg's Lake hedge-hyssop (*Gratiola heterosepala*), dwarf downingia (*Downinia pusilla*), legenere (*Legenere limosa*), Sacramento orcutt grass (*Orcuttia viscida*), slender orcutt grass (*Orcuttia tenuis*), and Sanford's arrowhead (*Sagittaria sanfordii*).

Ahart's dwarf rush, Bogg's Lake hedge-hyssop, dwarf downingia, legenere, Sacramento orcutt grass, and slender orcutt grass are all strongly associated with vernal pools habitats. Bogg's Lake hedge-hyssop can also occur around the perimeter of lakes and ponds. Conversely, Sanford's arrowhead generally occurs in deep aquatic habitats associated with drainages, canals, and larger ditches that sustain inundation into early summer.

The vernal pools and seasonal wetlands in the study area may provide potential habitat for Ahart's dwarf rush, Bogg's Lake hedge-hyssop, dwarf downingia, legenere, Sacramento orcutt grass, and slender orcutt grass. In addition, the reach of Vineyard Creek in the study area provides suitable habitat for Sanford's arrowhead. The results of focused plant surveys conducted in May and September of this year indicate that Sacramento orcutt grass, slender orcutt grass, and Sanford's arrowhead do not presently occur at the site. Due to the late timing of field surveys and the affects of recent mowing activities, we were unable to determine presence or absence of Ahart's dwarf rush, Bogg's Lake hedge-hyssop, dwarf downingia, and legenere in the study area.

SUMMARY

A number of special status raptors including Swainson's hawk, white-tailed kite, northern harrier, and burrowing owl would have some potential for occurring in the study area based on the presence of suitable foraging and/or nesting habitat. Should future development of the study area coincide with the raptor nesting season generally defined as February though August, we

recommend that a raptor nesting survey be completed within two weeks of the start of project construction.

Some or all of the vernal pools and seasonal wetlands in the study area provide potential habitat for special status branchiopods including the Federally listed vernal pool fairy shrimp and vernal pool tadpole shrimp. However, Protocol dry seasonal surveys to determine presence or absence of Federally listed branchiopods have not been conducted for this site.

The vernal pools and seasonal wetlands may also provide potential habitat for special status plants including Ahart's dwarf rush, Bogg's Lake hedge-hyssop, dwarf downingia, legenere, Sacramento ocrutt grass, and slender orcutt grass. In addition, Vineyard Creek provides suitable habitat for Sanford's arrowhead. However, focused plant surveys conducted this past summer indicate that Sanford's arrowhead, Sacramento orcutt grass, and slender orcutt grass are not present in the study area.

The reach of Vineyard Creek in the study area also provides suitable habitat for northwestern pond turtle, and it may also provide marginally suitable habitat for the Federally threatened giant garter snake. However, it is our opinion that the potential for giant garter snake to utilize this habitat would be low.

APPENDIX A

PLANT LIST

LIST OF PLANTS OBSERVED ON THE SWC GERBER-BRADSHAW PROPERTY AND THEIR STATUS AS WETLAND INDICATOR SPECIES

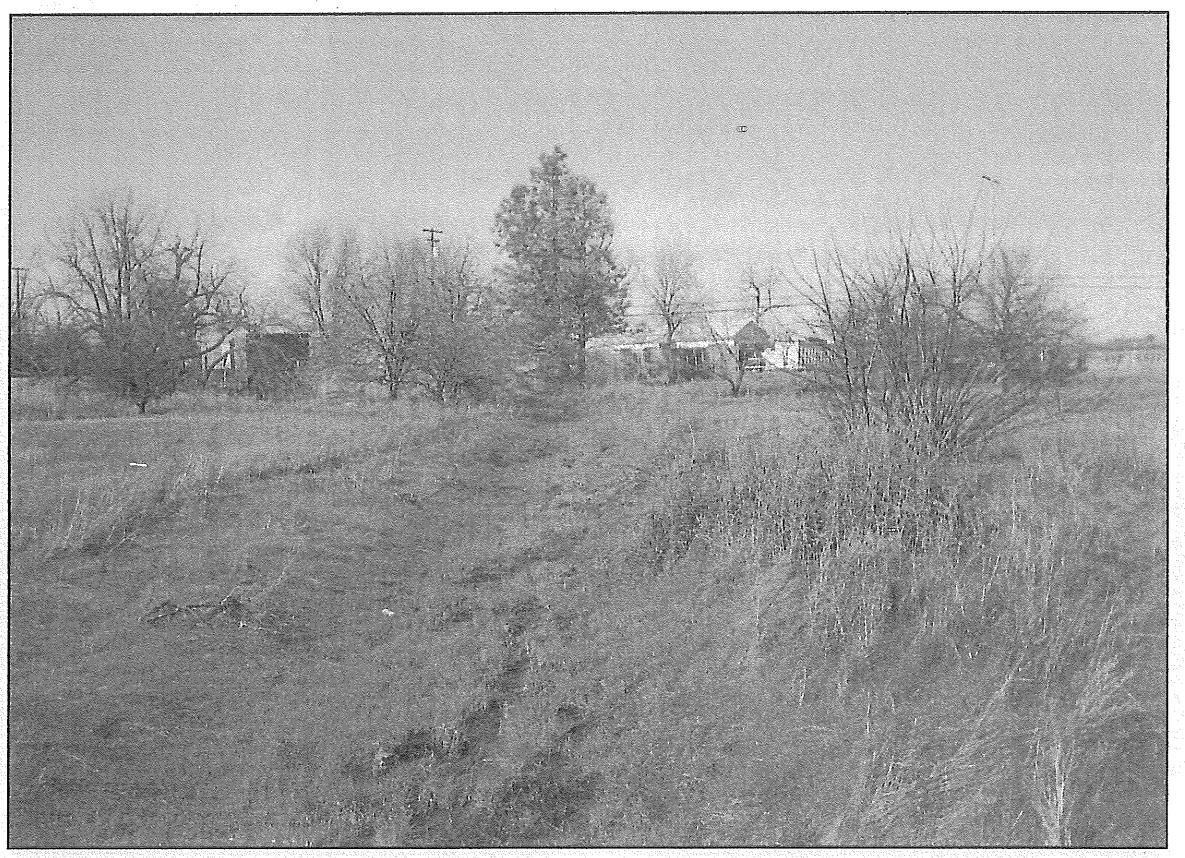
Scientific Name	Common Name	Status [1&2]
Agrostis avenacea	hairy flower bentgrass	FACW*
Aira caryophyllea	silver hairgrass	UPL
Alisma plantago-aquatica	broad-leaf water plantain	OBL
Amsinckia intermedia	fiddleneck	UPL
Avena sp.	wild oats	UPL
Brassica sp.	mustard	NI
Briza minor	little quaking grass	FACW-
Brodiaea sp.	brodiaea	---
Bromus diandrus (B. rigidus)	rip-gut grass	UPL
Bromus mollis	soft chess	FACU-
Centaurea solstitialis	yellow star-thistle	UPL
Cichorium intybus	chickory	UPL
Cirsium sp.	thistle	---
Convolvulus arvensis	bindweed	UPL
Conyza canadensis	Canada horseweed	FAC
Cynodon dactylon	Bermuda grass	FAC
Cyperus eragrostis	tall flatsedge	FACW
Deschampsia danthonioides	purple hairgrass	FACW
Downingia sp.	downingia	OBL
Echinochloa crusgalli	barnyard grass	FACW
Eleocharis macrostachya	creeping spikerush	OBL
Epilobium sp.	willow herb	FAC-FACW
Eremocarpus setigerus	doveweed	UPL
Erodium botrys	filaree	UPL
Erodium cicutarium	cut-leaf filaree	UPL
Eryngium vaseyi	coyote thistle	FACW
Geranium dissectum	cut-leaf geranium	UPL
Glyceria sp.	mannagrass	OBL
Gratiola ebracteata	bractless hedge-hyssop	OBL
Hemizonia fitchii	Fitch's spikeweed	UPL
Hemizonia pungens	common tarweed	FAC
Holocarpha virgata	tarweed	UPL
Hordeum hystrix (H. geniculatum)	Mediterranean barley	FAC
Hordeum leporinum	barley	NI
Hypochaeris glabra	smooth cats tongue	UPL

[1] Reed, P.B. 1988. National List of Plant Species That Occur in Wetlands: California (Region 0). Biological Report 88(26.10) May 1988. National Ecology Research Center, National Wetland Inventory, U.S. Fish and Wildlife Service, St. Petersburg, Fl.

[2] OBL = obligate; FACW = facultative wetland; FAC = facultative; FACU = facultative upland; UPL = upland; and NI = no indicator.

Scientific Name	Common Name	Status
Juglans californica (J. nigra)	California walnut	UPL
Juncus bufonius	toad rush	FACW+
Lactuca serriola	prickly lettuce	FAC
Lasthenia fremontii	Fremont's goldfields	OBL
Lasthenia glaberrima	smooth goldfields	OBL
Leontodon leysseri	hairy hawkbit	FACU
Leptochloa fascicularis	bearded sprangle-top	OBL
Lolium perenne (L. multiflorum)	perennial ryegrass	FAC
Lotus purshianus	Spanish clover	FAC
Ludwigia peploides	floating primrose	OBL
Lythrum hyssopifolia	loosestrife	FACW
Olea europaea	olive	UPL
Paspalum dilatatum	dallis grass	FAC
Paspalum distichum	knot grass	OBL
Phalaris sp.	canary grass	---
Plagiobothrys stipitatus var. micranthus	slender popcorn flower	OBL
Plantago lanceolata	English plantain	FAC-
Poa annua	annual bluegrass	FACW-
Polygonum aviculare	postrate knotweed	FAC
Polygonum sp.	smartweed	OBL
Polypogon monspeliensis	annual rabbit-foot grass	FACW+
Populus fremontii	Fremont cottonwood	FACW
Prunus dulcis	almond	UPL
Prunus sp.	fruit trees	UPL
Psilocarphus brevissimus	wooly marbles	OBL
Quercus lobata	valley oak	FAC
Ranunculus alveolatus (R. bonariensis var. trisepalus)	Carter's buttercup	OBL
Raphanus sativus	wild radish	UPL
Rubus procerus	Himalayan blackberry	FAC
Rumex acetosella	sheep sorrel	FAC-
Rumex crispus	curly dock	FACW-
Salix hindsiana	coyote willow	FACW
Silybum marianum	milk thistle	UPL
Sonchus arvensis	field sow thistle	FACU
Taeniatherum caput-medusae	medusa-head	UPL
Trichostema lanceolatum	vinegar weed	UPL
Trifolium sp.	clover	---
Veronica peregrina	purslane speedwell	OBL
Vicia villosa	winter vetch	---
Vulpia myuros	rat-tail fescue	FACU

WET-SEASON SAMPLING FOR FEDERALLY LISTED LARGE BRANCHIOPODS AT THE BRADSHAW SW PROPERTY



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May 2006

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WET-SEASON SAMPLING FOR FEDERALLY LISTED LARGE BRANCHIOPODS AT THE BRADSHAW SW PROPERTY

INTRODUCTION

Helm Biological Consulting was contracted by Taylor Properties to conduct wet-season sampling for federally listed large branchiopods (e.g., vernal pool fairy shrimp [*Branchinecta lynchi*] and vernal pool tadpole shrimp [*Lepidurus packardi*]) at the Bradshaw SW Property.

The Bradshaw SW Property consists of a 19.6-acre parcel located immediately south of Gerber Road and west of Bradshaw Road in Florin-Vineyard Community Plan development area in Sacrament County, California. More specifically, the Property is located within the northeast ¼ of Section 8, Township 7 North, and Range 6 East of the Elk Grove 7.5 minute US Geological Survey quadrangle topographic map (Figure 1). May & Associates, Inc. identified two vernal pools, five seasonal wetlands, four seasonal swales, and one other waters of the United States (Exhibit A).

This report discusses the methods and results of the wet-season sampling for the presence of large branchiopods at the Bradshaw SW Property.

METHODS

Helm Biological Consulting conducted wet-season sampling under permit TE-795930-3 of Section 10 (a)(1)(A) of the federal Endangered Species Act, 16 U.S.C. 1531 *et. seq.*, and its implementing regulations. Methods generally followed U.S. Fish and Wildlife Service (USFWS) *Interim Survey Guidelines to Permittees for Recovery Permits under Section 10 (a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods* (1996) and are described below.

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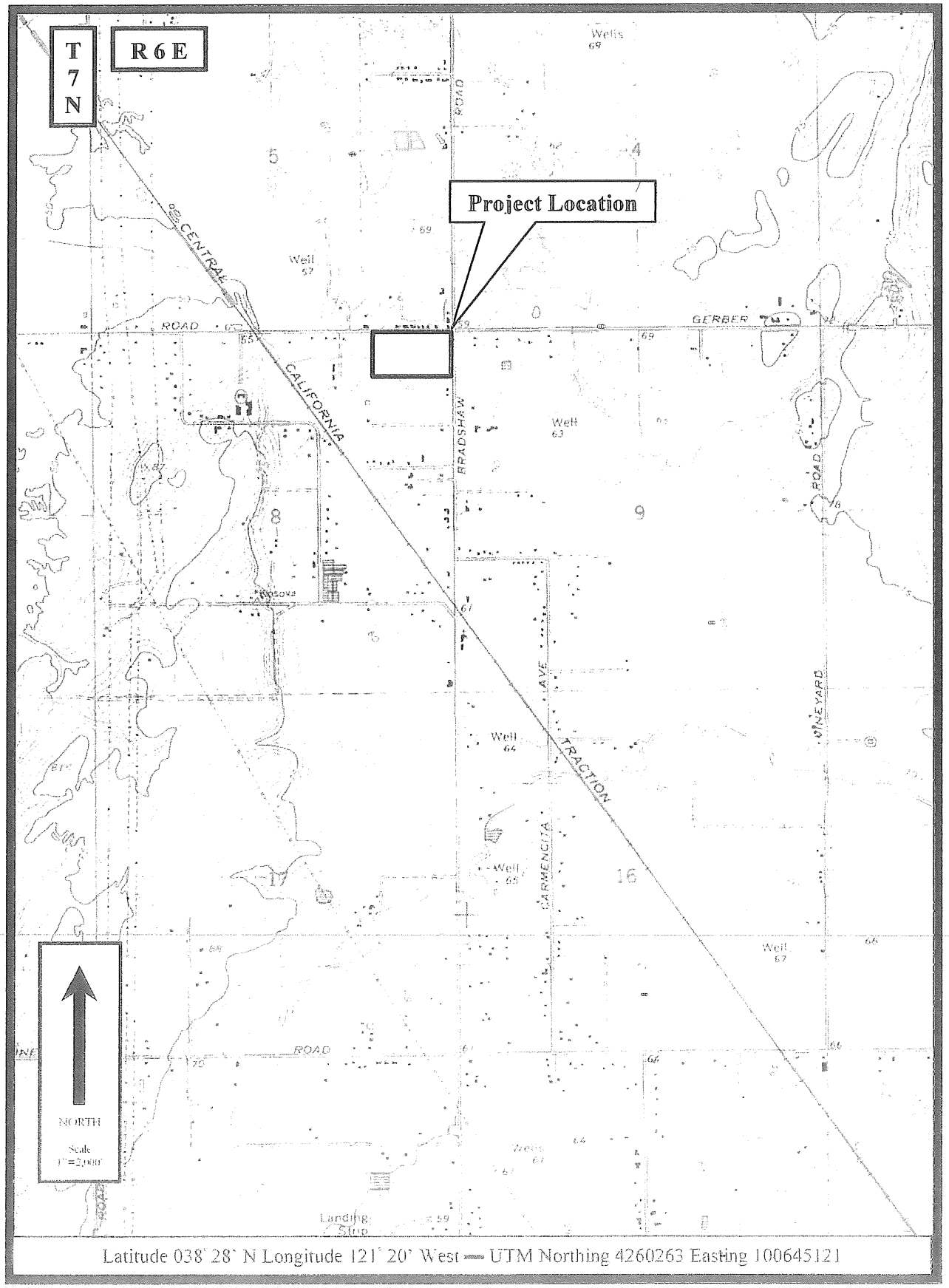
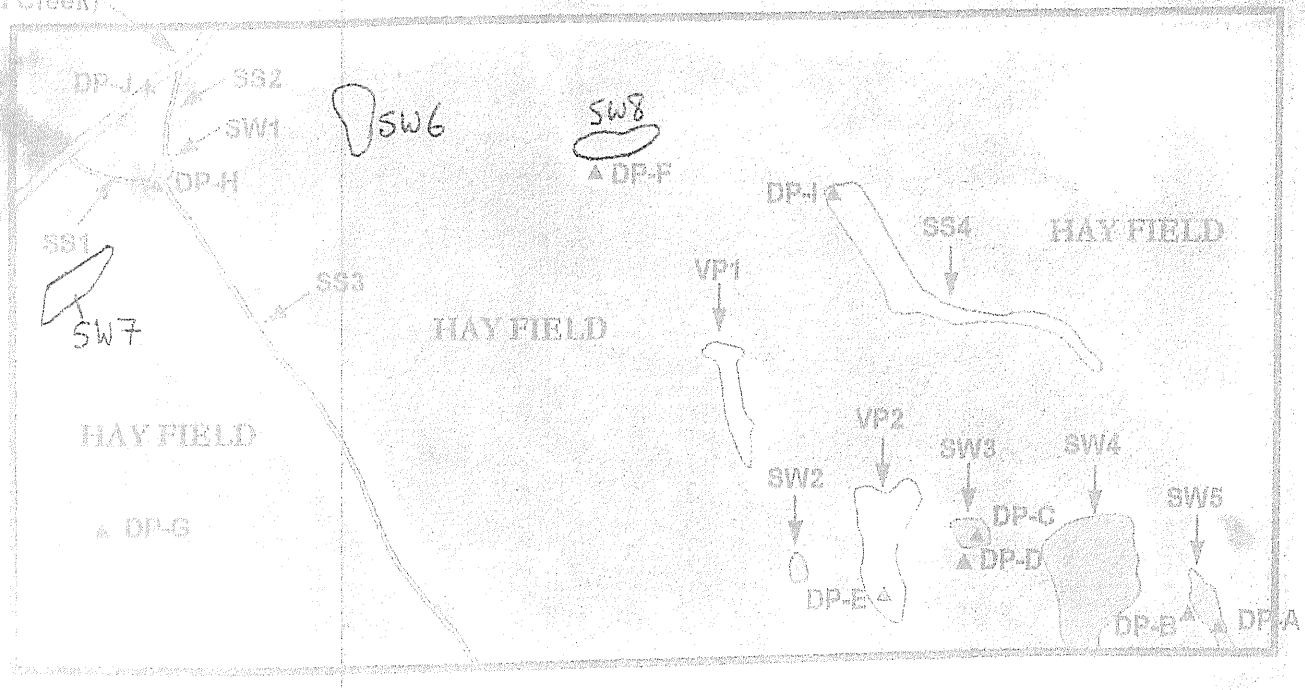


Figure 1. Bradshaw SW Property

(Source: U.S. Geological Survey Elk Grove 7.5 minute Quadrangle map)

Project: Gerber-Bradshaw SE
Delineator: Bill Roper
Surveyor: Bill Roper
Survey Date: August 12, 2003
Prepared: August 20, 2003

Total wetland acreage: 0.766
Vernal Pool: 0.198-acre
Seasonal Swale: 0.255-acre
Seasonal Wetland: 0.313-acre
Total "Other waters of the U.S." acreage: 0.064
Vineyard Creek (0.064-acre)



LEGEND

Study Area Boundary

DP-A Wetland Determination Data Point

Waters of the U.S.

Vernal Pool

Seasonal Swale

Seasonal Wetland

Other Waters of the U.S.

Upland Habitats

Hay Field

0 50 100 200 Feet

Figure 3. Location of Waters of the United States, including wetlands, at the Gerber Bradshaw SE Study Area, Sacramento County, California

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Scale: 1" = 200'
File: Figure1.jpg

Date:
August, 2003

All areas that potentially could support federally listed large branchiopods were sampled. Potential habitat for large branchiopods is defined as any seasonal inundated depression that on average ponds water two (2) inches or greater in depth for 30 or more consecutive days. Potential habitat characteristics of large branchiopods are based on the life history of Central Valley endemics (Eriksen and Belk 1999; Helm 1998, 1999; Helm and Vollmar 2002). Habitats that flow water (e.g., creeks, streams, ephemeral drainages) or semi-to-permanently inundated areas were not considered suitable habitat for federally listed large branchiopods.

Sampling was conducted on December 23, 2005; January 6 and 26, 2006; February 16 and 28, 2006; March 14 and 26, 2006; April 11 and 26, 2006; and May 11, 2006.

Wet-season sampling entailed dip netting all potential habitats on site for active large branchiopods. All potential habitats were sampled at roughly two-week intervals, after they were inundated with a minimum of one inch of water. All macroscopic organisms captured within the dipnet were identified to the lowest taxonomic group justifiable (in the field), recorded in field data forms, and then released back into the habitat from which they were collected.

RESULTS

A total of eight seasonal wetlands, four seasonal swales, and two vernal pool habitats were sampled (Exhibit A). Three of these seasonal wetlands (SW6, SW7, and SW8) were identified during wet-season sampling (Exhibit A). The California fairy shrimp (*Linderiella occidentalis*) was observed in nine of the sampled wetlands (SS4, SW4, SW5, SW6, SW7, SW8, VP1, and VP2) (Appendix B). Additionally, the vernal pool fairy shrimp (*Branchinecta lynchi*) was observed in two of the newly mapped habitats (SW6 and SW7) (Appendix B).

Appendix B contains representative photographs of the basins on site.

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DISCUSSION

The California fairy shrimp is a fairly common species within the Central Valley and has no state or federal listing status. However, the vernal pool fairy shrimp is listed as threatened under the federal Endangered Species Act.

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U.S. Fish and Wildlife Service. 1996. Interim Survey Guidelines to Permittees for Recovery Permits under Section 10 (a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods. 11 pp.

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APPENDIX A. FIELD DATA FORMS

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Table 1. Wet-sample Field Data
Dates & Weather: Dec 23, 2005

Investigator(s): Brent Helm

I/P = intermittently Ponding
N/P = Not Ponded

Abundance

R = Rare (<2 individuals)
NC = Not Common (3-10 individuals)
C = Common (11-50 individuals)
VC = Very Common (50-100 individuals)
A = Abundant (>100 individuals)
X = Present but not observed in 1 meter sample

Pool No.	Depths (inches)		Large Branchiopods		Crustacea			Insecta									Mollusca			Turbellaria	Herps		Comments
						Copepods		Coleoptera		Hemiptera			Odanota		Diptera						*Pseudacris*, sp		
	Max.	Ave.	*Branchinecta lynchi*	*Linderiella occidentalis*	Ostracods	Calanoida	Cyclopoda	Dytiscidae	Hydrophilidae	Notonectidae	Corixidae	Ephemeroptera	Zygoptera	Anisoptera	Culicidae	Chironomidae	Lymnaeidae	Physidae	Planorbidae	Micro-turbularian	Eggs	Tadpoles	
SS4	N/P																						
SW5	moist																						
SW4	3	2																					
SW3	N/P																						
VP2	N/P																			4			
SW2	N/P																						
VP1	3	1																					
SW8	N/P																						6
SW6	N/P																						
SS3	5	4															8						
SW7	N/P					8																	
SS1	3	2																					
SW1	6	4										8											
SS2	N/P													8									

Table 1. Wet-sample Field Data
Dates & Weather: January 6, 2006 (rainy and cold)

Investigator(s): Brent Helm

I/P = Intermittently Ponding
N/P = Not Ponded

Abundance

R = Rare (<2 individuals)
NC = Not Common (3-10 individuals)
C = Common (11-50 individuals)
VC = Very Common (50-100 individuals)
A = Abundant (>100 individuals)
X = Present but not observed in 1 meter sample

Pool No.	Depths (inches)		Large Branchiopods		Crustacea			Insecta									Mollusca			Turbellaria	Herps		Comments
						Copepods		Coleoptera		Hemiptera			Odanota		Diptera						*Pseudacris*, sp		
	Max.	Ave.	*Branchinecta lynchi*	*Linderiella occidentalis*	Ostracods	Calanoida	Cyclopoda	Dytiscidae	Hydrophilidae	Notonectidae	Corixidae	Ephemeroptera	Zygoptera	Anisoptera	Culicidae	Chironomidae	Lymnaeidae	Physidae	Planorbidae	Micro-turbularian	Eggs	Tadpoles	
SS4	8	5						R			R												
SW5	12	8																					
SW4	12	8						R			R												
SW3	7	2																		R			
VP2	3	5																					
SW2	1	1																					
VP1	7	3																			R		
SW8	N/P																						
SW6	7	3															R						
SS3	6	3				R																	
SW7	3	6																					
SS1	4	1 2										R											
SW1	9	5												R									
SS2	1	1																					I/P

Table 1. Wet-sample Field Data
Dates & Weather: Jan 25, 05 Cold and cloudy

Investigator(s): Brent Helm

I/P = intermittently Ponding
N/P = Not Ponded

Abundance

R = Rare (<2 individuals)
NC = Not Common (3-10 individuals)
C = Common (11-50 individuals)
VC = Very Common (50-100 individuals)
A = Abundant (>100 individuals)
X = Present but not observed in 1 meter sample

Pool No.	Depths (inches)		Large Branchiopods		Crustacea			Insecta									Mollusca			Turbellaria	Herps		Comments
						Copepods		Coleoptera		Hemiptera			Odanota		Diptera								
	Max.	Ave.	*Branchinecta lynchi*	*Linderiella occidentalis*	Ostracods	Calanoida	Cyclopoda	Dytiscidae	Hydrophilidae	Notonectidae	Corixidae	Ephemeroptera	Zygoptera	Anisoptera	Culicidae	Chironomidae	Lymnaeidae	Physidae	Planorbidae	Micro-turbularian	*Pseudacris, sp* Eggs	*Pseudacris, sp* Tadpoles	
SS4	6	4		NC	NC	NC																	
SW5	9	6		C	C	NC														NC			
SW4	10	7		C		C														NC		NC	
SW3	N/P																						
VP2	1	1																				R	
SW2	1	1																					
VP1	7	5		C		C														C			
SW8	5	5		NC		NC																	6
SW6	5	3	NC	NC																			
SS3	4	2																					I/P
SW7	8	3	NC	NC													6						
SS1	3	2																					I/P
SW1	5	5		NC	6							8											Crayfish
SS2	3	2																					I/P

Table 1. Wet-sample Field Data
Dates & Weather: Feb 16, 2006

Investigator(s): Brent Helm

I/P = intermittently Ponding
N/P = Not Ponded

Abundance

R = Rare (<2 individuals)
NC = Not Common (3-10 individuals)
C = Common (11-50 individuals)
VC = Very Common (50-100 individuals)
A = Abundant (>100 individuals)
X = Present but not observed in 1 meter sample

Pool No.	Depths (inches)		Large Branchiopods		Crustacea			Insecta									Mollusca			Turbellaria	Herps		Comments
						Copepods		Coleoptera		Hemiptera			Odanota		Diptera						*Pseudacris*, sp		
	Max.	Ave.	*Branchinecta lynchi*	*Linderiella occidentalis*	Ostracods	Calanoida	Cyclopoda	Dytiscidae	Hydrophilidae	Notonectidae	Corixidae	Ephemeroptera	Zygoptera	Anisoptera	Culicidae	Chironomidae	Lymnaeidae	Physidae	Planorbidae	Micro-turbularian	Eggs	Tadpoles	
SS4	4	2		R		NC		R												NC			
SW5	4	3			NC	NC					R									NC	X	NC	
SW4	7	5			NC	NC														NC		NC	
SW3	N/P																			NC		NC	
VP2	5	4		R	NC	NC														VC		NC	
SW2	N/P																						
VP1	4	2		NC	NC	NC														NC		NC	6
SW6	N/P																						
SW8	N/P																8						
SS3	1	1				8																	I/P
SW7	N/P																						
SS1	1	1										8											I/P
SW1	7	6												6									
SS2	N/P																						

Table 1. Wet-sample Field Data
Dates & Weather: Feb 28, 2006

Investigator(s): Brent Helm

I/P = intermittently Ponding
N/P = Not Ponded

Abundance

R = Rare (<2 individuals)
NC = Not Common (3-10 individuals)
C = Common (11-50 individuals)
VC = Very Common (50-100 individuals)
A = Abundant (>100 individuals)
X = Present but not observed in 1 meter sample

Pool No.	Depths (inches)		Large Branchiopods		Crustacea			Insecta									Mollusca			Turbellaria	Herps		Comments
						Copepods		Coleoptera		Hemiptera			Odanota		Diptera						*Pseudacris, sp*		
	Max.	Ave.	*Branchinecta lynchi*	*Linderiella occidentalis*	Ostracods	Calanoida	Cyclopoda	Dytiscidae	Hydrophilidae	Notonectidae	Corixidae	Ephemeroptera	Zygoptera	Anisoptera	Culicidae	Chironomidae	Lymnaeidae	Physidae	Planorbidae	Micro-turbularian	Eggs	Tadpoles	
SS4	4	2		R		NC		R												NC			
SW5	4	3			NC	NC					R									NC	X	NC	
SW4	7	4			NC	NC														NC		NC	
SW3	N/P																			NC		NC	
VP2	5	4		R	NC	NC														VC		NC	
SW2	N/P																						
VP1	3	2		R	NC	NC														NC		NC	
SW8	N/P																						
SW6	N/P																						
SS3	1	1																					I/P
SW7	N/P																						
SS1	1	1																					I/P
SW1	7	4																					
SS2	N/P																						

Table 1. Wet-sample Field Data
Dates & Weather: March 14, 06 Cloudy and cold

Investigator(s): Brent Heim

I/P = intermittently Ponding
N/P = Not Ponded

Abundance

R = Rare (<2 individuals)
NC = Not Common (3-10 individuals)
C = Common (11-50 individuals)
VC = Very Common (50-100 individuals)
A = Abundant (>100 individuals)
X = Present but not observed in 1 meter sample

Pool No.	Depths (inches)		Large Branchiopods		Crustacea			Insecta									Mollusca			Turbellaria	Herps		Comments
						Copepods		Coleoptera		Hemiptera			Odanota		Diptera						*Pseudacris, sp*		
	Max.	Ave.	*Branchinecta lynchi*	*Lindorella occidentalis*	Ostraceds	Calanoida	Cyclopoda	Dytiscidae	Hydrophilidae	Notonectidae	Corixidae	Ephemeroptera	Zygoptera	Anisoptera	Culicidae	Chironomidae	Lymnaeidae	Physidae	Planorbidae	Micro-turbularion	Eggs	Tadpoles	
SS4	5	5			NC																	R	
SW5	11	7			C																		Amphipod (R)
SW4	12	5																					
SW3	5	2															NC			R			IP
VP2	4	1		R	NC												R			NC		NC	
SW2	2	1																		NC			
VP1	7	5		NC				R	R													NC	
SW8	5	3						R	R														
SW6	6	4	NC																				
SS3	4	3																					Flowing strong
SW7	7	4						NC	R														
SS1	6	3																					Flowing strong
SW1	10	6																				R	
SS2	3	1																					IP filled with filimentis alga

Table 1. Wet-sample Field Data
Dates & Weather: March 26, 06 Cloudy and cold

Investigator(s): Brent Heim

Abundance

I/P = intermittently Ponding
N/P = Not Ponded

R = Rare (<2 individuals)
NC = Not Common (3-10 individuals)
C = Common (11-50 individuals)
VC = Very Common (50-100 individuals)
A = Abundant (>100 individuals)
X = Present but not observed in 1 meter sample

Pool No.	Depths (inches)		Large Branchiopods		Crustacea			Insecta									Mollusca			Turbellaria	Herps		Comments
			Branchinecta lynchi	*Linderiella occidentalis*	Ostracods	Copepods		Coleoptera		Hemiptera		Ephemeroptera	Odanota		Diptera		Lymnaeidae	Physidae	Planorbidae	Micro-turbularian	*Pseudacris, sp*		
	Max.	Ave.				Calanoida	Cyclopoda	Dytiscidae	Hydrophilidae	Notonectidae	Corixidae		Zygoptera	Anisoptera	Culicidae	Chironomidae					Eggs	Tadpoles	
SS4	7	5			C			R	R													NC	
SW5	13	10				NC																R	
SW4	11	8				NC		NC			NC											NC	
SW3	7	3																					
VP2	8	5		NC	NC															R		NC	
SW2	2	1																					
VP1	7	4		NC																		NC	
SW8	4	3						R															
SW6	3	4																					
SS3	4	3																					I/P
SW7	16	7			NC																R	NC	
SS1	7	3																					Flowing
SW1	9	8			NC	NC																NC	
SS2	3	2																					I/P

Table 1. Wet-sample Field Data
Dates & Weather: April 11, 06 Cloudy and cold

Investigator(s): Brent Helm

I/P = intermittently Ponding
N/P = Not Ponded

Abundance

R = Rare (<2 individuals)
NC = Not Common (3-10 individuals)
C = Common (11-50 individuals)
VC = Very Common (50-100 individuals)
A = Abundant (>100 individuals)
X = Present but not observed in 1 meter sample

Pool No.	Depths (inches)		Large Branchiopods		Crustacea			Insecta									Mollusca			Turbellaria	Herps		Comments
			Branchinecta lynchi	*Linderiella occidentalis*	Ostracods	Copepods		Coleoptera		Hemiptera		Ephemeroptera	Odonata		Diptera		Lymnaeidae	Physidae	Planorbidae	Micro-turbularian	*Pseudacris*, sp		
	Max.	Ave.				Calanoida	Cyclopoda	Dytiscidae	Hydrophilidae	Notonectidae	Corixidae		Zygoptera	Anisoptera	Culicidae	Chironomidae					Eggs	Tadpoles	
SS4					NC																	R	
SW5					C																		Amphipod (R)
SW4																							
SW3																			NC	R			IP
VP2				R	NC												R			NC		NC	
SW2																				NC			
VP1				NC				R	R													NC	
SW8								R	R														
SW6																							
SS3																							Flowing strong
SW7								NC	R														
SS1																							Flowing strong
SW1																						R	
SS2																							IP filled with filimentis alga

Table 1. Wet-sample Field Data
Dates & Weather: April 26, 08 clear and mild

Investigator(s): Brent Helm

I/P = Intermittently Ponded
N/P = Not Ponded

Abundance

R = Rare (<2 individuals)
NC = Not Common (3-10 individuals)
C = Common (11-50 individuals)
VC = Very Common (50-100 individuals)
A = Abundant (>100 individuals)
X = Present but not observed in 1 meter sample

Pool No.	Depths (inches) Max.	Depths (inches) Ave.	Large Branchiopods *Underfella occidentalis*	Crustacea: Ostracods	Crustacea: Copepods: Calanoida	Crustacea: Copepods: Cyclopoda	Insecta: Coleoptera: Dytiscidae	Insecta: Coleoptera: Hydrophilidae	Insecta: Hemiptera: Notonectidae	Insecta: Hemiptera: Corixidae	Insecta: Ephemeroptera	Insecta: Odanota: Zygoptera	Insecta: Odanota: Anisoptera	Insecta: Diptera: Culicidae	Insecta: Diptera: Chironomidae	Mollusca: Lymnaeidae	Mollusca: Physidae	Mollusca: Planorbidae	Turbellaria: Micro-turbularian	Herps: *Pseudacris*, sp Eggs	Herps: *Pseudacris*, sp Tadpoles	Comments
SS4	2	1																				I/P
SW5	4	2																				
SW4	5	3																				
SW3	N/P																					
VP2	3	2																				
SW2	N/P																					
VP1	3	1																				
SW6	N/P																					
SW8	3	1																				
SS3	1	1																				I/P
SW7	2	1														A						
SS1	3	1				A																
SW1	6	3									A											
SS2	1	1																				I/P

Table 1. Wet-sample Field Data
Dates & Weather: May 11, 06 Clear and warm

Investigator(s): Brent Helm

I/P = intermittently Ponding
N/P = Not Ponded

Abundance

R = Rare (<2 individuals)
NC = Not Common (3-10 individuals)
C = Common (11-50 individuals)
VC = Very Common (50-100 individuals)
A = Abundant (>100 individuals)
X = Present but not observed in 1 meter sample

Pool No.	Depths (inches)		Large Branchiopods		Crustacea			Insecta									Mollusca			Turbellaria	Herps		Comments
						Copepods		Coleoptera		Hemiptera			Odanota		Diptera						*Pseudacris*, sp		
	Max.	Ave.	*Branchinecta lynchi*	*Linderiella occidentalis*	Ostracods	Calanoida	Cyclopoda	Dytiscidae	Hydrophilidae	Notonectidae	Corixidae	Ephemeroptera	Zygoptera	Anisoptera	Culicidae	Chironomidae	Lymnaeidae	Physidae	Planorbidae	Micro-turbularian	Eggs	Tadpoles	
SS4	N/P																						
SW5	N/P																						
SW4	N/P																						
SW3	N/P																			1			
VP2	N/P																						
SW2	N/P																						
VP1	N/P																						6
SW8	N/P																						
SW6	N/P																						
SS3	N/P																8						
SW7	N/P					8																	
SS1	N/P	1										8											
SW1	N/P																						
SS2	N/P													6									

HELM
BIOLOGICAL CONSULTING
2273 Nolen Drive, Lincoln, CA 95648

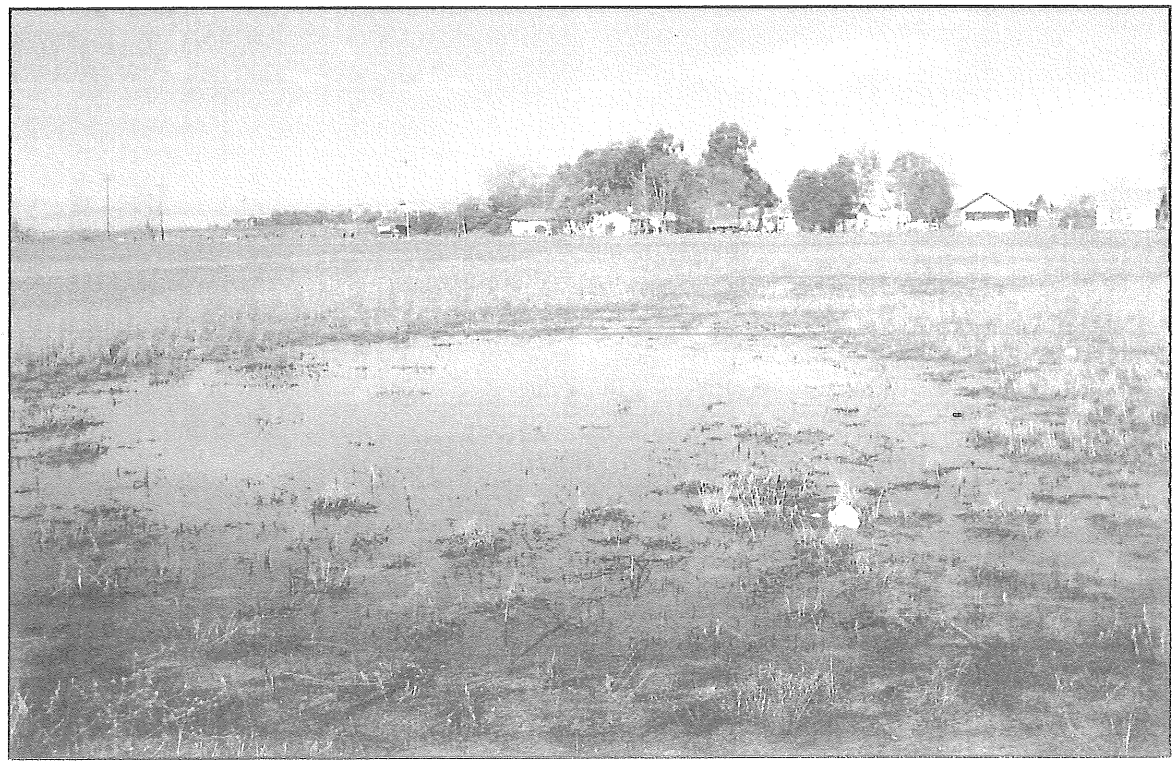
APPENDIX B. REPRESENTATIVE PHOTOGRAPHS

Ph: (916) 543-7397
Fax: (916) 543-7398
E-mail: bhelm09485@aol.com

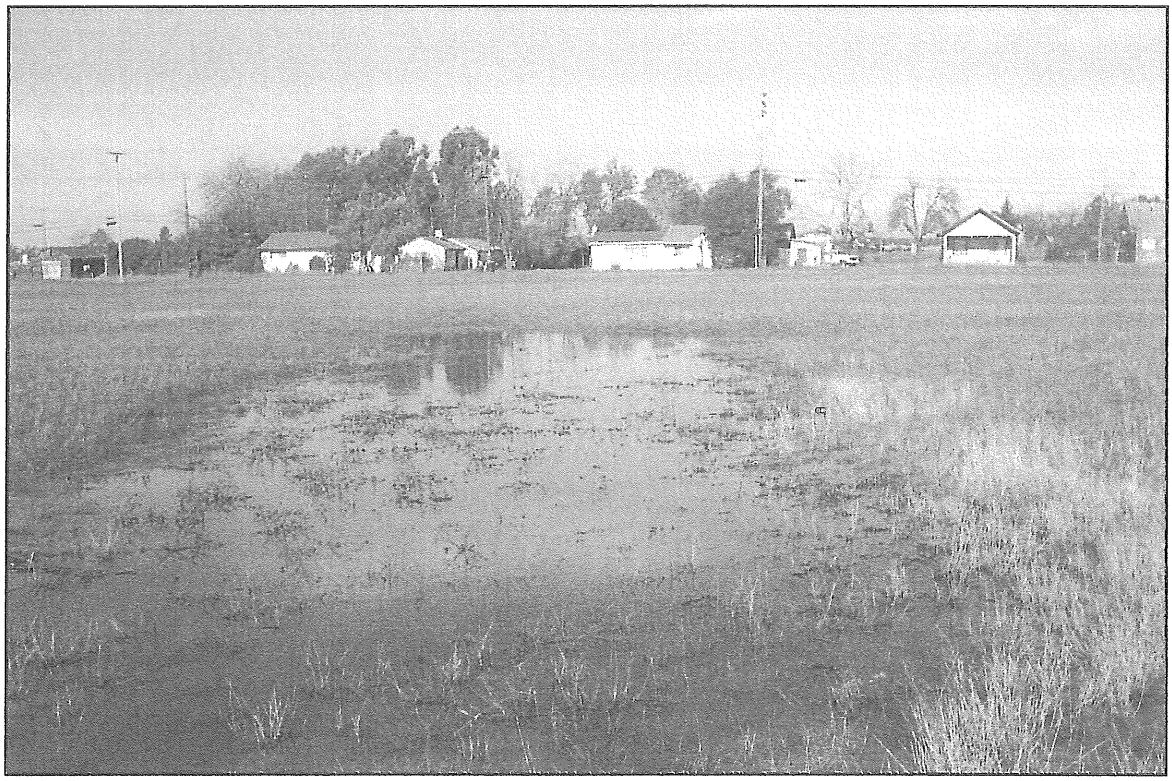
Bradshaw SW (SS4)

Bradshaw SW (SW5)

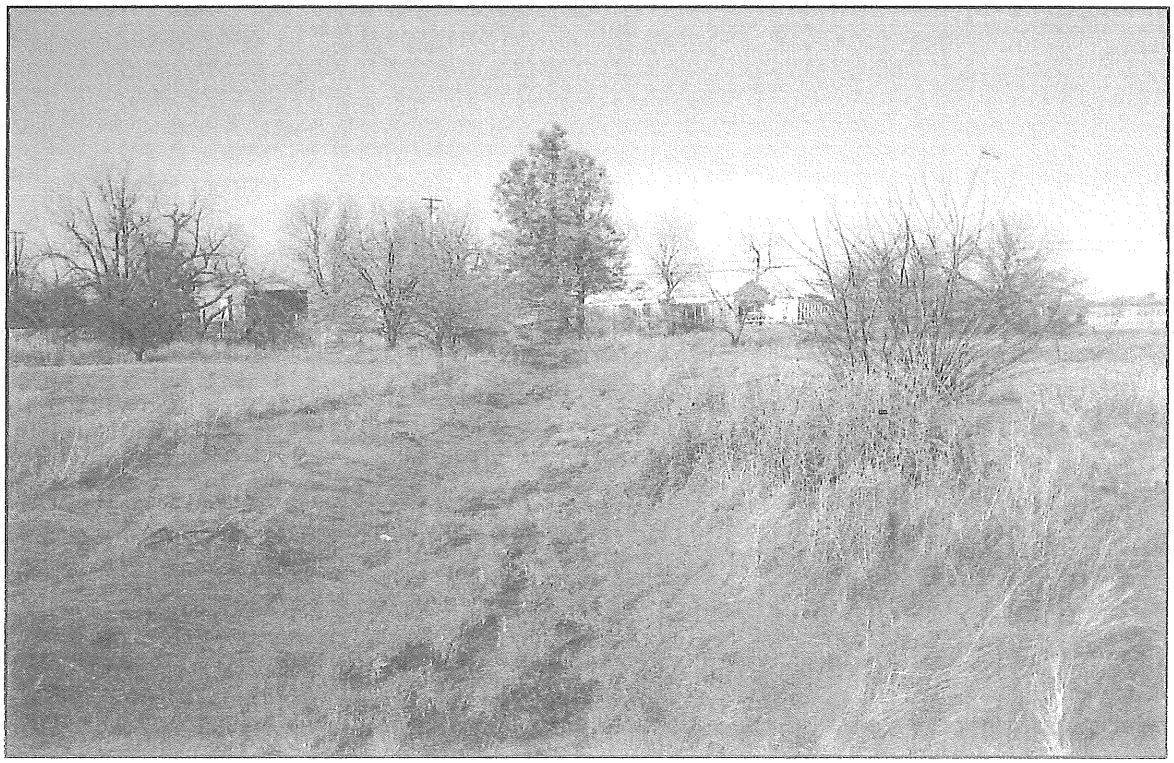
Bradshaw SW (SW4)



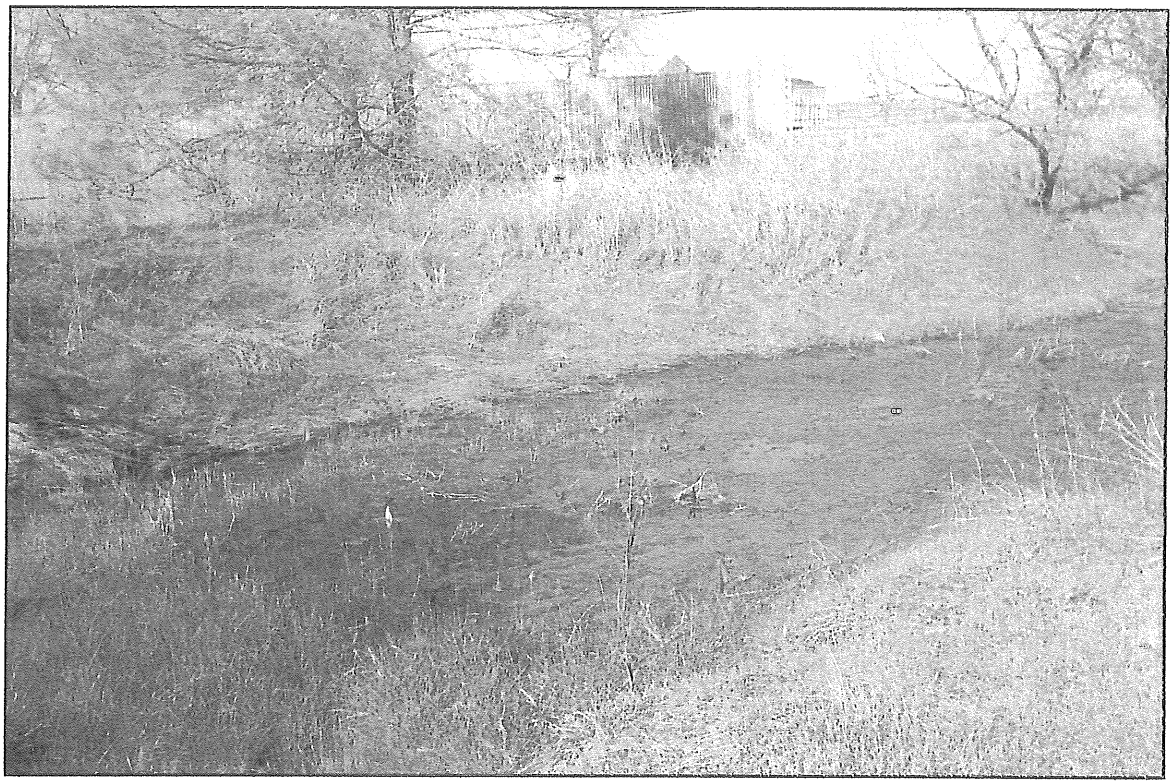
Bradshaw SW (VP2)



Bradshaw SW (VP1)

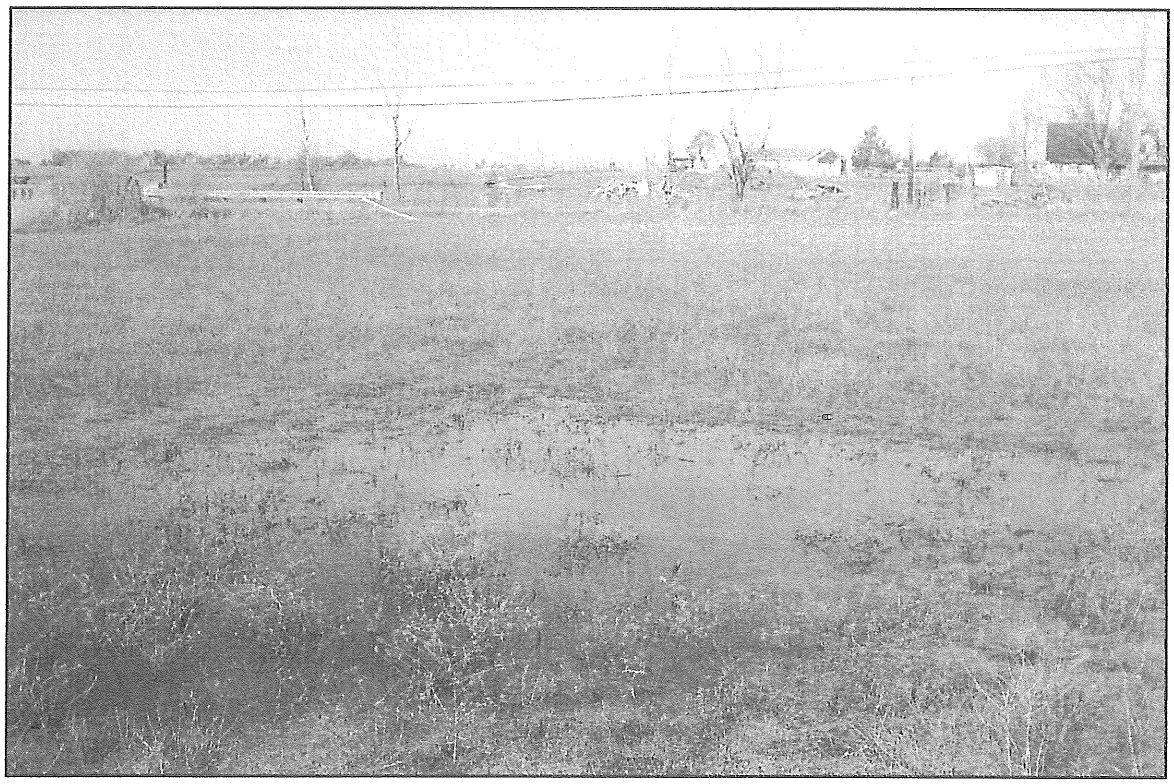


Bradshaw SW (SS3)



Bradshaw SW (SW1)

Bradshaw SW (SW7)



Bradshaw SW (SW6)

Bradshaw SW (SW8)

7720-30
REPORTS

SIERRA NEVADA ARBORISTS

TAYLOR PROPERTIES

Gerber Bradshaw SW
Florin Vineyard Community Plan Area
(County of Sacramento, California)

INITIAL ARBORIST REPORT
AND
INVENTORY SUMMARY

Submitted by:

Edwin E. Stirtz, Consulting Arborist
ISA Certified Arborist WE-0510A
Member, American Society of Consulting Arborists
SIERRA NEVADA ARBORISTS

RECEIVED
SEP 2004
DEPARTMENT

August 24, 2004

503 Anthony Court ◆ Roseville, CA 95678 ◆ 916-784-7940 ◆ 916-784-1901 Fax

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GENERAL PRESERVATION RECOMMENDATIONS 6-8

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COPYRIGHT STATEMENT

This consultant's report, dated August 24, 2004, is for the exclusive and confidential use of Taylor Properties concerning development of its Gerber Bradshaw SW project located in the Florin Vineyard Community Plan area (County of Sacramento), 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

August 24, 2004

Mr. Kim Whitney
TAYLOR PROPERITES
1792 Tribute Road, Suite 270
Sacramento, California 95815-4508

Re: ***Initial Arborist Report and Inventory Summary:***
Gerber Bradshaw SW Project (Florin Vineyard Community Plan Area)

Dear Mr. Whitney:

On August 20, 2004, Sierra Nevada Arborists visited Taylor Properties' Gerber Bradshaw SW project site located within the Florin Vineyard Community Plan area in the County of Sacramento, California. The purpose of this site visit was to conduct a field inspection to identify, inventory and evaluate all trees within the project boundaries which measure 4 inches and greater in diameter at breast height ("DBH"), specifically including the identification of any native oaks, California Sycamore, Northern California Black Walnut, Oregon Ash, Goodding's Black Willow, California Box Elder and White Alder, and any other significant trees which measure 19 inches DBH and larger. The trees which met the defined criteria were identified in the field with a round, metal-stamped number tag beginning with Tree No. 76 which was affixed to the tree's trunk. For your reference, the numbers utilized in this report correspond to the tree tag affixed to the tree in the field, and those numbers were rough-plotted on the aerial "Consultant's Worksheet" which was provided for reference by and returned to Bruce Walters of MacKay & Somps Engineering.

SUMMARY

As you will see, 28 trees totaling 428 aggregate diameter inches have been documented within this report. Our site visit found that 8 of these trees are ***non-native species*** which are not protected by the County of Sacramento Tree Preservation and Protection Ordinance; however, these trees have been memorialized within this report due to their size (i.e., all trees which measure 4"+ DBH) to accurately document the trees' species, diameter and dripline measurements for mapping purposes. For ease of reference, the ***non-ordinance*** trees have been highlighted in blue within the Inventory Summary.

Our site visit found 20 trees totaling 326 aggregate diameter inches which may be protected by Ordinance either due to their species and/or size. Composition of these 20 trees include 7 Valley Oak *(Quercus lobata)* totaling 66 aggregate diameter inches; 9 California Black Walnut *(Juglans hindsii)* totaling 140 aggregate diameter inches, and 4 non-native species which measure 19"+DBH totaling 120 aggregate diameter inches.

503 Anthony Court ◆ Roseville, CA 95678 ◆ 916-784-7940 ◆ 916-784-1901 Fax

Recommended Removals

At this time no trees have been recommended for removal from the project site due to noted structural defects. It should be noted, however, that Tree Nos. 76, 83 and 100 possess structural defects and/or characteristics which warrant further evaluation and/or annual monitoring to assess the trees' ongoing structural integrity. For reference, these trees have been separately highlighted in yellow within the accompanying Inventory Summary. At this juncture these trees have not been recommended for removal since development plans have not yet been finalized. We draw your attention to these trees, however, and note that ***precaution should be taken if development and/or pedestrian activity will occur within the fall zone of these trees.*** If retained, these trees should be monitored on an annual basis by an ISA Certified Arborist to assess the trees' ongoing structural integrity and potential for hazard in a developed environment.

Construction Impact Assessment

Please note that while this is a detailed review of the trees within the current project boundaries specific tree impacts cannot be definitively assessed until development plans have been finalized. As you know, trees are living organisms whose condition may change at any time. Therefore, a complete assessment of construction impacts and specific mitigation recommendations cannot be made until those development plans have been refined and finalized. At that time an ISA Certified Arborist should review the improvement plans to provide an analysis of construction impacts, including identification of trees which may require removal for home construction and other contemplated development activities. This will be particularly important if home construction and/or pedestrian activities will fall within or near the fall zone of a tree which has been noted as having structural defects and/or questionable long-term longevity. The review should also include an assessment of impacts which will be sustained by those trees which will be preserved within the project boundaries, along with associated mitigation recommendations. In the meantime, this report provides recommendations for pre-construction maintenance, as well as General Preservation Recommendations which should be utilized as a guideline for the protection of trees which may be preserved within the development area.

GENERAL COMMENTS AND ARBORIST'S DISCLAIMER

As you know, a tree permit and/or authorization to develop should be obtained from the County of Sacramento approving contemplated development activities, including the removal of protected trees, within the project area. All terms and conditions of the tree permit are the sole and exclusive responsibility of the developer. It should also be noted that prior to final inspection the County *may* require written verification from an ISA Certified Arborist certifying the approved removal activities and/or implementation of the mitigation measures outlined for the preserved trees on the site. Sierra Nevada Arborists cannot provide written Certification of Compliance unless we have been provided with a copy of the approved site development plans and applicable permits, and are on site to monitor and observe regulated activities during the course of construction. Therefore, it will be necessary for the developer to notify Sierra Nevada Arborists well in advance (48-hours prior notice) of any regulated activities which are scheduled

to occur on site so that those activities can be properly monitored and documented for compliance certification.

Lastly, at this juncture we believe implementation of the general recommendations outlined within this report will attempt to afford the trees the best possibility for survival. However, these recommendations and their implementation should not be viewed as a guarantee or warranty against the trees' ultimate demise and/or failure in the future, and are being provided solely for the purpose of obtaining development authorization from the County of Sacramento. Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of the trees and ***attempt to reduce the risk of living near trees***. Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Since trees are living organisms, conditions are often hidden within the tree and below ground, and their condition may change at any time. Arborists cannot guarantee that a tree will be healthy and/or safe under all circumstances, or for a specific period of time. Likewise remedial treatments cannot be guaranteed. Trees can be managed but they cannot be controlled. To develop and live near trees is to accept some degree of risk and the only way to eliminate all risk associated with trees is to eliminate all of the trees. ***An entity who develops land and/or builds homes with a tree in the vicinity should be aware of this Arborists' Disclaimer and be further advised that the developer and their future homeowners assume the risk that a tree could at any time suffer a branch and/or limb failure, blow over in a storm and/or fail for no apparent reason which may cause bodily injury or property damage.*** Sierra Nevada Arborists cannot predict acts of nature, including without limitation storms of sufficient strength which can take down even a healthy tree. The information contained within this report is believed to be true to the best of the author's knowledge and experience as of the date it was prepared; however, certain conditions may exist which only a comprehensive, scientific, investigation might reveal which should be performed by other consulting professionals. Neither this author nor Sierra Nevada Arborists has assumed any responsibility for liability associated with the preserved trees on or adjacent to the Gerber Bradshaw SW project site, their future demise and/or any damage which may result therefrom.

Thank you for allowing Sierra Nevada Arborists to assist you with this review and analysis. Please feel free to give me a call if you have any questions or require additional information.

Sincerely,

Edwin E. Stirtz

Edwin E. Stirtz
ISA Certified Arborist WE-0510A
Member, American Society of Consulting Arborists

EES:ks
Enclosures
cc: Mr. Bruce Walters, MacKay & Somps (w/enclosures)

TAYLOR PROPERTIES
Gerber Bradshaw SW
County of Sacramento, California
INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						REMOVALS (inches)	NOTABLE CHARACTERISTICS	MAINTENANCE RECOMMENDATIONS
						RT CR	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
76	Valley Oak	*(Quercus lobata)*	14,15	29	20	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Weak primary crotch; slightly above average amount of deadwood	Clean out crown; prune to reduce weight; ***recommend annual inspection by an ISA Certified Arborist***
77	Olive Tree	*(Olea europaea)*	3,3,3,3,3,4,4,6	29	17	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
78	Brazillian Pepper	*(Schinus terebinthifolius)*	2,3,3	8	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
79	Brazillian Pepper	*(Schinus terebinthifolius)*		16	20	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
80	Almond Tree	*(Prunus sp.)*	3,3,3,4	13	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
81	Almond Tree	*(Prunus sp.)*	5,5,5,6,8	29	15	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
82	California Black Walnut	*(Juglans hindsii)*		9	26	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Trunk leans east, suppressed; slightly above average amount of deadwood	Clean out crown
83	California Black Walnut	*(Juglans hindsii)*		11	28	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing lower trunk wound, north side, 1' to 2' above grade with minor interior decay; trunk leans east, suppressed; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
84	California Black Walnut	*(Juglans hindsii)*		10	24	Fair	Fair	Fair	Fair	Fair	Fair		Trunk leans north, somewhat suppressed; slightly above average amount of deadwood	Clean out crown
85	California Black Walnut	*(Juglans hindsii)*	13,14,16	43	28	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
86	Weeping Willow	*(Salix babylonica)*		18	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
87	Almond Tree	*(Prunus sp.)*	3,3,3,4,4,4	21	14	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
88	Almond Tree	*(Prunus sp.)*	2,2,2,3,3	12	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
89	California Black Walnut	*(Juglans hindsii)*	5,7,9	21	19	Fair	Fair	Fair	Fair	Fair	Fair		Measured at 3' above grade; slightly above average amount of deadwood	Clean out crown
90	California Black Walnut	*(Juglans hindsii)*		10	17	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
91	California Black Walnut	*(Juglans hindsii)*		8	14	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
92	Foothill Pine	*(Pinus sabiniana)*		13	19	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
93	Foothill Pine	*(Pinus sabiniana)*		15	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
94	California Black Walnut	*(Juglans hindsii)*	3,7	10	17	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
95	California Black Walnut	*(Juglans hindsii)*	4,4,5,5	18	20	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
96	Valley Oak	*(Quercus lobata)*	2,3	5	4	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
97	Valley Oak	*(Quercus lobata)*	2,2	4	5	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
98	Valley Oak	*(Quercus lobata)*		4	7	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
99	Brazillian Pepper	*(Schinus terebinthifolius)*	3,4	7	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
100	Fremont Cottonwood	*(Populus fremontii)*	13,14,14	41	27	Poor to fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair		Callusing basal/lower trunk wound, south side, with minor to moderate interior decay and hollowing; weak primary crotches; above average amount of deadwood; somewhat sparse foliage	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist; longevity questionable***
101	Valley Oak	*(Quercus lobata)*	5,6	11	11	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
102	Valley Oak	*(Quercus lobata)*		4	6	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
103	Valley Oak	*(Quercus lobata)*	4,5	9	8	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown

TOTAL INVENTORIED TREES = 28 Trees (428 aggregate diameter inches)
TOTAL RECOMMENDED TREE REMOVALS = 0 Trees
PRECAUTIONARY TREES HIGHLIGHTED FOR REFERENCE

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.

STREET AND UTILITY MITIGATIVE MEASURES

Generally, impacts from street construction alone are less of an impact than those occurring with dry and wet utility construction. Often it is very difficult or impossible to effectively preserve a tree with more than 30% of its critical root zone area falling within the PUE/street.

Dry Utilities.

Since dry utilities are typically located behind the curb and gutter and/or sidewalks, where applicable, they fall within the closest proximity to trees preserved outside of the roadway. The dry utilities tend to be shallow, within the top 5 feet of the soil profile. Unfortunately, in this region that is also typically where tree roots are found. Where possible, dry utilities should be routed on the opposite side of the street from tree locations. This would require more street crossings than normally planned; however, impacts to trees would be greatly lessened. In some circumstances, hand digging the utilities through critical root zone areas may be an option. Since the dry utility profile is usually 3-4 in depth and includes multiple conduits or plumbing due to the various utilities, boring beneath the critical root zone area is not usually effective.

Wet Utilities.

The greatest conflicts with wet utilities typically arise from deep sanitary sewers or storm drains. Soil conditions and safety concerns often require than trench openings at ground level be quite large. Therefore, the storm and sewer locations must be carefully considered. In some circumstances where a particularly valuable tree may be impacted by wet utilities boring may be an option. Since water main construction tends to be more shallow than storm drains or sewers, and flow lines are not as critical, boring can often be most effective in preserving tree roots.

Streets/Hardscape.

Should the street construction sections be 18" or less, the percentage of encroachment into the critical root zone area may be able to exceed 20%. If this is possible, determinations cannot be made until an accurate evaluation of the root system profiles on the site has been completed. It is impossible to preserve roots within the street section profile. Further, the construction of the street alters the gaseous exchange and oxygen to the tree's root system. In some circumstances aeration systems may mitigate a small portion of these impacts.

Hardscape (concrete slabs, walkways, etc.) should be minimized within the critical root zone area. Grade cuts in excess of 12" should be avoided. In some circumstances aeration systems may be required to reduce root system stress.

CONCLUSION

In an effort to minimize tree removals in the early phases of a project a category for potential tree removals should be established. This category would include those trees which are located in areas that would expose them to moderate or significant encroachments and/or construction impacts. As construction occurs and construction staking is installed, assessment of impacts are much more accurate than those based simply on plan review. At that time, determinations by the Project Arborist and Agency Representatives may result in preservation of trees which may have previously appeared as requiring removal on the plans.

DEFINITIONS AND RATINGS

Within this report you will find the following information defined as follows:

Tree Number:	Corresponds to aluminum tag attached to the tree.
Species Identification:	Scientific and common species name.
Diameter ("DBH"):	This is the trunk diameter as measured at breast height (industry standard 4.5 feet above ground level).
Dripline radius ("DLR"):	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.

Structure and Vigor Ratings:

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.

Encroachment Ratings:

MINOR - No anticipated long-term negative effects

MODERATE – Potential long-term negative effects

SIGNIFICANT – Probable long-term negative effects

Maintenance Recommendations:

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.

SUBSURFACE LIQUID FERTILIZATION INJECTION/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.

JURISDICTIONAL DELINEATION AND SPECIAL STATUS SPECIES EVALUATION

CASELMAN ROAD PROPERTY

SACRAMENTO COUNTY, CALIFORNIA

JUNE 2004
Revised JULY 2007

RECEIVED
JUN 26 2007
DEPARTMENT OF ENVIRONMENTAL REVIEW AND ASSESSMENT

Prepared For:

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INTRODUCTION

The purpose of this report is to present the results of a jurisdictional delineation and special status species evaluation conducted for the Caselman Road Property.

LOCATION

The study area is an approximately 48-acre site located ½ mile south of Gerber Road and immediately northwest of the intersection of Elk Grove-Florin Road and Caselman Road. It lies in Section 12, Township 7 North, and Range 5 East of Sacramento County, California (Latitude 38° 28' North, Longitude 121° 22' West). Figure 1 is a vicinity map.

METHODOLOGY

Field studies were conducted on April 23, 2004 for the purpose of delineating existing waters and wetlands in the study area and evaluating special status species and their habitats.

Jurisdictional Delineation

Representative data points, reference points, ditches and other site features were surveyed in the field by Gibson & Skordal, LLC utilizing a Trimble GPS data logger with sub-meter accuracy. The delineation map was prepared by layering the GPS field data over aerial photography flown in May of 2002 by the United States Geological Survey (USGS).

The **"Corps of Engineers Wetlands Delineation Manual"**[1] was used as the standard of determining whether specific areas are wetlands potentially subject to regulation under Section 404 of the Clean Water Act. Corps of Engineers' regulations (33 CFR 328) was used to determine the presence of waters of the United States other than wetlands. The **"National List of Plant Species That Occur in Wetlands: California (Region 0)"**[2] was used to determine the wetland indicator status of plants observed in the study area. The **"Soil Survey of Sacramento County, California"**[3] was used to evaluate soil mapping in the study area.

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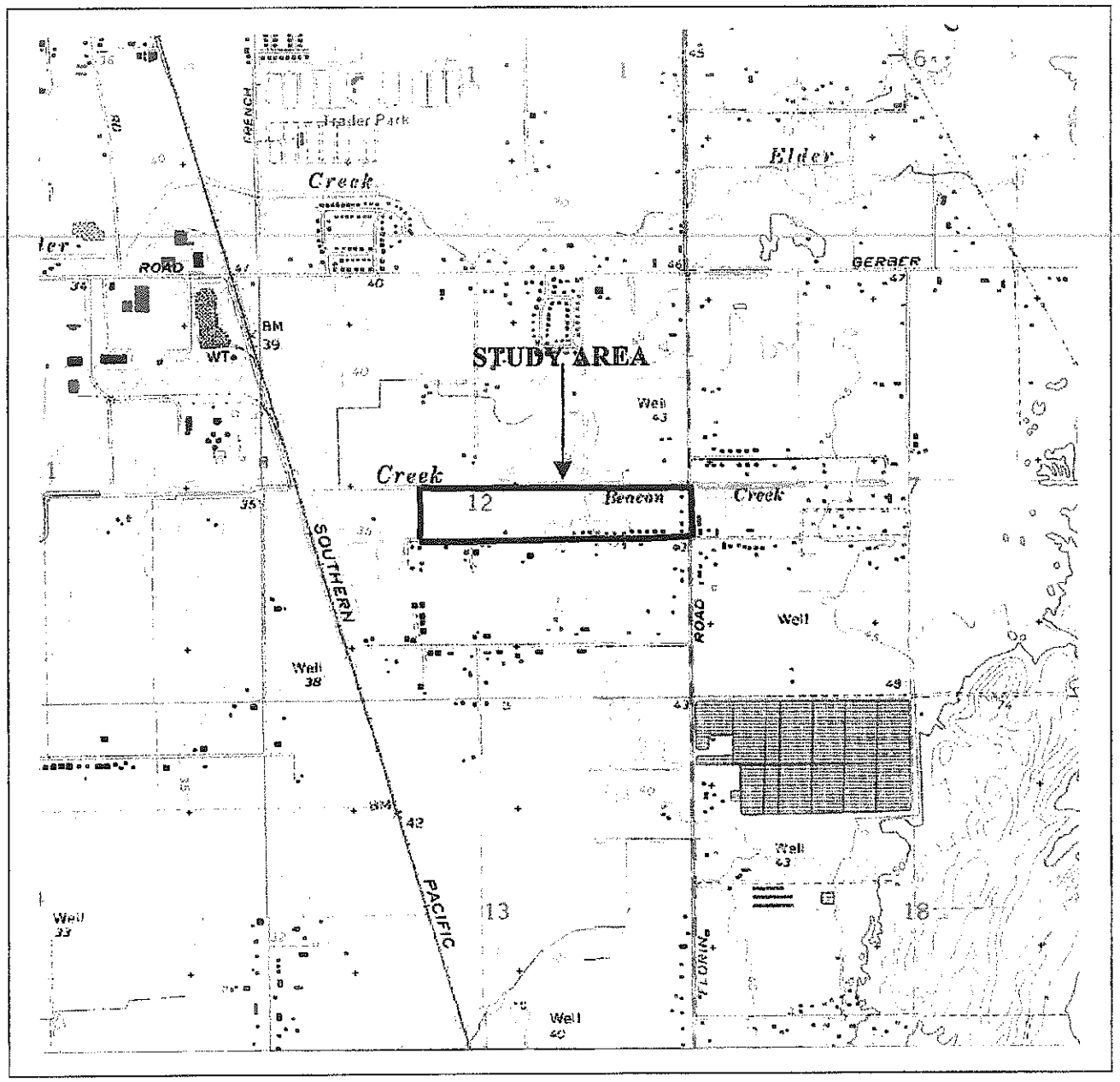
[1] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station. Vicksburg, Miss.

[2] Reed, P.B. 1988. National List of Plant Species That Occur In Wetlands: California (Region 0). Biological Report 88(26.10). May 1988. National Ecology Research Center, National Wetlands Inventory, U.S. Fish & Wildlife Service, St. Petersburg, Florida.

[3] USDA, Soil Conservation Service. 1993. Soil Survey of Sacramento County, California.

FIGURE 1

VICINITY MAP



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(Scale: 1 Inch = 2000 Feet)

Source: Florin & Elk Grove 7.5 Minute USGS Topographic Quadrangles

Detailed data on vegetation, soils, and hydrology characteristics was taken in the field. Data forms documenting the basis for determining which areas are wetland or upland are provided in Appendix A. Mr. Dave Leput, U.S. Army Corps of Engineers, field verified our delineation on March 17, 2006. Requested changes have been incorporated in this report.

Special Status Species Evaluation

The special status species evaluation includes those species that have been identified as having relative scarcity and/or declining populations by the United States Fish & Wildlife Service (USFWS) or California Department of Fish & Game (CDFG). Special status species include those formally listed as threatened or endangered, those proposed for formal listing, candidates for Federal listing, and those considered to be Species of Concern by FWS or Species of Special Concern by CDFG. In addition to these, we also included those species considered to be "special animals" or "fully protected" by the CDFG and those plant species considered to be rare, threatened or endangered in California by the California Native Plant Society (CNPS).

In our evaluation, we considered those special status species documented by the California Natural Diversity Database (CNDDB) as occurring in the vicinity of the study area. A record search of the CNDDB was conducted for the Florin, Elk Grove, Sacramento East, and Carmichael 7.5 Minute USGS quadrangles to identify all documented sightings of special status species in the vicinity of the study area. In addition to these species, we included other special status species that may have some potential for occurring in the study area based on historical range data and/or the presence of suitable habitat.

GENERAL SITE CONDITIONS AND HABITATS

The study area is a mostly undeveloped site including five parcels bordered by Elk Grove-Florin Road to the east, Caselman Road to the south, Union House Creek (i.e. Beacon Creek) to the north, and open pasture and ranchettes to the west. A majority of the study area supports leveled to nearly leveled pasture/grassland that has been historically ditched, drained, disked, and irrigated for a variety of agricultural uses. Existing homes include a row of houses along Caselman Road and Elk Grove-Florin Road in the southeast and northeast corners of the study area, as well as another house along the southern boundary near the southwest corner of the site.

In recent years, portions of the site may have supported grazing pasture or winter hay, but it does not appear to have been irrigated in the past several years. A number of shallow internal ditches bisect the study area. The ditches were historically constructed in upland for irrigation use, and they are generally isolated to the site. Soils are mapped as San Joaquin silt loam, leveled, 0 to 1

percent slopes. These are generally described as moderately deep, moderately well drained soils on low terraces that have been leveled and altered for agricultural uses. Although they are not listed as hydric soils, they do have hydric inclusions in drainages and depressions. Figure 2 provides a soils map.

A majority of the site supports leveled pasture/grassland characterized by non-native annual species including wild oats (*Avena sp.*), soft chess (*Bromus mollis*), hare barley (*Hordeum leporinum*), perennial rye (*Lolium perenne*), Mediterranean barley (*Hordeum hystrix*), filaree (*Erodium spp.*), rattail fescue (*Vulpia myuros*), and hairy hawkbit (*Leontodon leysseri*). Other common species observed include rip-gut brome (*Bromus diandrus*), cut-leaf geranium (*Geranium dissectum*), Bermuda grass (*Cynodon dactylon*), curly dock (*Rumex crispus*), winter vetch (*Vicia villosa*), and rose clover (*Trifolium hirtum*). A few scattered trees including valley oak (*Quercus lobata*), California walnut (*Juglans californica*), blue gum (*Eucalyptus globulus*), fruit trees (*Prunus sp.*), mulberry (*Morus alba*), and a variety of ornamental species occur in association with the home sites.

EXISTING WETLANDS

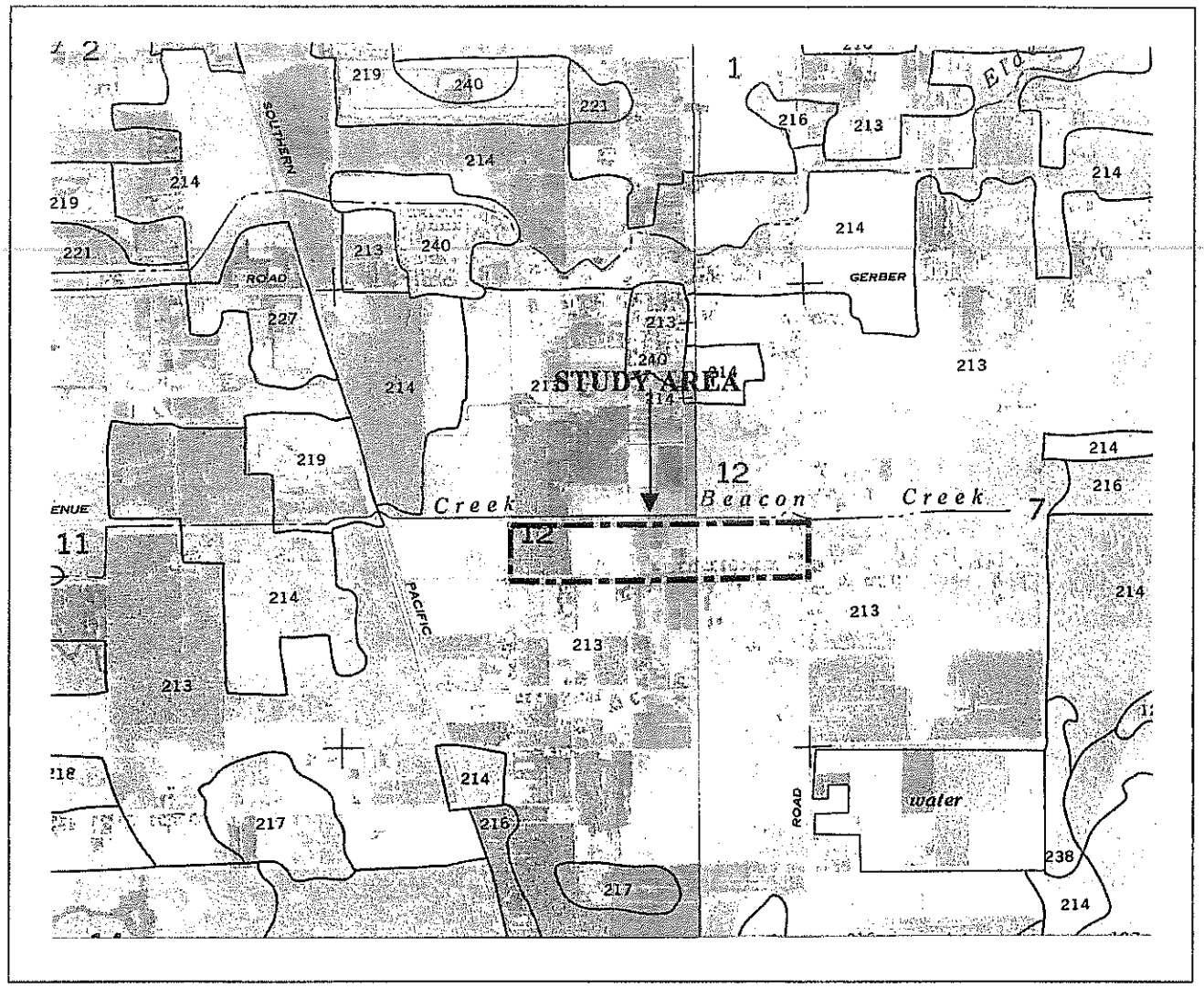
The Corps identified eight seasonal wetlands in the study area totaling 0.1396 acre during the field verification. Appendix B provides a delineation map showing the study area boundary and location of the seasonal wetlands. Appendix C provides a list of plant species observed in the study area including their status as wetland indicators.

In their January 12, 2007 letter (Appendix D) the Corps determined that the eight seasonal wetlands are intrastate isolated waters not regulated by the Corps of Engineers.

There are a number of shallow internal irrigation ditches that bisect the study area. The ditches were historically constructed in uplands for purposes of irrigation, and they are generally isolated to the site. In addition, there is an irrigation pipe outfall located along the northern boundary as indicated on the delineation map. None of these areas meet the criteria for designation as waters or wetlands subject to regulation by the Corps.

FIGURE 2

SOILS MAP



Soil Unit	Soil Name	Soil Classification	Drainage Class
213	San Joaquin silt loam, leveled, 0-1% slopes	Abruptic Durixeralfs	moderately well drained

Source: USDA, Soil Conservation Service. 1991. Soil Survey of Sacramento County, California

SPECIAL STATUS SPECIES

Table 1 provides a list of special status species that were evaluated including their listing status, habitat associations, and whether potential habitats occur in the study area. Of the twenty-four special status species evaluated in Table 1, eight species including bank swallow, Swainson's hawk, giant garter snake, vernal pool fairy shrimp, vernal pool tadpole shrimp, valley elderberry longhorn beetle, Bogg's Lake hedge-hyssop, and slender orcutt grass are Federal and/or State listed threatened and/or endangered species. The following is a detailed summary of special status species and their habitats.

Swainson's Hawk and Other Raptors

Swainson's hawk (*Buteo swainsoni*) is a raptor species currently listed as threatened in California by the CDFG. They typically nest in tall cottonwoods, valley oaks, or willows associated with riparian corridors with adjacent grassland, pasture, and/or cropland with a high density of rodents. The Central Valley population typically breeds and nests in late spring through early summer before migrating to Central America and South America for the winter.

Based on CNDDB records, active Swainson's have been historically documented within a 2-½ mile radius of the study area. Based on this, it may be reasonable to assume that the study area occurs within a 5-mile radius or less of active Swainson's hawk nests. As such, the open pasture in the study area is considered as potential foraging habitat for Swainson's hawk. In addition, there is suitable foraging habitat and/or nesting habitat available for a variety of other raptors including sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperi*), white-tailed kite (*Elanus leucurus*), and northern harrier (*Circus cyaneus*). We did not observe any active raptor nests in or immediately adjacent to the study during our field studies.

Burrowing owl (*Athene cunicularia*) is a ground nesting raptor species that is afforded protection by CDFG as a species of special concern due to potentially declining populations in the Central Valley of California. They typically inhabit open grassland habitats where they nest in abandoned ground squirrel burrows and other nesting cavities associated with raised mounds, levees, or soft berm features. Although we did observe a few ground squirrel burrows in the study area that may provide suitable nesting habitat for burrowing owls, we did not observe any active nests or other indications of current burrowing owl activity at the site.

TABLE 1

EVALUATION OF SPECIAL STATUS SPECIES HABITATS

	State Status	Federal Status	CNPS Listing (plants)	Habitat Association	Potential Habitat In Study Area
Birds					
Accipiter cooperi (Cooper's hawk)	Species of Special Concern	None		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes - suitable foraging & nesting habitat.
Accipiter striatus (sharp-shinned hawk)	Species of Special Concern	None		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes - suitable foraging & nesting habitat.
Agelaius tricolor (tricolored blackbird)	Species of Special Concern	None		Colonial nester in cattails, bulrush, or blackberries associated with marsh habitats.	No
Ardea alba (great egret)	CDFG - Special Animals	None		Rivers, streams, lakes, marsh and other aquatic habitats.	No
Ardea herodias (great blue heron)	CDFG - Special Animals	None		Rivers, streams, lakes, marsh and other aquatic habitats.	No
Athene cunicularia (burrowing owl)	Species of Special Concern	None		Nests in abandoned ground squirrel burrows associated with open grassland habitats.	Yes - suitable foraging & nesting habitat.
Buteo swainsoni (Swainson's hawk)	Threatened	None		Nests in tall cottonwoods, valley oaks or willows. Forages in fields, cropland, irrigated pasture, and grassland near large riparian corridors.	Yes - suitable foraging & nesting habitat.
Circus cyaneus (northern harrier)	Species of Special Concern	None		Forages in open grasslands, nests on ground in shrubby vegetation.	Yes - suitable foraging & nesting habitat.
Elanus leucurus (white-tailed kite)	Fully Protected	None		Nests in riparian corridors along streams and rivers, and forages in nearby grasslands and fields.	Yes - suitable foraging & nesting habitat.
Riparia riparia (bank swallow)	Threatened	Species of Concern		Colonial nester in vertical cliffs and banks associated with riparian zones along streams, rivers, and lakes.	No

TABLE 1

EVALUATION OF SPECIAL STATUS SPECIES HABITATS

Amphibians & Reptiles					
Ambystoma californiense (California tiger salamander)	Species of Special Concern	Threatened		Breeds in vernal pools, seasonal wetlands and associated swales. Forages and hibernates in adjacent grasslands.	No
Clemmys marmorata (western pond turtle)	Species of Special Concern	None		Ponds, rivers, streams, wetlands, and irrigation ditches with associated marsh habitat.	No
Thamnophis gigas (giant garter snake)	Threatened	Threatened		Rivers, canals, irrigation ditches, rice fields, and other aquatic habitats with slow moving water and heavy emergent vegetation.	No
Invertebrates					
Branchinecta lynchi (vernal pool fairy shrimp)	None	Threatened		Vernal pools and seasonal wetlands	Unlikely
Branchinecta mesovallensis (midvalley fairy shrimp)	None	None		Vernal pools and seasonal wetlands	Unlikely
Desmocerus californicus dimorphus (valley elderberry longhorn beetle)	None	Threatened		Dependent upon elderberry plant (Sambucus mexicana) as primary host species	Unlikely
Lepidurus packardi (vernal pool tadpole shrimp)	None	Endangered		Vernal pools and seasonal wetlands	Unlikely
Linderiella occidentalis (California linderiella)	None	None		Vernal pools and seasonal wetlands	Unlikely

TABLE 1

EVALUATION OF SPECIAL STATUS SPECIES HABITATS

Plants					
Downingia pusilla (dwarf downingia)	None	None	CNPS-2	Vernal pools	Unlikely
Gratiola heterosepala (Bogg's Lake hedge-hyssop)	Endangered	None	CNPS-1B	Vernal pools and margins of lakes/ponds	Unlikely
Juncus leiospermus var. ahartii (Ahart's dwarf rush)	None	Species of Concern	CNPS-1B	Vernal pools	Unlikely
Legenere limosa (legenere)	None	None	CNPS-1B	Vernal pools	Unlikely
Orcuttia tenuis (slender orcutt grass)	Endangered	Threatened	CNPS-1B	Vernal pools	Unlikely
Sagittaria sanfordii (Sanford's arrowhead)	None	None	CNPS-1B	Emergent marsh habitat, typically associated with drainages, canals, or irrigation ditches.	Unlikely

Tricolored Blackbird

Tricolored blackbirds (*Agelaius tricolor*) are afforded protection by CDFG as a species of special concern due to declining populations in the region. They are colonial nesters preferring to nest in dense stands of cattails and/or bullrush, but they also commonly nest in blackberry thickets associated with drainages, ditches, and canals. There have been a number of documented sightings of tricolored blackbird nesting colonies in the Florin and Elk Grove quadrangles, but the locations have been excluded from CNDDB records for protection issues.

Although there is a patch of Himalayan blackberry along the fence line at the western boundary of the study area, it is not generally suitable for tricolored blackbird nesting habitat given the absence of associated aquatic habitats including marsh, ponds, or surface drainages. Given this, the potential for tricolored blackbirds to use the study area appears to be low.

California Tiger Salamander

The California tiger salamander (*Ambystoma trigrinum californiense*) is a Federal Candidate for formal listing and a California Species of Special Concern that typically breeds in seasonal or permanent ponds. California tiger salamander (CTS) may also breed in deeper ponded vernal pools, seasonal wetlands and/or other seasonal pools within swales or channels. They typically spend a majority of their life cycle living below ground in ground squirrel burrows or pocket gopher burrows in grasslands situated adjacent to breeding sites.

The absence of potential breeding habitat in the study area would eliminate any reasonable potential for CTS to occur at the site. In addition, the current and past farming practices (i.e. disking and irrigation) in the study area would further restrict the potential for CTS to utilize the site.

Giant Garter Snake

Giant garter snake is designated as a Federal threatened and State threatened species afforded special protection by USFWS and CDFG. The giant garter snake (GGS) is generally associated with larger canals, irrigation ditches, and other semi-permanent to permanent aquatic sites with slow moving water and an abundance of emergent vegetation.

The study area lacks suitable or potential breeding habitat for GGS. As part of the Section 7 consultation (i.e. biological opinion) conducted for the adjacent Tamarindo Subdivision 404

permit approval, the USFWS did not consider Union House Creek to be potential habitat for GGS. Given this, the pasture and grassland in the study area is not suitable for "*upland refugia*" use by GGS, and there is little if any potential for GGS to utilize the site.

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (*Desmocerus californicus*) is a Federal threatened species that is dependent upon the elderberry plant (*Sambucus sp.*) as a primary host species. Elderberry shrubs are a common component of riparian areas throughout the Sacramento Valley region, and they have been documented as occurring at numerous locations in the vicinity of the study area.

Given the absence of elderberry shrubs in the study area, there is no potential for valley elderberry longhorn beetle to occur at the site.

Vernal Pool Branchiopods

Federally listed vernal pool branchiopods including the threatened vernal pool fairy shrimp (*Branchinecta lynchi*) and the endangered vernal pool tadpole shrimp (*Lepidurus packardi*) have been documented as occurring in Elk Grove and Florin USGS quadrangles. Other non-listed branchiopods known to occur in the region include California linderiella (*Linderiella occidentalis*) and midvalley fairy shrimp (*Branchinecta mesovallensis*).

The branchiopod species listed above are generally restricted to vernal pools and/or other seasonally ponded wetlands that sustain inundation during the winter before drying up in the late spring. The seasonal wetlands on the site have limited ability to pond for sufficient periods of time to accommodate the species. Sampling in the 2006-07 wet season resulted in negative results.

Special Status Plants

Special status plant species identified on the CNDDB as occurring in the general vicinity of the study area, or could potentially occur in the area, include Ahart's dwarf rush (*Juncus leiospermus ahartii*) dwarf downingia (*Downinia pusilla*), Bogg's Lake hedge-hyssop (*Gratiola heterosepala*), legenere (*Legenere limosa*), slender orcutt grass (*Orcuttia tenuis*), and Sanford's arrowhead (*Sagittaria sanfordii*).

Ahart's dwarf rush, dwarf downingia, legenere, Bogg's Lake hedge-hyssop, and slender orcutt grass are all strongly associated with vernal pools habitats. Bogg's Lake hedge-hyssop can also

occur around perimeter of lakes and ponds. Conversely, Sanford's arrowhead generally occurs in deep aquatic habitats associated with drainages, canals, and larger ditches that sustain inundation into early summer. The seasonal wetlands in the study area are unlikely to contain these species.

SUMMARY

The Corps determined that there are 0.139 acres of seasonal wetlands (SW1-SW8) in the study area. They also determined that none of the wetlands are regulated under Section 404 of the Clean Water Act.

With respect to special status species and their habitats, there are a number of special status raptors including Swainson's hawk, white-tailed kite, and northern harrier that have a reasonable potential for occurring in the study area based on the presence of suitable foraging and/or suitable nesting habitat. In addition, there is suitable nesting and foraging habitat available for burrowing owls. If future development of the study area occurs during the raptor nesting season (i.e. February-August), we recommend that a raptor nesting survey be conducted within two weeks of the start of project construction.

APPENDIX A

DATA FORMS

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Caselman Rd. Property	Date: 4-23-04
Applicant/Owner: Carson Development	City/County: Sacramento Co.
Investigator(s): D. Skordal	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Facultative Pasture-grassland
Is the site significantly disturbed (Atypical Situation)? Past irrigation, farming (Yes) No	Transect ID:
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: 1

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Lolium perenne (D)		FAC	9.		
2. Hordeum hystrix (D)		FAC	10.		
3. Rumex crispus		FACW-	11.		
4. Convolvulus arvensis		UPL	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100% FAC Dominated

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Slight depression lacking algae matting, oxidized root channels or other indicators of ~~so~~ longterm saturation or ponding.

Map Unit Name (Series and Phase): (213) San Joaquin silt loam, leveled, 0-1 % slopes

Drainage Class: Moderately well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-10	7.5 YR 3/4	None		sandy silt loam

Hydric Soil Indicators:

___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed or Low-Chroma Colors
___ Concretion in upper 3 inches
___ High Organic Content in Surface Layer in Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks: Lacks hydric soils!

WETLAND DETERMINATION

Hydrophytic Vegetation Present? FAC (Yes) No
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? Yes (No)

Is this Data Point Within a Wetland? Yes (No)

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Caselman Rd. Property	Date: 4-23-04
Applicant/Owner: Carson Development	City/County: Sacramento Co.
Investigator(s): D. Skordal	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: FAC Grassland - pasture
Is the site significantly disturbed (Atypical Situation)? past irrigation, farming (Yes) No	Transect ID:
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: 2

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Hordeum hystrix (D)		FAC	9.		
2. Lolium perenne (A)		FAC	10.		
3. Bromus Mollis (A)		FACU-	11.		
4. Vicia villosa (A)		UPL	12.		
5. Rumex crispus (A)		FACW	13.		
6. Convolvulus arvensis (A)		UPL	14.		
7. Bromus diandrus (A)		UPL	15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100% FAC

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Flat to gently sloping terrain lacking algae matting, oxidized root channels on live roots, or any other indicators of longterm saturation or ponding.

Map Unit Name (Series and Phase): (213) San Joaquin silt loam, leveled, 0-1% slopes

Drainage Class: Moderately well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-8	10YR 4/3	None	—	sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: Lacks hydric soils!

WETLAND DETERMINATION

Hydrophytic Vegetation Present? FAC	Yes	No	Is this Data Point Within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No	
Hydric Soils Present?	Yes	No	

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Caselman Rd. Property	Date: 4-23-04
Applicant/Owner: Carson Development	City/County: Sacramento Co.
Investigator(s): D. Skordal	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Disturbed Grassland
Is the site significantly disturbed (Atypical Situation)? Past irrigation, farming (Yes) No	Transect ID:
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: 3

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Avena sp. (D)		UPL	9.		
2. Bromus Mollis (A)		FACU	10.		
3. Vulpia myuros (A)		FACU	11.		
4. Hordeum leporinum (A)		UPL	12.		
5. Lolium perenne (A)		FAC	13.		
6. Geranium dissectum (A)		UPL	14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). None

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Leveled to nearly leveled terrain lacking indicators of longterm saturation or ponding.

Map Unit Name (Series and Phase): (213) San Joaquin silt loam, leveled, 0-1% slopes

Drainage Class: Moderately well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-8	10YR 4/3	None	—	Sandy Silt loam

Hydric Soil Indicators:

___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed or Low-Chroma Colors
___ Concretion in upper 3 inches
___ High Organic Content in Surface Layer in Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (No)
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? Yes (No)

Is this Data Point Within a Wetland? Yes (No)

Remarks: Non-wetland

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Caselman Rd. Property	Date: 4-23-04
Applicant/Owner: Carson Development	City/County: Sacramento Co.
Investigator(s): D. Skordal	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: FAC Grassland-pasture
Is the site significantly disturbed (Atypical Situation)? Past irrigation, farming (Yes) No	Transect ID:
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: 4

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Hordeum hystrix (D)		FAC	9.		
2. Vulpia myuros (A)		FACU	10.		
3. Lolium perenne (A)		FAC	11.		
4. Lactuca serriola (A)		FAC	12.		
5. Convolvulus arvensis (A)		UPL	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100% FAC

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: nearly level to gently sloping terrain lacking indicators of longterm saturation or ponding.

SOILS

Map Unit Name (Series and Phase): (213) San Joaquin silt loam, leveled, 0-1% slopes

Drainage Class: Moderately well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-12	10YR 4/3	None	—	fine sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: Lacks hydric soils!

WETLAND DETERMINATION

Hydrophytic Vegetation Present? FAC	(Yes)	No	Is this Data Point Within a Wetland? Yes (No)
Wetland Hydrology Present?	Yes	(No)	
Hydric Soils Present?	Yes	(No)	

Remarks: Non-wetland

APPENDIX B

DELINEATION MAP

APPENDIX C

PLANT LIST

TABLE 1

PARTIAL LIST OF PLANTS OBSERVED ON THE CASELMAN ROAD PROPERTY AND THEIR STATUS AS WETLAND INDICATOR SPECIES

Scientific Name	Common Name	Status [1&2]
Achyrachaena mollis	blow wives	FAC
Aira caryophyllea	silver hairgrass	UPL
Anagallis arvensis	scarlet pimpernel	FAC
Avena fatua	wild oats	UPL
Brassica nigra	black mustard	UPL
Brodiaea sp.	brodiaea	---
Bromus diandrus	rip-gut grass	UPL
Bromus mollis	soft chess	FACU-
Centaurea solstitialis	yellow star-thistle	UPL
Claytonia perfoliata	Miner's lettuce	FAC
Cichorium intybus	chicory	UPL
Convolvulus arvensis	bindweed	UPL
Cynodon dactylon	Bermuda grass	FAC
Cyperus eragrostis	tall flatsdege	FACW
Echinochloa crusgalli	barnyard grass	FACW
Eleocharis macrostachya	creeping spikerush	OBL
Eremocarpus setigerus	doveweed	UPL
Erodium botrys	filaree	UPL
Eschsholzia californica	California poppy	UPL
Eucalyptus globulus	blue gum	UPL
Eucalyptus sp.	gum	UPL
Foeniculum vulgare	sweet fennel	FACU
Holocarpha virgata	tarweed	UPL
Hordeum hystrix	Mediterranean barley	FAC
Hordeum leporinum	barley	FACU-UPL
Hypochaeris glabra	smooth cats tongue	UPL
Juglans californica	California walnut	UPL
Juncus bufonius	toad rush	FACW+
Juncus xiphioides	iris leaf rush	OBL
Lactuca serriola	prickly lettuce	FAC
Leontodon leysseri	hairy hawkbit	FACU
Lippia nidoflora	common frog-fruit	FACW
Lolium perenne	perennial ryegrass	FAC
Medicago polymorpha	bur clover	UPL

[1] Reed, P.B. 1988. National List of Plant Species That Occur in Wetlands: California (Region 0). Biological Report 88(26.10) May 1988. National Ecology Research Center, National Wetland Inventory, U.S. Fish and Wildlife Service, St. Petersburg, Fl.

[2] OBL = obligate; FACW = facultative wetland; FAC = facultative; FACU = facultative upland; UPL = upland; and NI = no indicator.

Scientific Name	Common Name	Status
Olea europaea	olive	UPL
Plagiobothrys stipitatus var. micranthus	slender popcorn flower	OBL
Plantago lanceolata	English plantain	FAC-
Poa annua	annual bluegrass	FACW-
Polygonum aviculare	postrate knotweed	FAC
Quercus lobata	valley oak	FAC
Ranunculus muricatus	spiny-fruited buttercup	FACW+
Raphanus sativus	wild radish	UPL
Rubus procerus	Himalaya blackberry	FAC
Rumex conglomeratus	clustered dock	FACW
Rumex crispus	curly dock	FACW-
Sonchus arvensis	field sow thistle	FACU
Stellaria media	chickweed	FACU
Trifolium hirtum	rose clover	UPL
Trifolium sp.	clover	---
Typha sp.	cattails	OBL
Vicia villosa	winter vetch	UPL
Vitis californica	wild grape	UPL
Vulpia myuros	rattail fescue	FACU

APPENDIX D

CORPS OF ENGINEERS VERIFICATION LETTER

Caselman Rd

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

REPLY TO
ATTENTION OF

January 12, 2007

Regulatory Branch (200400777)

JJ Jacobs
Carson Development Company
P.O. Box 2590
Sacramento, California 95812-2590

Dear Ms. Jacobs:

We are responding to your consultant's request for an approved jurisdictional determination for the Caselman Road site. This approximately 48-acre site is located near Unionhouse Creek in Section 12, Township 7 North, Range 5 East, MDB&M, Latitude 38° 28′ 25.1″, Longitude 121° 22′ 39.9″, Sacramento County, California.

The 0.14 acres of waters identified as as seasonal wetlands 1 through 8 (SW1-SW8) on the "Jursidictional Delineation Map, Caselman Road Property", dated January 2007, are intrastate isolated waters with no apparent interstate or foreign commerce connection. As such, these waters are not currently regulated by the Corps of Engineers. This disclaimer of jurisdiction is only for Section 404 of the Federal Clean Water Act. Other Federal, State, and local laws may apply to your activities. In particular, you may need authorization from the California State Water Resources Control Board and/or the U.S. Fish and Wildlife Service.

This verification is valid for five years from the date of this letter, unless new information warrants revision of the determination before the expiration date. This letter contains an approved jurisdictional determination for your subject site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the South Pacific Division Office at the following address: Doug Pomeroy, Administrative Appeal Review Officer, Army Corps of Engineers, South Pacific Division, CESPD-PDS-O, 333 Market Street, Room 923, San Francisco, California 94105-2195, Telephone: 415-977-8035 FAX: 415-977-8129.

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within 60 days of the NAP. Should you decide to submit an RFA form, it must be received at the above address by March 11, 2007. It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this letter.

You should provide a copy of this letter and notice to all other affected parties, including any individual who has an identifiable and substantial legal interest in the property.

This determination has been conducted to identify the limits of Corps of Engineers' Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

Please refer to identification number 200400777 in any correspondence concerning this project. If you have any questions, please contact Andrea Jones at our Sacramento Office, 1325 J Street, Room 1480, Sacramento, California 95814-2922, email *Andrea.J.Jones@usace.army.mil*, or telephone 916-557-7745. You may also use our website: *www.spk.usace.army.mil/regulatory.html*.

Sincerely,

ORIGINAL SIGNED

Kevin Roukey
Chief, Central California/Nevada
Section

Enclosure

Copy furnished without enclosure:

Jim Gibson, Gibson & Skordal, LLC, 2277 Fair Oaks Boulevard, Suite 105, Sacramento, California 95825-5500
U.S. Fish and Wildlife Service, Wetlands Branch, 2800 Cottage Way, Suite W2605, Sacramento, California 95825-3901
U.S. Fish and Wildlife Service, Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, California 95825-3901
Vincent King, Planner I, Planning and Community Development Department, County of Sacramento, 827 7th Street, Room 230, Sacramento, California 95814-2406

Copies furnished with delineation map:

William Marshall, Storm Water and Water Quality Certification Unit, Central Valley Regional Water Quality Control Board, 11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114
Oscar Balaguer, Chief, Water Quality Certification Unit, California State Water Resources Control Board, 1001 I Street, Sacramento, California 95814

CONNOR ARBORIST SERVICES

Post Office Box 277754
Sacramento, California 95827-7754
Phone (916) 726-1427 • Fax (916) 484-1023

August 30, 2004

Judy Jacobs
Carson Development Company
1722 3rd Street, #202
Sacramento, Ca. 95814

Re: Arborist report for Caselman property in Sacramento

Dear Judy,

As per our conversation, I am sending you this arborist report describing trees on the 50 acre parcel at the southwest corner of Caselman Road and Elk Grove Florin Road in Sacramento. At present most of this property is a vacant field, but there are several established residential home sites on the south and east perimeters. All of the trees described in this report are growing in the yards of these homes except for the last two trees (#54 and #55), which are growing in vacant field property to the west of the most westerly house.

By the specifications given by Sacramento County, native trees four inches in trunk diameter and larger are included, as are non-native trees with trunk diameters nineteen inches in diameter and larger. The native trees are relatively few. There are two native Valley Oaks, and a few Black Walnuts and Boxelder trees. The vast majority of the trees are ornamental varieties, mostly Modesto Ash and Fruitless Mulberry. It would appear that there has been some maintenance pruning done to these trees over the years, but most of the trees (especially the Modesto Ash trees) are in relatively poor condition and would benefit from some remedial work if they are to be preserved as landscape trees.

The recommendations given for the individual trees are stated assuming that the trees are being preserved. Only two trees were determined to be in such poor condition that they could not be salvaged. But, realistically, some of the trees (especially the Modesto Ash) are approaching the end of their useful lives and would more logically be removed and replaced by different species which would be much less costly to maintain.

Aluminum number tags have been placed on the trunks of the trees for field identification. Please note that there are many ornamental trees that are below the nineteen inch trunk diameter limit required for documentation by the county. A marked up site plan is returned to you with this report. Please feel free to call if you have any questions regarding this report.

Sincerely,

George M. Connor
ISA Certified Arborist #587

RECEIVED
SEP 13 2004
DEPARTMENT OF
REVIEW

Tree #1 Fruitless Mulberry Morus alba
DBH: 22 "
DLR: 30 '
Structure: Fair to poor, excessive lateral weight on limbs
Vigor: Fair, some fluxing on trunk
Dripline environment: Residential yard, drainage ditch
Recommendation: Prune

Tree #2 Fruitless Mulberry Morus alba
DBH: 20 "
DLR: 35 '
Structure: Fair, excessive lateral weight on limbs
Vigor: Fair, minor fluxing on limbs
Dripline environment: Residential yard, drainage ditch
Recommendation: Prune

Tree #3 Fruitless Mulberry Morus alba
DBH: 24 " at 3 feet
DLR: 30 '
Structure: Fair, excessive lateral weight on limbs
Vigor: Fair, exposed surface roots
Dripline environment: Residential yard
Recommendation: Prune

Tree #4 Valley Oak Quercus lobata
DBH: 7 "
DLR: 10 '
Structure: Good to fair
Vigor: Good to fair
Dripline environment: Residential yard, drainage ditch
Recommendation: No work necessary

Tree #5 Fruitless Mulberry Morus alba
DBH: 26 " at 3 feet
DLR: 40 '
Structure: Fair to poor, excess weight on lateral limbs to south, has been side pruned for line clearance
Vigor: Fair, minor root damage from grading to southwest
Dripline environment: Vacant lot
Recommendation: Prune

Tree #6 Modesto Ash Fraxinus veluntina 'modesto'
DBH: 20 "
DLR: 30 '
Structure: Fair
Vigor: Fair to poor, above average amount of dead wood
Dripline environment: Vacant lot
Recommendation: Prune and fertilize

Tree #7 Modesto Ash Fraxinus velutina 'modesto'
DBH: 26 "
DLR: 20 '
Structure: Fair to poor, major primary limbs removed
Vigor: Fair, large mechanical trunk wound on east side
Dripline environment: Vacant lot
Recommendation: Prune and fertilize

Tree #8 Red Gum Eucalyptus Eucalyptus camaldulensis
DBH: 37 "
DLR: 30 '
Structure: Fair to poor, has been topped, some decay in trunk
Vigor: Fair to poor, above average amount of dead wood, lerp psyllid infestation
Dripline environment: Gravel driveway, building pad
Recommendation: Prune, fertilize inspect annually

Tree #9 Red Gum Eucalyptus Eucalyptus camaldulensis
DBH: 31 "
DLR: 25 '
Structure: Fair to poor, has been topped, some decay in trunk
Vigor: Fair to poor, above average amount of dead wood, lerp psyllid infestation
Dripline environment: Gravel driveway, building pad
Recommendation: Prune, fertilize, inspect annually

Tree #10 London Plane Platanus acerifolia
DBH: 26 "
DLR: 28 '
Structure: Fair, has been topped for line clearance
Vigor: Fair
Dripline environment: Residential yard, road easement
Recommendation: Prune and fertilize

Tree #11 London Plane Platanus acerifolia
DBH: 27 "
DLR: 30 '
Structure: Fair to poor, has been topped for line clearance
Vigor: Fair
Dripline environment: Residential yard, road easement
Recommendation: Prune and fertilize

Tree #12 Black Walnut Juglans hindsii
DBH: 22 "
DLR: 30 '
Structure: Fair
Vigor: Fair, slightly above average amount of dead wood
Dripline environment: Residential yard, water tank to south within dripline
Recommendation: Prune and fertilize

Tree #13 Modesto Ash Fraxinus velutina 'modesto'
DBH: 20 "
DLR: 28 '
Structure: Fair, weak crotching, excess lateral weight to south
Vigor: Fair
Dripline environment: Residential yard
Recommendation: Prune and fertilize

Note – due to a sequencing error, there are no trees #14, #15, and #16

Tree #17 Modesto Ash Fraxinus velutina 'modesto'
DBH: 21 "
DLR: 28 '
Structure: Fair
Vigor: Fair to poor, above average amount of dead wood, sparse foliage, mistletoe
Dripline environment: Residential yard
Recommendation: Prune, fertilize, irrigate

Tree #18 Black Walnut Juglans hindsii
DBH: 15 " at 3 feet
DLR: 12 '
Structure: Fair to poor, regrowth from 5 foot high stump
Vigor: Fair
Dripline environment: Residential yard, gravel driveway
Recommendation: Prune and fertilize

Tree #19 Black Walnut Juglans hindsii
DBH: Multiple 5 to 3 " trunks
DLR: 10 '
Structure: Fair to poor, regrowth from old stump
Vigor: Poor, almost dead
Dripline environment: Road easement
Recommendation: Remove – poor health

Tree #20 Modesto Ash Fraxinus velutina 'modesto'
DBH: 26 "
DLR: 35 '
Structure: Fair to poor, excess lateral weight to east, weak crotching
Vigor: Fair to poor, above average amount of dead wood, mistletoe
Dripline environment: Residential yard, gravel driveway
Recommendation: Prune, fertilize, cable, inspect annually

Tree #21 Fruitless Mulberry Morus alba
DBH: 28 " at 3 feet
DLR: 35 '
Structure: Fair, excess weight on lateral limbs
Vigor: Good to fair
Dripline environment: Residential yard, ivy
Recommendation: Prune

Tree #22 Modesto Ash Fraxinus velutina 'modesto'
DBH: 26 "
DLR: 32 '
Structure: Fair to poor, weak crotching, split limb in upper canopy
Vigor: Fair, above average amount of dead wood, mistletoe
Dripline environment: Residential yard
Recommendation: Prune,fertilize, remove broken limb, cable, inspect annually

Tree #23 Modesto Ash Fraxinus velutina 'modesto'
DBH: 26 "
DLR: 30 '
Structure: Fair
Vigor: Fair, above average amount of dead wood, mistletoe
Dripline environment: Residential yard
Recommendation: Prune and fertilize

Tree #24 Modesto Ash Fraxinus velutina 'modesto'
DBH: 23 "
DLR: 30 '
Structure: Fair, canopy overbalanced to south
Vigor: Fair, slightly above average amount of dead wood
Dripline environment: Residential yard
Recommendation: Prune and fertilize

Tree #25 Modesto Ash Fraxinus velutina 'modesto'
DBH: 22 "
DLR: 25 '
Structure: Fair, canopy overbalanced to southwest
Vigor: Fair, slightly above average amount of dead wood
Dripline environment: Residential yard, gravel driveway
Recommendation: Prune and fertilize

Tree #26 Black Walnut Juglans hindsii
DBH: 4, 4 "
DLR: 10 '
Structure: Fair, co-dominant trunks
Vigor: Fair
Dripline environment: Gravel driveway, road easement
Recommendation: No work necessary

Tree #27 Modesto Ash Fraxinus velutina 'modesto'
DBH: 26 " at 3 '
DLR: 30 '
Structure: Fair, growing into canopy of tree #28
Vigor: Fair
Dripline environment: Residential yard
Recommendation: Prune and fertilize

Tree #28 Fruitless Mulberry Morus alba
DBH: 25 "
DLR: 34 '
Structure: Fair, wounds on surface roots, growing into canopy of tree #27
Vigor: Good to fair
Dripline environment: Residential yard
Recommendation: Prune

Tree #29 Modesto Ash Fraxinus velutina 'modesto'
DBH: 22 "
DLR: 28 '
Structure: Fair to poor, excessive weight to southwest
Vigor: Fair
Dripline environment: Residential yard
Recommendation: Prune and fertilize

Tree #30 Modesto Ash Fraxinus velutina 'modesto'
DBH: 22 "
DLR: 38 '
Structure: Fair to poor, leans to west
Vigor: Fair
Dripline environment: Residential yard
Recommendation: Prune and fertilize

Tree #31 Black Walnut Juglans hindsii
DBH: 25 " at 2 feet
DLR: 30 '
Structure: Fair, canopy overbalanced to south due to crowding, co-dominant trunks above primary crotch at 5 feet
Vigor: Fair
Dripline environment: Residential yard, gravel driveway
Recommendation: Prune and fertilize

Tree #32 Modesto Ash Fraxinus velutina 'modesto'
DBH: 27 "
DLR: 35 '
Structure: Fair, excessive weight on lateral limbs
Vigor: Fair, above average amount of dead wood, mistletoe
Dripline environment: Residential yard
Recommendation: Prune and fertilize

Tree #33 Modesto Ash Fraxinus velutina 'modesto'
DBH: 25 '
DLR: 35 '
Structure: Fair
Vigor: Fair, above average amount of dead wood, mistletoe
Dripline environment: Residential yard
Recommendation: Prune and fertilize

Tree #34 Fruitless Mulberry Morus alba
DBH: 31 "
DLR: 40 '
Structure: Fair, weak crotching, excessive weight on lateral limbs
Vigor: Fair, fungal sporophore at north base of trunk, foliage undersized and chlorotic
Dripline environment: Residential yard
Recommendation: Prune, fertilize and inspect annually

Tree #35 Modesto Ash Fraxinus velutina 'modesto'
DBH: 31 "
DLR: 40 '
Structure: Fair, excessive weight on lateral limbs
Vigor: Fair
Dripline environment: Residential yard
Recommendation: Prune and fertilize

Tree #36 Boxelder Acer negundo
DBH: 5, 4 "
DLR: 10 '
Structure: Fair, co-dominant trunks from weak primary crotch at 1 foot
Vigor: Fair, some mistletoe
Dripline environment: Residential yard
Recommendation: Prune and fertilize

Tree #37 Boxelder Acer negundo
DBH: 15 "
DLR: 25 '
Structure: Fair
Vigor: Fair, above average amount of dead wood, mistletoe
Dripline environment: Residential yard
Recommendation: Prune and fertilize

Tree #38 Modesto Ash Fraxinus velutina 'modesto'
DBH: 20 "
DLR: 30 '
Structure: Fair, growing into canopy of tree #39
Vigor: Fair, above average amount of dead wood, mistletoe
Dripline environment: Residential yard, asphalt driveway
Recommendation: Prune and fertilize

Tree #39 Fruitless Mulberry Morus alba
DBH: 32 "
DLR: 40 '
Structure: Fair to poor, co-dominant trunks grafted together from 1 to 5 feet
Vigor: Fair, some decay in lower trunk
Dripline environment: Residential yard
Recommendation: Prune, cable, inspect annually

Tree #40 Modesto Ash Fraxinus velutina 'modesto'
DBH: 22 "
DLR: 30 '
Structure: Fair to poor, canopy overbalanced to west due to crowding
Vigor: Fair, above average amount of dead wood, mistletoe
Dripline environment: Residential yard
Recommendation: Prune and fertilize

Tree #41 Modesto Ash Fraxinus velutina 'modesto'
DBH: 21 "
DLR: 25 '
Structure: Fair, excessive weight on lateral limbs
Vigor: Fair, above average amount of dead wood, mistletoe
Dripline environment: Residential yard, asphalt driveway
Recommendation: Prune and fertilize

Tree #42 Modesto Ash Fraxinus velutina 'modesto'
DBH: 26 " at 3 feet
DLR: 32 '
Structure: Fair, excessive weight on lateral limbs
Vigor: Fair, above average amount of dead wood, mistletoe
Dripline environment: Residential yard
Recommendation: Prune and fertilize

Tree #43 Modesto Ash Fraxinus velutina 'modesto'
DBH: 25 '
DLR: 40 '
Structure: Fair, canopy overbalanced to south, excessive weight on lateral limbs
Vigor: Fair, callusing wound on west base of trunk, mistletoe and dead wood
Dripline environment: Residential yard
Recommendation: Prune and fertilize

Tree #44 Modesto Ash Fraxinus velutina 'modesto'
DBH: 27 " at 3 feet
DLR: 40 '
Structure: Fair, excessive weight on lateral limbs
Vigor: Fair, above average amount of dead wood, mistletoe
Dripline environment: Residential yard
Recommendation: Prune and fertilize

Tree #45 Modesto Ash Fraxinus velutina 'modesto'
DBH: 25 '
DLR: 35 '
Structure: Fair to poor, severe split in trunk
Vigor: Fair, mistletoe
Dripline environment: Residential yard
Recommendation: Prune, cable, bolt, inspect annually, fertilize

Tree #46 Modesto Ash Fraxinus velutina 'modesto'
DBH: 32 "
DLR: 30 '
Structure: Fair, weak crotching, excessive weight on lateral limbs
Vigor: Fair, above average amount of dead wood
Dripline environment: Residential yard
Recommendation: Prune, fertilize, inspect annually

Tree #47 Italian Stone Pine Pinus pinea
DBH: 22 "
DLR: 25 '
Structure: Fair to poor, severe lean to south over road
Vigor: Good to fair
Dripline environment: Residential yard, road easement
Recommendation: Prune to reduce weight, inspect annually

Tree #48 Modesto Ash Fraxinus velutina 'modesto'
DBH: 22 "
DRL: 30 '
Structure: Fair
Vigor: Fair, above average amount of dead wood, mistletoe
Dripline environment: Residential yard
Recommendation: Prune and fertilize

Tree #49 Modesto Ash Fraxinus velutina 'modesto'
DBH: 21 "
DLR: 25 '
Structure: Fair, canopy overbalanced to southwest
Vigor: Fair, above average amount of dead wood
Dripline environment: Residential yard
Recommendation: Prune and fertilize

Tree #50 Valley Oak Quercus lobata
DBH: 21 "
DLR: 30 '
Structure: Fair, some excessive weight on limbs to south
Vigor: Fair, fluxing lesions on trunk and primary limbs
Dripline environment: Residential yard
Recommendation: Prune and inspect annually

Tree #51 Boxelder Acer negundo
DBH: 10 " at 3 feet
DLR: 15 '
Structure: Fair to poor, decay in trunk
Vigor: Fair to poor, above average amount of dead wood, mistletoe
Dripline environment: Residential yard, vacant lot
Recommendation: Prune and fertilize

Tree #52 Boxelder Acer negundo
DBH: 9 '
DLR: 10 '
Structure: Fair to poor, decay in trunk
Vigor: Fair to poor, above average amount of dead wood
Dripline environment: Residential yard, vacant lot
Recommendation: Prune and fertilize

Tree #53 Boxelder Acer negundo
DBH: 12 "
DLR: 10 '
Structure: Poor extensive decay
Vigor: Poor, sparse living growth, almost dead
Dripline environment: Residential yard, vacant lot
Recommendation: Remove – poor health

Tree #54 Black Walnut Juglans hindsii
DBH: 17 "
DLR: 20 '
Structure: Fair to poor
Vigor: Fair to poor, above average amount of dead wood
Dripline environment: Vacant lot
Recommendation: Prune, fertilize, irrigate

Tree #55 Black Walnut Juglans hindsii
DBH: 7, 6 "
DLR: 18 '
Structure: Fair
Vigor: Fair
Dripline environment: Vacant lot
Recommendation: Prune, fertilize, irrigate

A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas

TREE HAZARD EVALUATION FORM 2nd Edition

Site/Address: 1842 Elk Grove - Florin Rd.

Map/Location: 1842 Elk Grove - Florin Rd

Owner: public ____ private ✓ unknown ____ other ____

Date: Aug 29, 2004 Inspector: George M. Conner

Date of last inspection: —

HAZARD RATING:

1 (Failure Potential) + 1 (Size of part) + 1 (Target Rating) = 3 (Hazard Rating)

____ Immediate action needed

____ Needs further inspection

____ Dead tree

TREE CHARACTERISTICS

Tree #: 19 **Species:** Black Walnut

DBH: ____ **# of trunks:** ____ **Height:** ____ **Spread:** ____

Form: ☐ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed

Crown class: ☐ dominant ☐ co-dominant ☐ intermediate ☐ suppressed

Live crown ratio: ____ % **Age class:** ☐ young ☐ semi-mature ☐ mature ☐ over-mature/senescent

Pruning history: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none ☐ multiple pruning events **Approx. dates:** ____

Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☐ indigenous ☐ protected by gov. agency

TREE HEALTH

Foliage color: ☐ normal ☑ chlorotic ☐ necrotic **Epicormics?** Y N

Foliage density: ☐ normal ☑ sparse **Leaf size:** ☐ normal ☐ small

Annual shoot growth: ☐ excellent ☐ average ☑ poor **Twig Dieback?** Y N

Woundwood development: ☐ excellent ☐ average ☑ poor ☐ none

Vigor class: ☐ excellent ☐ average ☐ fair ☑ poor

Growth obstructions: ☐ stakes ☐ wire/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☐ other ____

Major pests/diseases: ____

SITE CONDITIONS

Site Character: ☐ residence ☐ commercial ☐ industrial ☐ park ☐ open space ☐ natural ☐ woodland/forest

Landscape type: ☐ parkway ☐ raised bed ☐ container ☐ mound ☐ lawn ☐ shrub border ☐ wind break

Irrigation: ☐ none ☐ adequate ☐ inadequate ☐ excessive ☐ trunk wettied

Recent site disturbance? Y N ☐ construction ☐ soil disturbance ☐ grade change ☐ line clearing ☐ site clearing

% dripline paved: 0% 10-25% 25-50% 50-75% 75-100% **Pavement lifted?** Y N

% dripline w/ fill soil: 0% 10-25% 25-50% 50-75% 75-100%

% dripline grade lowered: 0% 10-25% 25-50% 50-75% 75-100%

Soil problems: ☐ drainage ☐ shallow ☐ compacted ☐ droughty ☐ saline ☐ alkaline ☐ acidic ☐ small volume ☐ disease center ☐ history of fail ☐ clay ☐ expansive ☐ slope ____° aspect: ____

Obstructions: ☐ lights ☐ signage ☐ line-of-sight ☐ view ☐ overhead lines ☐ underground utilities ☐ traffic ☐ adjacent veg. ☐ ____

Exposure to wind: ☐ single tree ☐ below canopy ☐ above canopy ☐ recently exposed ☐ windward, canopy edge ☐ area prone to windthrow

Prevailing wind direction: ____ *Occurrence of snow/ice storms* ☐ never ☐ seldom ☐ regularly

TARGET

Use Under Tree: ☐ building ☐ parking ☐ traffic ☐ pedestrian ☐ recreation ☐ landscape ☐ hardscape ☐ small features ☐ utility lines

Can target be moved? Y N **Can use be restricted?** Y N

Occupancy: ☐ occasional use ☐ intermittent use ☐ frequent use ☐ constant use

The International Society of Arboriculture assumes no responsibility for conclusions or recommendations derived from use of this form.

TREE DEFECTS

ROOT DEFECTS:

Suspect root rot: Y N **Mushroom/conk/bracket present:** Y N **ID:** _____

Exposed roots: ☐ severe ☐ moderate ☐ low **Undermined:** ☐ severe ☐ moderate ☐ low

Root pruned: _____ distance from trunk **Root area affected:** _____% **Buttress wounded:** Y N **When:** _____

Restricted root area: ☐ severe ☐ moderate ☐ low **Potential for root failure:** ☐ severe ☐ moderate ☐ low

LEAN: _____ deg. from vertical ☐ natural ☐ unnatural ☐ self-corrected **Soil heaving:** Y N

Decay in plane of lean: Y N **Roots broken** Y N **Soil cracking:** Y N

Compounding factors: _____ **Lean severity:** ☐ severe ☐ moderate ☐ low

CROWN DEFECTS: Indicate presence of individual defects and rate their severity (s = severe, m = moderate, l = low)

DEFECT	ROOT CROWN	TRUNK	SCAFFOLDS	BRANCHES
Poor taper				
Bow, sweep				
Codominants/forks				
Multiple attachments				
Included bark				
Excessive end weight				
Cracks/splits				
Hangers				
Girdling				
Wounds/seam				
Decay				
Cavity				
Conks/mushrooms/bracket				
Bleeding/sap flow				
Loose/cracked bark				
Nesting hole/bee hive				
Deadwood/stubs				
Borers/termites/ants				
Cankers/galls/burls				
Previous failure				

HAZARD RATING

Tree part most likely to fail: _____

Inspection period: _____ annual _____ biannual _____ other _____

Failure Potential + Size of Part + Target Rating = Hazard Rating

1 + 1 + 1 = 3

Failure potential: 1 - low; 2 - medium; 3 - high; 4 - severe
Size of part: 1 - <6" (15 cm); 2 - 6-18" (15-45 cm); 3 - 18-30" (45-75 cm); 4 - >30" (75 cm)
Target rating: 1 - occasional use; 2 intermittent use; 3 - frequent use; 4 - constant use

HAZARD ABATEMENT

Prune: ☐ remove defective part ☐ reduce end weight ☐ crown clean ☐ thin ☐ raise canopy ☐ crown reduce ☐ restructure ☐ shape

Cable/Brace: _____ **Inspect further:** ☐ root crown ☐ decay ☐ aerial ☐ monitor

Remove tree: Y N **Replace?** Y N **Move target:** Y N **Other:** _____

Effect on adjacent trees: ☐ none ☐ evaluate

Notification: ☐ owner ☐ manager ☐ governing agency **Date:** _____

COMMENTS

Recommended removal due to poor health and not potential hazard - Small Tree

A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas

TREE HAZARD EVALUATION FORM 2nd Edition

Site/Address: 8799 Cauleman Rd

Map/Location:

Owner: public _____ private _____ unknown _____ other _____

Date: Aug 29, 2004 Inspector: George M. Connor

Date of last inspection:

HAZARD RATING:

1 + 1 + 1 = 3

Failure Potential + Size of part + Target Rating = Hazard Rating

_____ Immediate action needed

_____ Needs further inspection

_____ Dead tree

TREE CHARACTERISTICS

Tree #: 53 **Species:** Boxelder

DBH: 12" **# of trunks:** _____ **Height:** _____ **Spread:** _____

Form: ☐ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed

Crown class: ☐ dominant ☐ co-dominant ☐ intermediate ☐ suppressed

Live crown ratio: _____ % **Age class:** ☐ young ☐ semi-mature ☐ mature ☐ over-mature/senescent

Pruning history: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none ☐ multiple pruning events Approx. dates:

Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☐ indigenous ☐ protected by gov. agency

TREE HEALTH

Foliage color: ☐ normal ☑ chlorotic ☐ necrotic **Epicormics?** Y N

Foliage density: ☐ normal ☑ sparse **Leaf size:** ☐ normal ☐ small

Annual shoot growth: ☐ excellent ☐ average ☑ poor **Twig Dieback?** Y N

Woundwood development: ☐ excellent ☐ average ☐ poor ☐ none

Vigor class: ☐ excellent ☐ average ☐ fair ☑ poor

Major pests/diseases:

Growth obstructions:

☐ stakes ☐ wire/ties ☐ signs ☐ cables

☐ curb/pavement ☐ guards

☐ other

SITE CONDITIONS

Site Character: ☐ residence ☐ commercial ☐ industrial ☐ park ☐ open space ☐ natural ☐ woodland/forest

Landscape type: ☐ parkway ☐ raised bed ☐ container ☐ mound ☐ lawn ☐ shrub border ☐ wind break

Irrigation: ☐ none ☐ adequate ☐ inadequate ☐ excessive ☐ trunk wettied

Recent site disturbance? Y N ☐ construction ☐ soil disturbance ☐ grade change ☐ tree clearing ☐ site clearing

% dripline paved: 0% 10-25% 25-50% 50-75% 75-100% **Pavement lifted?** Y N

% dripline w/ fill soil: 0% 10-25% 25-50% 50-75% 75-100%

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Soil problems: ☐ drainage ☐ shallow ☐ compacted ☐ droughty ☐ saline ☐ alkaline ☐ acidic ☐ small volume ☐ disease center ☐ history of fail ☐ clay ☐ expansive ☐ slope _____° aspect: _____

Obstructions: ☐ lights ☐ signage ☐ line-of-sight ☐ view ☐ overhead lines ☐ underground utilities ☐ traffic ☐ adjacent veg. ☐ _____

Exposure to wind: ☐ single tree ☐ below canopy ☐ above canopy ☐ recently exposed ☐ windward, canopy edge ☐ area prone to windthrow

Prevailing wind direction: _____ *Occurrence of snow/ice storms* ☐ never ☐ seldom ☐ regularly

TARGET

Use Under Tree: ☐ building ☐ parking ☐ traffic ☐ pedestrian ☐ recreation ☐ landscape ☐ hardscape ☐ small features ☐ utility lines

Can target be moved? Y N **Can use be restricted?** Y N

Occupancy: ☐ occasional use ☐ intermittent use ☐ frequent use ☐ constant use

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TREE DEFECTS

ROOT DEFECTS:

Suspect root rot: Y N **Mushroom/conk/bracket present:** Y N **ID:** _____

Exposed roots: ☐ severe ☐ moderate ☐ low **Undermined:** ☐ severe ☐ moderate ☐ low

Root pruned: _____ distance from trunk **Root area affected:** _____% **Buttress wounded:** Y N **When:** _____

Restricted root area: ☐ severe ☐ moderate ☐ low **Potential for root failure:** ☐ severe ☐ moderate ☐ low

LEAN: _____ deg. from vertical ☐ natural ☐ unnatural ☐ self-corrected **Soil heaving:** Y N

Decay in plane of lean: Y N **Roots broken** Y N **Soil cracking:** Y N

Compounding factors: _____ **Lean severity:** ☐ severe ☐ moderate ☐ low

CROWN DEFECTS: Indicate presence of individual defects and rate their severity (s = severe, m = moderate, l = low)

DEFECT	ROOT CROWN	TRUNK	SCAFFOLDS	BRANCHES
Poor taper				
Bow, sweep				
Codominants/forks				
Multiple attachments				
Included bark				
Excessive end weight				
Cracks/splits				
Hangers				
Girdling				
Wounds/seam				
Decay				
Cavity				
Conks/mushrooms/bracket				
Bleeding/sap flow				
Loose/cracked bark				
Nesting hole/bee hive				
Deadwood/stubs				
Borers/termites/ants				
Cankers/galls/burls				
Previous failure				

HAZARD RATING

Tree part most likely to fail: _____

Inspection period: _____ annual _____ biannual _____ other _____

Failure Potential + Size of Part + Target Rating = Hazard Rating

_____ + _____ + _____ = _____

Failure potential: 1 - low; 2 - medium; 3 - high; 4 - severe

Size of part: 1 - <6" (15 cm); 2 - 6-18" (15-45 cm); 3 - 18-30" (45-75 cm); 4 - >30" (75 cm)

Target rating: 1 - occasional use; 2 intermittent use; 3 - frequent use; 4 - constant use

HAZARD ABATEMENT

Prune: ☐ remove defective part ☐ reduce end weight ☐ crown clean ☐ thin ☐ raise canopy ☐ crown reduce ☐ restructure ☐ shape

Cable/Brace: _____ **Inspect further:** ☐ root crown ☐ decay ☐ aerial ☐ monitor

Remove tree: Y N **Replace?** Y N **Move target:** Y N **Other:** _____

Effect on adjacent trees: ☐ none ☐ evaluate

Notification: ☐ owner ☐ manager ☐ governing agency **Date:** _____

COMMENTS

Recommended removal due to poor health and not potential hazard - Small tree

Page: 1

12/4/2008 10:17:13 AM

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name:

Project Name: Caselman Ranch

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2008 TOTALS (lbs/day unmitigated)	11.56	66.92	35.25	0.02	250.06	4.09	254.15	52.23	3.76	55.99	5,905.65
2009 TOTALS (lbs/day unmitigated)	732.47	63.27	76.72	0.07	250.06	3.86	253.92	52.23	3.55	55.78	8,505.37

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	20.12	4.80	15.06	0.00	0.04	0.04	5,957.65

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	28.25	27.89	339.39	0.26	41.37	8.01	26,010.06

12/4/2008 10:17:13 AM

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	48.37	32.69	354.45	0.26	41.41	8.05	31,967.71

Page: 1

9/28/2010 1:21:37 PM

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name:

Project Name: Gardner Country Estates

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2010 TOTALS (lbs/day unmitigated)	6.45	42.83	25.47	0.01	50.02	2.71	52.74	10.45	2.49	12.94	4,123.72
2011 TOTALS (lbs/day unmitigated)	77.93	56.58	40.12	0.01	50.05	3.73	53.78	10.46	3.43	13.89	6,341.12

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	2.06	0.50	1.54	0.00	0.00	0.00	610.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	2.38	2.37	28.30	0.03	4.23	0.82	2,672.12

9/28/2010 1:21:37 PM

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	4.44	2.87	29.84	0.03	4.23	0.82	3,282.12

Page: 1

11/20/2008 2:46:44 PM

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name:

Project Name: Martin

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2008 TOTALS (lbs/day unmitigated)	8.31	57.30	33.03	0.01	160.02	3.64	163.67	33.42	3.35	36.77	4,857.38
2009 TOTALS (lbs/day unmitigated)	11.33	54.17	31.78	0.01	160.02	3.45	163.47	33.42	3.17	36.59	4,857.61

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04-0423

June 3, 2005

RECEIVED
JUN 6 2005
DEPARTMENT

Phillip Martin
Martin Brothers Construction
3174 Luyung Drive, #3
Rancho Cordova, CA 95742

Dear Mr. Martin:

Enclosed is a copy of the document titled, *Wetland Assessment at 9440 Bar-Du Lane, Sacramento County, California.*

A of total 0.67-acre of habitats potentially under the jurisdiction of the U.S. Army Corps of Engineers pursuant to Section 404 of the Clean Water Act occur on site. These habitats include vernal pool, seasonal wetland, marsh, ditch, and pond.

If you have any questions or need additional information please call me at (916) 952-0308. Thank you for the opportunity to work on this project. We look forward to future opportunities to work with you.

Sincerely,

Brent Helm, PhD.
Senior Ecologist

Enclosures: *Wetland Assessment at 9440 Bar-Du Lane, Sacramento County, California.*

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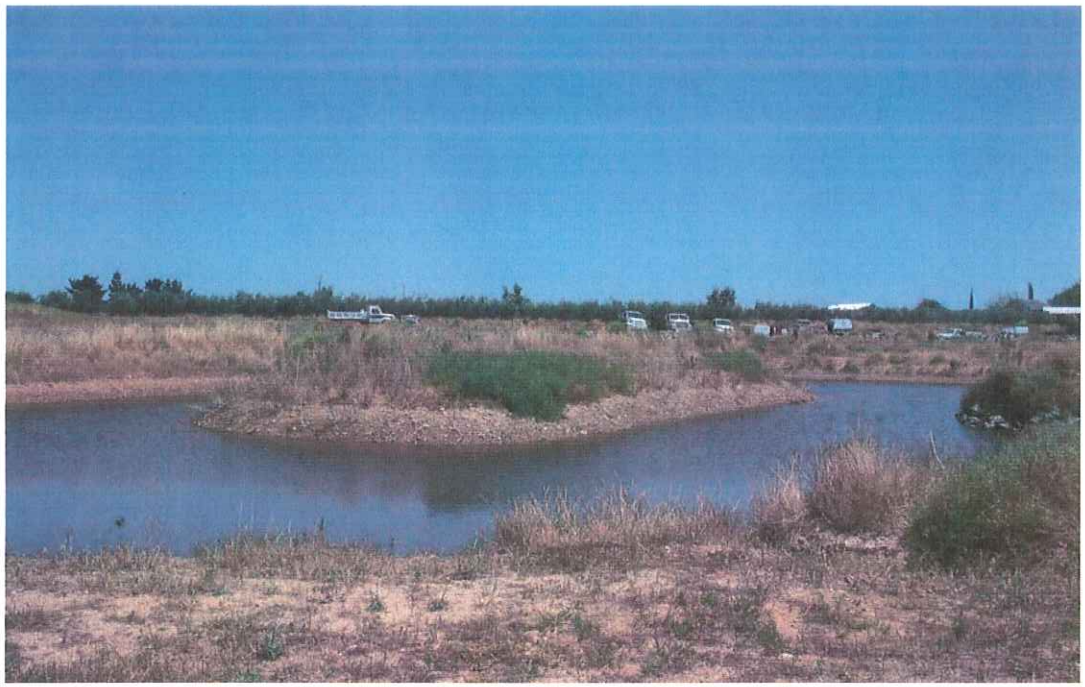
WETLAND ASSESSMENT
AT
9440 BAR DU LANE
SACRAMENTO COUNTY, CALIFORNIA



Prepared for: Martin Brothers Construction
3174 Luyung Drive, #3
Rancho Cordova, CA 95742
Contact: Phillip Martin

Prepared by: Helm Biological Consulting
8110 Granite Oaks Drive
Granite Bay, CA 95746
Contact: Brent Helm

June 2005

SUMMARY

A total of 0.64-acre of habitat potential under the jurisdiction of the U.S. Army Corps of Engineers pursuant to Section 404 of the Clean Water Act occurs on site. These habitats include three wetland types (vernal pool, seasonal wetland, and marsh) and two other waters types (ditch and pond) were identified at the 9440 Bar Du Lane (Exhibit A and Table 1).

Table 1. Acreage Calculations of Wetlands and Other Waters.

Habitat Type	Polygon Number	Acres
Marsh	W1	0.0504
Vernal Pool	W2	0.0279
Seasonal Wetland	W3	0.1626
Seasonal Wetland	W4	0.0395
Pond	W5	0.3817
Ditch	W6	0.0012
Seasonal Wetland	W7	0.0067
	Total	**0.6700**

INTRODUCTION

Helm Biological Consulting was contracted by Phillip Martin of Martin Brothers Construction to conduct an assessment of wetlands and other waters occurring at 9440 Bar Du Lane, Sacramento County, California. This report discusses the methods and results of the wetland assessment.

METHODS

Brent Helm and Becky Rozumowicz visited the site on May 17, 2005 and June 2, 2005. Areas supporting a prevalence of hydrophytes (water-loving plants) and evidence of wetland hydrology were mapped on a color aerial photograph and the dimensions were collected with a GIS grade GPS unit (Leica GS20).

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RESULTS

Three wetland habitats (vernal pool, seasonal wetland, marsh) and two other water habitats (ditch and pond) were encountered on site (Table 1 and Exhibit A). The ditch and pond habitats have been artificially created by excavation in upland soils. The wetland hydrology of the pond, ditch, and marsh habitat are augmented by an artificial water source (domestic well water). All five wetlands and other water habitat types and the upland annual grassland habitat are discussed further below.

Vernal Pool

Vernal pools are seasonally flooded landscape depressions where water ponds because of limitations to surface and subsurface drainage. Surface drainage is prevented by their depressed or concave topography. Subsurface drainage is inhibited by subsurface hardpan (duripan) or claypan soil layers that impede the downward filtration of water. Vernal pools support an endemic flora adapted to periodic or continuous inundation during the wet season and desiccation during the summers.

Vernal pools observed on site support a prevalence of hydrophytes ("water-loving" plants) typical of the Sacramento Valley vernal pool flora. Vernal pool basins are dominated by spike-primrose (*Epilobium cleistogamum*) (OBL), hyssop loosestrife (*Lythrum hyssopifolia*) (FACW), stipitate popcorn flower (*Plagiobotrys stipitatus* var. *micranthus*) (OBL), American pillwort (*Pilularia americana*) (OBL), Carter's buttercup (*Ranunculus bonariensis* var. *trisepalus*) (OBL), and smooth goldfield (*Lasthenia glaberrima*) (OBL). Subdominant plants occurring in the vernal pool habitat on site included rabbit's foot grass (*Polypogon monspeliensis*) (FACW+), umbrella sedge (*Cyperus eragrostis*) (FACW), Downingia (*Downingia* sp.) (OBL), prostrate knotweed (*Polygonum arenastrium*) (FAC), and annual silver hairgrass (*Deschampsia danthonioides*) (FACW).

Seasonal Wetland

Seasonal wetlands are shallow to deep topographic depressions underlain by soils with slow permeability that promote ponding and soil saturation of varying duration during the wet season. Seasonal wetlands on site support numerous plants adapted to periodic inundation during the growing season. Plants occurring in the seasonal wetland habitats on site include many of the same species observed in the vernal pools. However, the seasonal wetland habitats lack the presence of two or more vernal habitat indicator plants (*Downigia* ssp., *Eryngium* ssp., *Plagiobothrys* ssp., *Psilocarpus* ssp.,) and therfore are not classified as vernal pool or swale habitats. Dominant plants observed in the seasonal wetland habitat include annual Italian ryegrass (*Lolium multiflorum*) (FAC*), hyssop loosestrife (*Lythrum hyssopifolia*) (FACW), rabbit's foot grass (*Polypogon*

monspeliensis) (FACW+), coyote thistle (*Eryngium vaseyi*) (FACW), and curly dock (*Rumex crispus*) (FACW-).

Toad rush (*Juncus bufonius*) (FACW+) and broad-leaf willow herb (*Epilobium latifolium*) (FACW) also occur in this habitat; however, less frequently then those plants listed above.

Marsh

Marsh habitat on site is characterized by a prevalence of perennial monocots, which grow in permanently or semi-permanently flooded or saturated soil that is associated with freshwater. Dominant plants occurring in this habitat include broad-leaved cattail (*Typha latifolia*) (OBL) and common spike rush (*Eleocharis macrostachya*) (OBL). Additionally, young samplings of Black willow (*Salix goddingii*) (OBL) and Fremont's cottonwood (*Populus fremontii*) (FACW) occurred as sundominants.

Ditch

The ditch habitat is a human-made feature excavated in an upland for the purposes of water conveyance. In particular the ditch conveys overflow water from the marsh down slope to the pond. The ditch habitat was sparsely vegetated (approximately 5% aerial cover) by hydrophytes. Dominate plants species occurring in the ditch habitat were similar to those in the seasonal wetland habitat and included annual Italian ryegrass (*Lolium multiflorum*) (FAC*), hyssop loosestrife (*Lythrum hyssopifolia*) (FACW), and rabbit's foot grass (*Polypogon monspeliensis*) (FACW+).

Pond

The pond habitat is another human-made feature on site that was constructed by excavation and inundated by an artificial water source. The pond was largely unvegetated and consisted of open water habitat. Open water habitat occurs were water remains ponded year round at a sufficient depth to preclude the establishment of emergent marsh vegetation. Yet, a few Fremont's cottonwood seedlings were established at the waters edge.

Annual Grassland

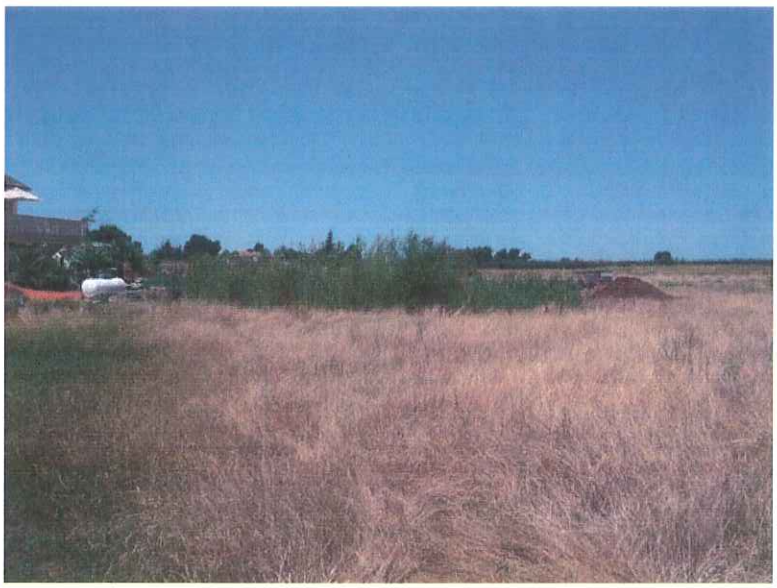
Annual grasslands occur in well-drained upland sites that are dry through summer. This seasonally dry habitat is characterized by a dominance of naturalized non-native grasses that covers the hilltops and well-drained uplands on site and surrounding areas.

Annual grassland habitat on site supported a dominance of upland and facultative upland grasses such as annual Italian ryegrass (*Lolium multiflorum*) (FAC*), annual blue grass (*Poa annua*) (FAC), wild oat (*Avena fatua*) (-), ripgut brome (*Bromus diandrus*) (-), soft chess (*Bromus hordeaceous*) (FACU), hare barley (*Hordeum murinum* ssp. *leporinum*)

(NI), small fescue (*Vulpia microstachys*) (-), and medusa-head grass (*Elymus caput-medusae*) (-).

Forbs such as wild lettuce (*Lactuca serriola*) (FAC), dove weed (*Eremocarpus setigerus*) (-), yellow star thistle (*Centaurea solstitialis*) (-), hairy hawkbit (*Leontodon taraxacoides*) (FACU), broadleaf filaree (*Erodium botrys*) (-), and dissected-leaf geranium (*Geranium dissectum*) (-) were also present as subdominants.

In conclusion, the vernal pool, seasonal wetland, marsh, ditch, and pond are potentially under the Jurisdiction of the U.S. Army Corps of Engineers pursuant to the Clean Water Act. Although the ditch and pond habitats lack sufficient aerial cover of hydrophytes to be classified as wetlands, they have an a defined bed and bank and ordinary high water mark, respectively and therefore would be considered others waters of the United States. In addition, all of these habitats are connected hydrologically. The seasonal wetlands convey storm runoff to the marsh, which overflows in to the ditch. The ditch conveys water into the pond. Hence, a total of 0.64-acre of habitat potentially under the jurisdiction of the U.S. Army Corps of Engineers pursuant to Section 404 of the Clean Water Act occurs on site. Representative photographs are provided below.



Photograph of seasonal wetland (W3) with marsh habitat (W1) in background (facing north).

Photograph of seasonal wetland (W4) (facing east).

Photograph of ditch habitat (W6) with pond habitat (W5) in background (facing northeast).

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Photograph of pond habitat (W5) (facing east).

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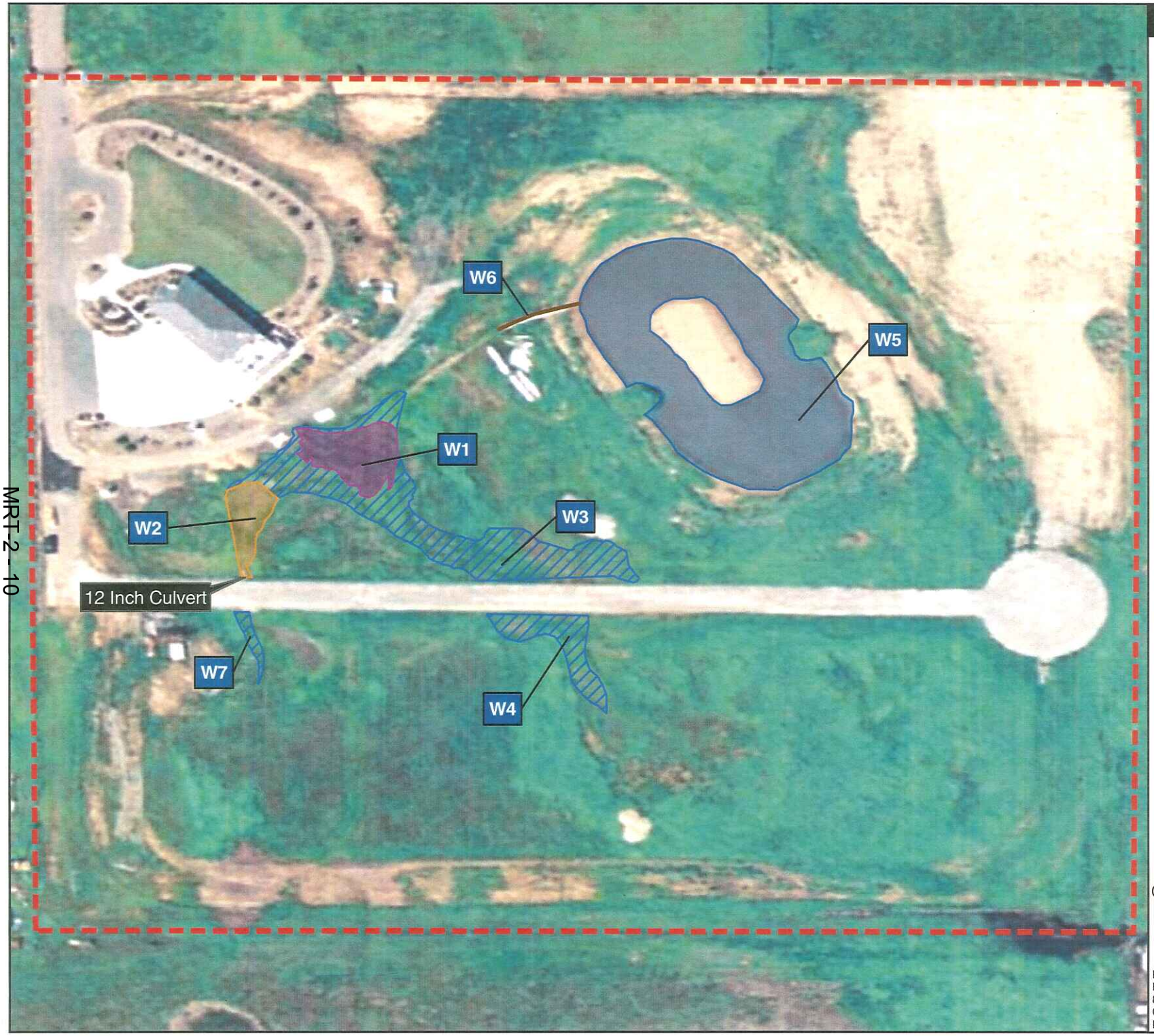
Exhibit A



9440 BAR DU LANE

Delineation of Waters of the U.S.

Legend

Parcel Boundary

Wetlands

Vernal Pool

Marsh

Pond

Seasonal Wetland

Ditch

1:1200

1 Inch = 100 Feet

0 25 50 75 100 125 150
Feet

Prepared By:
Helm Biological Consulting
8110 Granite Oaks Drive
Granite Bay, CA 95746
Date: 6/1/05

WET-SEASON SAMPLING
FOR
FEDERALLY-LISTED LARGE BRANCHIOPODS
AT THE
9440 BAR DU LANE PROPERTY

Prepared for: MARTIN BROTHERS CONSTRUCTION
20 Light Sky Court
Sacramento, CA 95828
Contact: Phillip Martin
(916) 381-0911

Prepared by: HELM BIOLOGICAL CONSULTING
2273 Nolen Drive
Lincoln, CA 95648
Contact: Brent Helm
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JUL 23 2007
DEPARTMENT OF ENVIRONMENTAL REVIEW AND ASSESSMENT

July 2006

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WET-SEASON SAMPLING FOR FEDERALLY-LISTED LARGE BRANCHIOPODS AT THE 9440 BAR DU LANE PROPERTY

INTRODUCTION

Helm Biological Consulting was contracted by Martin Brothers Construction to conduct wet-season sampling for federally-listed large branchiopods (e.g., vernal pool fairy shrimp [*Branchinecta lynchi*] and vernal pool tadpole shrimp [*Lepidurus packardi*]) at the 9440 Bar Du Lane Property.

The Bar Du Lane Property consists of a roughly 10 acre parcel located at 9440 Bar Du Lane, which is south of Gerber Road, north of Rodgers Road, and west of Bradshaw Road within Sacramento County, California. More specifically, the Property is located in the northwest ¼ of Section 8, Township 7 north, and Range 6 east of the Elk Grove U.S. Geological Survey 7.5 minute topographic quadrangle map (Latitude 38° 28' North, and Longitude 121° 20' west) (Figure 1). Helm Biological Consulting identified seven wetlands (0.672 acre), including one permanent pond, one vernal pool, one seasonal marsh, one ditch, and three seasonal wetlands onsite (Exhibit A).

This report discusses the methods and results of the wet-season sampling for the presence of federally-listed large branchiopods at the 9440 Bar Du Lane Property.

METHODS

Dr. Brent Helm conducted wet-season sampling under permit TE-795930-3 of Section 10 (a)(1)(A) of the federal Endangered Species Act, 16 U.S.C. 1531 *et. seq.*, and its implementing regulations. Methods generally followed U.S. Fish and Wildlife Service (USFWS) *Interim Survey Guidelines to Permittees for Recovery Permits under Section 10 (a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods* (1996) and are described below.

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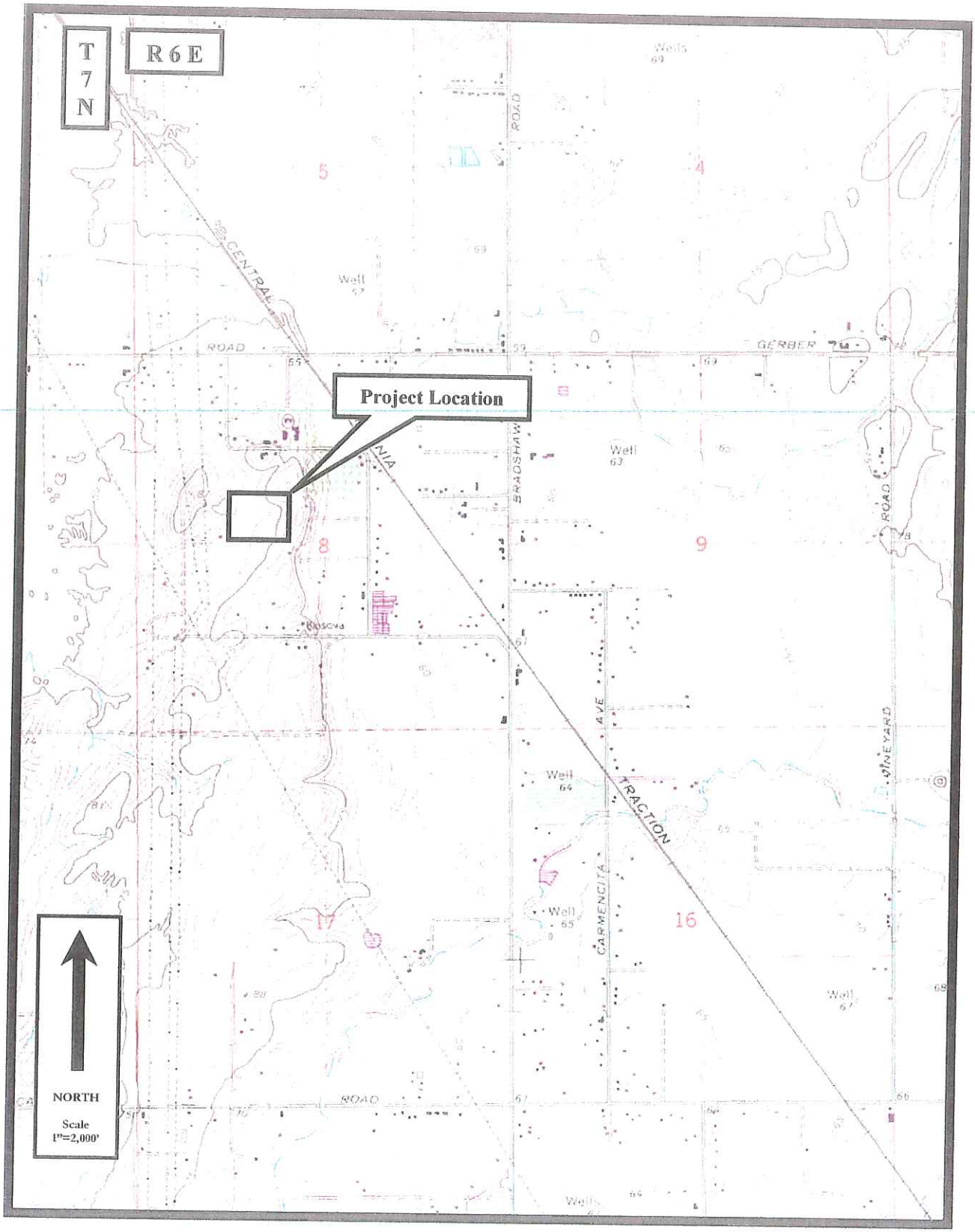

Figure 1. 9440 Bar Du Lane Project Location
(Source: U.S. Geological Survey Elk Grove 7.5 minute Quadrangle)

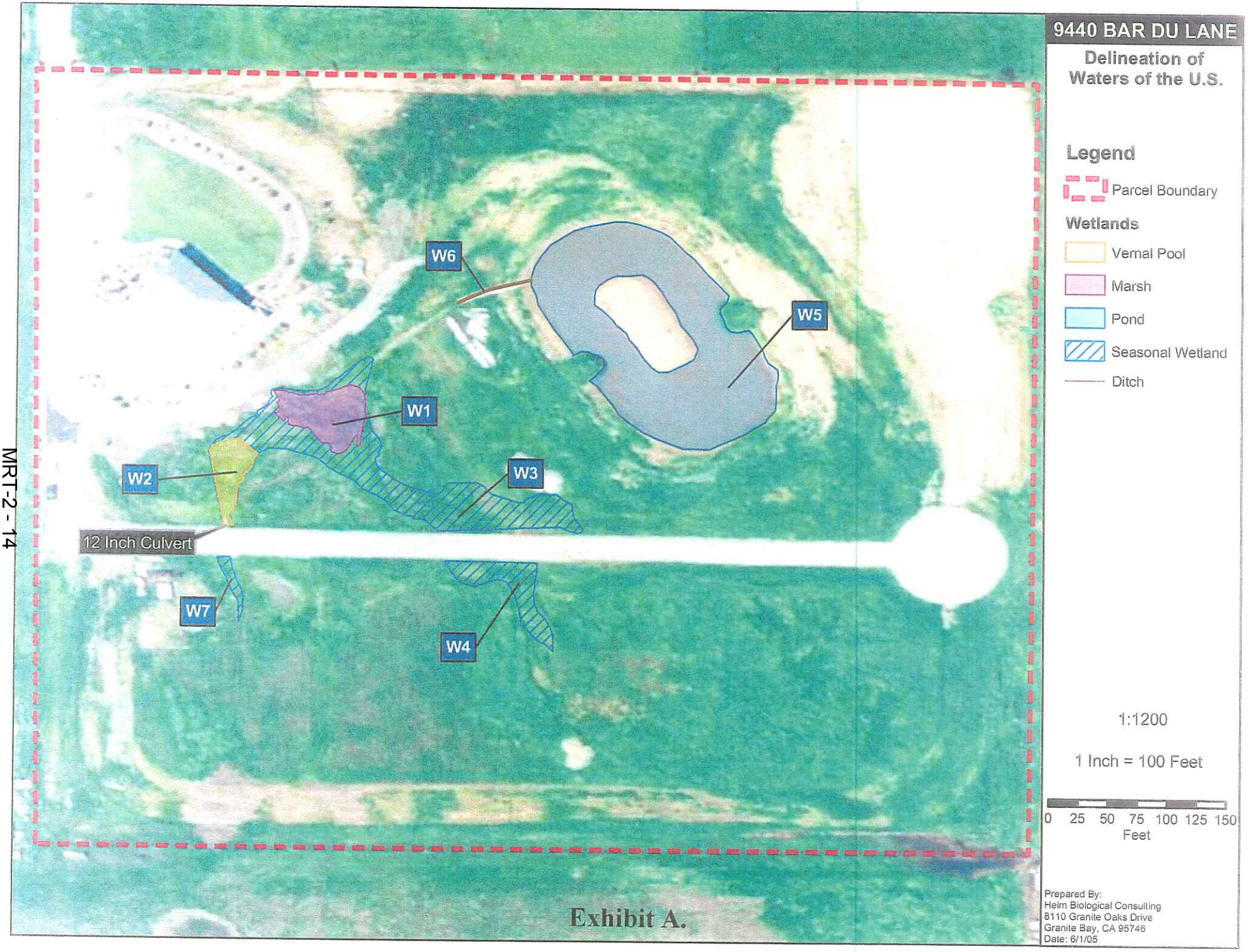
9440 BAR DU LANE
Delineation of Waters of the U.S.
Legend
Parcel Boundary
Wetlands
Vernal Pool
Marsh
Pond
Seasonal Wetland
Ditch
W1
W2
W3
W4
W5
W6
W7
12 Inch Culvert
1:1200
1 Inch = 100 Feet
0 25 50 75 100 125 150
Feet
Prepared By:
Helm Biological Consulting
8110 Granite Oaks Drive
Granite Bay, CA 95746
Date: 6/1/05

Exhibit A.

All areas that potentially could support federally-listed large branchiopods were sampled. Potential habitat for federally-listed large branchiopods is defined as any seasonal inundated depression that on average ponds water two (2) inches or greater in depth for 30 or more consecutive days. Potential habitat characteristics of large branchiopods are based on the life history of Central Valley endemics (Eriksen and Belk 1999; Helm 1998, 1999; Helm and Vollmar 2002). Habitats that flow water (e.g., creeks, streams, ephemeral drainages) or semi-to-permanently inundated areas were not considered suitable habitat for federally-listed large branchiopods.

Sampling was conducted on December 30, 2005; January 6, 16, and 26, 2006; February 8 and 21, 2006; March 7 and 21, 2006; and April 4, 16, and 28, 2006.

Wet-season sampling entailed dip-netting all potential habitats on site for active large branchiopods. All potential habitats were sampled at roughly two-week intervals, after they were inundated with a minimum of one inch of water. Sampling continued until the wetland were dry or 120 continuous days of ponding had occurred. All macroscopic aquatic organisms captured within the dipnet were identified to the lowest taxonomic group justifiable (in the field), recorded in field data forms, and then released back into the habitat from which they were collected.

RESULTS

Five (W1, W2, W4, W6, and W7) of seven seasonally inundated basins occurring on site (Exhibit A) were sampled using wet-season survey techniques for the presence of federally-listed large branchiopods. W5 is a human-made permanent pond and therefore, is not habitat for federally-listed large branchiopods. In contrast to W2, which ponded too long to support federally listed large branchiopods, W3 did not pond long enough or deep enough. Basin W3 ponded one inch in depth during the initially field survey and was not observed ponding during subsequent surveys. Basin W2 was only sampled during the first and second field surveys, conducted on December 30, 2006, and January 6, 2006. Upon initiation the third round of wet-season sampling, W2 had been altered and no longer functioned as potential federally-listed large branchiopod habitat. Black plastic sheeting had been laid down over the entire basin, and 4" to 6" cobble had been placed on top of the plastic sheeting (see photograph of W2 in Appendix B).

The first two field surveys, conducted on December 30, 2005, and January 6, 2006, produced no aquatic macroscopic invertebrates. Appendix A contains data forms listing all aquatic macroscopic organism observed in the wetland basins sampled during each of the field surveys. No evidence of large branchiopods (i.e., active adults or *Lepidurus* sp. carapaces) was observed within the basins sampled. Appendix B contains representative photographs of the basins on site.

DISCUSSION

Data results obtained from wet-season sampling efforts mirror those results obtained from dry-season sampling conducted by Helm Biological Consulting in September 2004.

LITERATURE CITED

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Helm, B. P., and J. E. Vollmar. 2002. Vernal pool large brachiopods. Pages 151-190 *in* John E. Vollmar (ed.). Wildlife and rare plant ecology of eastern Merced County's vernal pool grasslands. Sentinel Printers, Inc. CA. 446 pp.

Helm Biological Consulting. 2004. Dry-season sampling for federally listed large branchiopods at the 9440 Bar Du Lane Project. Prepared for Martin Brothers Construction, 3174 Luyung Drive #3, Rancho Cordova, CA 95742. 8 pp.

HELM
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2273 Nolen Drive, Lincoln, CA 95648

APPENDIX A. FIELD DATA SHEET

9440 Bar Du Lane Wet-sample Field Survey Data Sheet (2005-2006)

Dates and Weather: 30 Dec 05 (Clear and Cool); 06 Jan 06 (Clear and Cool); 16 Jan 06 (Clear and Cool); 26 Jan 06 (Clear and Mild); 8 Feb 06 (Clear and Cool); 21 Feb 06 (Clear and Mild); 7 Mar 06 (Partly Cloudy and Cool); 21 Mar 06 (Partly Cloudy and Mild); 4 Apr 06 (Clear and Mild); 18 Apr 06 (Partly Cloudy and Mild); 28 Mar 06 (Clear and Mild)

Abundance:

R = Rare (<2 individuals) C = Common (11-50 individuals) A = Abundant (>100 individuals)

NC = Not Common (3-10 individuals) VC = Very Common (50-100 individuals) X = Present but not observed in 1 meter sample

Investigator(s): Randall Stringer and Brent Helm

Survey Date	Pool No.	Depths (inches)		Crustacea	Insecta								Mollusca			Turbellaria	Herps	
					Coleoptera	Hemiptera			Odonata		Diptera						*Pseudacris*, sp	
		Max.	Min.	Ostracods	Hydrophilidae	Notonectidae	Corixidae	Ephemeroptera	Zygoptera	Anisoptera	Culicidae	Chironomidae	Lymnaeidae	Physidae	Planorbidae	Micro-turbularian	Eggs	Tadpoles
30-Dec	W1	6	3															
	W4	3	3															
	W6	7	6															
	W7	9	6															
6-Jan-06	W1	5	3															
	W4	3	1															
	W6	6	5															
	W7	8	5															
16-Jan-06	W1	4	2													R		
	W4	2	1															
	W6	7	5															
	W7	8	5	R												NC		
26-Jan-06	W1	5	2													NC		
	W4	N/P	N/P															
	W6	8	6													NC	X	
	W7	6	4	NC												NC		
8-Feb-06	W1	4	1													NC		R
	W4	N/P	N/P															
	W6	8	5													R	R	R
	W7	5	3	NC												NC		R
21-Feb-06	W1	5	2													NC	X	NC

Survey Date	Pool No.	Depths (inches) Max.	Depths (inches) Min.	Crustacea: Ostracods	Insecta: Coleoptera Hydrophilidae	Insecta: Hemiptera Notonectidae	Insecta: Hemiptera Corixidae	Insecta: Ephemeroptera	Insecta: Odonata Zygoptera	Insecta: Odonata Anisoptera	Insecta: Diptera Culicidae	Insecta: Diptera Chironomidae	Mollusca: Lymnaeidae	Mollusca: Physidae	Mollusca: Planorbidae	Turbellaria: Micro-turbularian	Herps: *Pseudacris*, sp Eggs	Herps: *Pseudacris*, sp Tadpoles
	W4	1	1															
	W6	9	6				X										R	
	W7	6	3	NC														NC
7-Mar-06	W1	5	3													NC		NC
	W4	2	1															
	W6	9	6		R		NC									NC	X	NC
	W7	7	3	C												R		NC
21-Mar-06	W1	7	4													R	R	NC
	W4	4	3														X	
	W6	9	7		NC		R											NC
	W7	7	4	C														X
4-Apr-06	W1	8	5															NC
	W4	4	2															
	W6	9	7				NC											NC
	W7	8	5	NC														X
18-Apr-06	W1	8	5															NC
	W4	3	2		X													R
	W6	7	5		R		NC											
	W7	5	3															NC
28-Apr-06	W1	7	5															NC
	W4	2	1															
	W6	5	3		X		X											NC
	W7	3	1															

N/P = Not Ponded

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APPENDIX B. REPRESENTATIVE PHOTOGRAPHS

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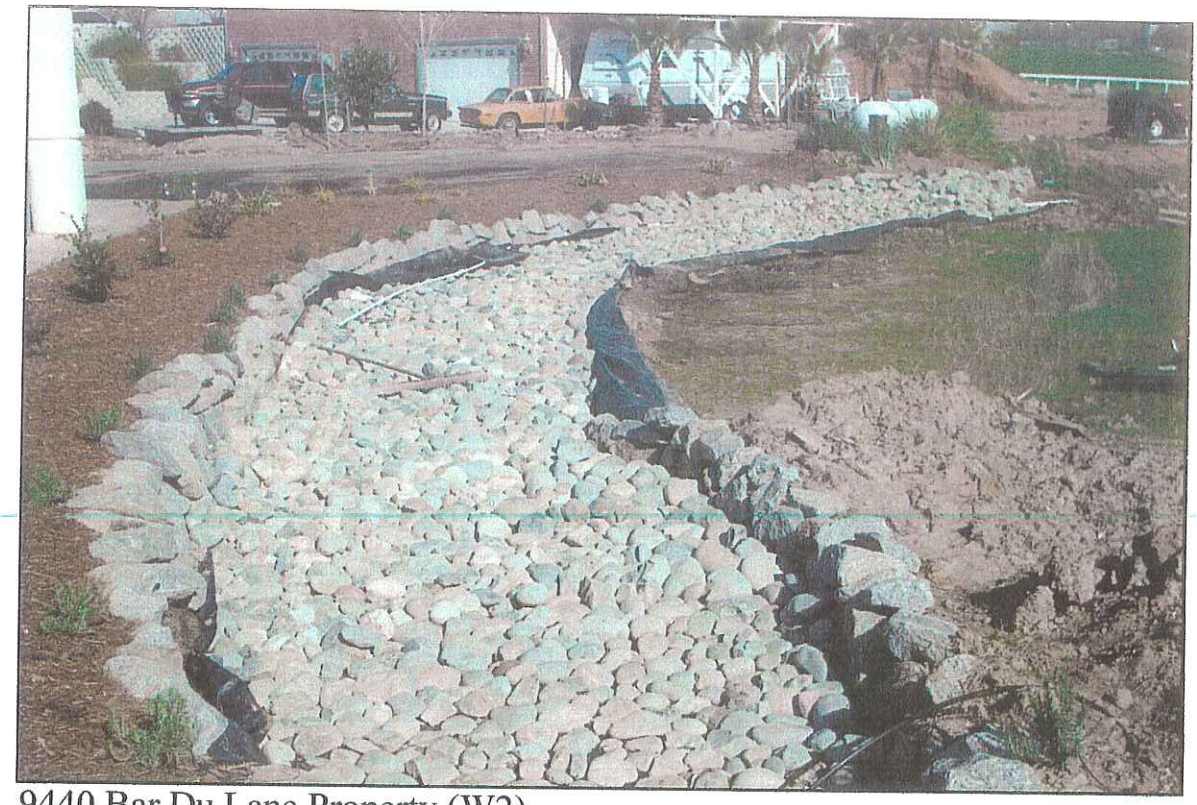
9440 Bar Du Lane (W1)

9440 Bar Du Lane (W4)

9440 Bar Du Lane (W6 – Facing West)

9440 Bar Du Lane (W7)



9440 Bar Du Lane Property (W2)

9440 Bar Du Lane Property (W3)

04.0423

AUG 2 8 2007
DEPARTMENT OF ENVIRONMENTAL
REVIEW AND ASSESSMENT

DRY-SEASON SAMPLING FOR FEDERALLY LISTED LARGE BRANCHIOPODS AT THE 9440 BAR DU LANE PROJECT

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Dry-Season Sampling For Federally Listed Large Branchiopods at the 9440 Bar Du Lane Project

Introduction

Helm Biological Consulting was contracted by Martin Brothers Construction, to conduct dry-season sampling for federally listed large branchiopods (e.g., vernal pool fairy shrimp [*Branchinecta lynchi*] and vernal pool tadpole shrimp [*Lepidurus packardi*]) at the 9440 Bar Du Lane Project.

The Bar Du Lane Property consists of a roughly 10 acre parcel located at 9440 Bar Du Lane, which is south of Gerber Road, north of Rodgers Road, and west of Bradshaw Road within Sacramento County, California. It lies in the northwest ¼ of Section 8, Township 7 north, and Range 6 east of the Elk Grove U.S. Geological Survey 7.5 minute topographic quadrangle map (Latitude: 38° 28' 23.57" north, Longitude: 121° 20' 27.16" west) (Figure 1). Martin Brothers Construction is proposing construction of a residential building on the southern half of the parcel. Helm Biological Consulting identified seven wetlands at the site, consisting of 0.672 acre (Exhibit A). The parcel supports five seasonally inundated basins (0.287 acres) which were sampled.

This report discusses the methods and results of the dry-season sampling for the presence of large branchiopods at the 9440 Bar Du Lane Project, Sacramento County, California.

Methods

Dr. Brent Helm conducted dry-season sampling under permit TE-795930-3 of Section 10 (a)(1)(A) of the federal Endangered Species Act, 16 U.S.C. 1531 *et seq.*, and its

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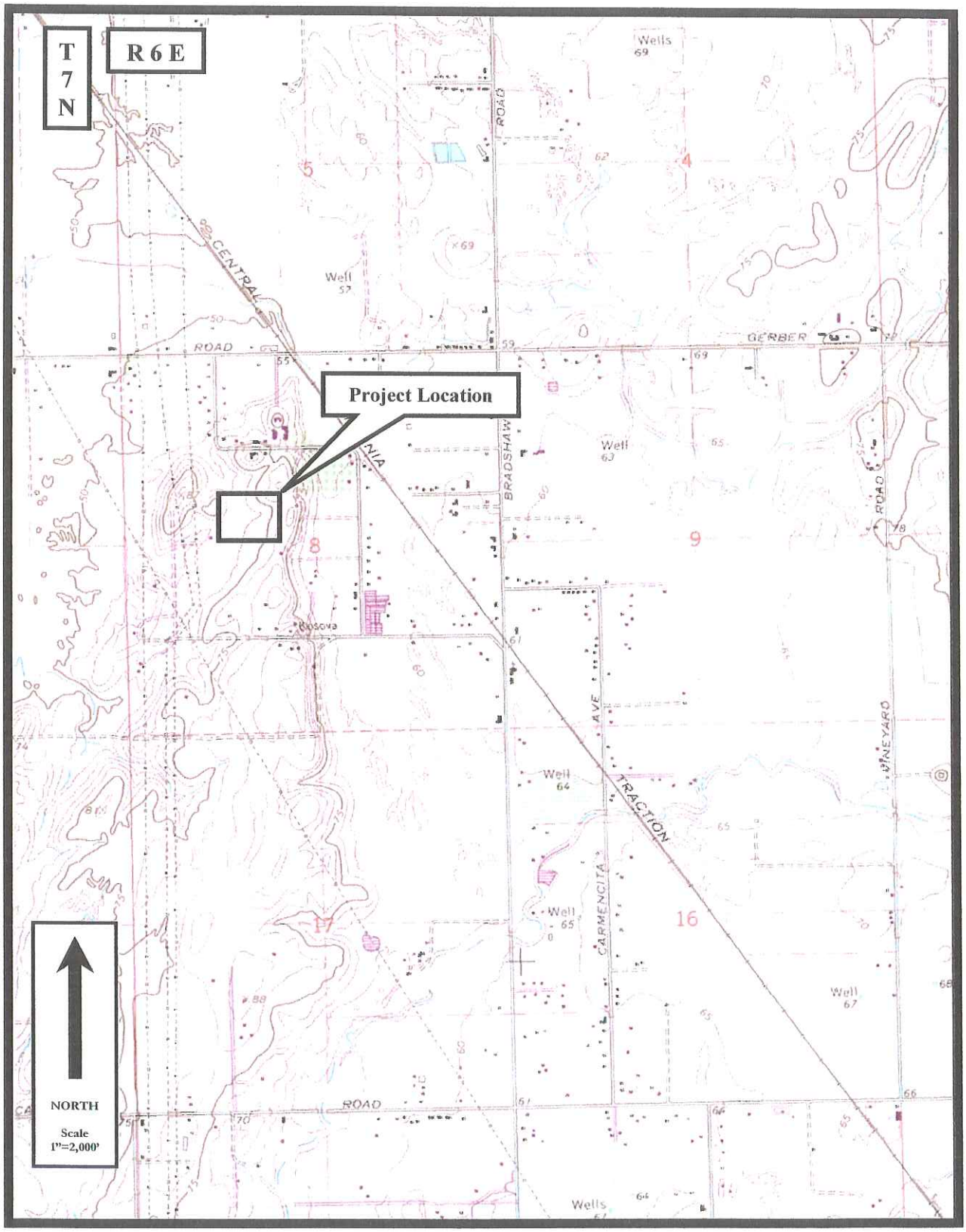

Figure 1. 9440 Bar Du Lane Project Location
(Source: U.S. Geological Survey Elk Grove 7.5 minute Quadrangle)

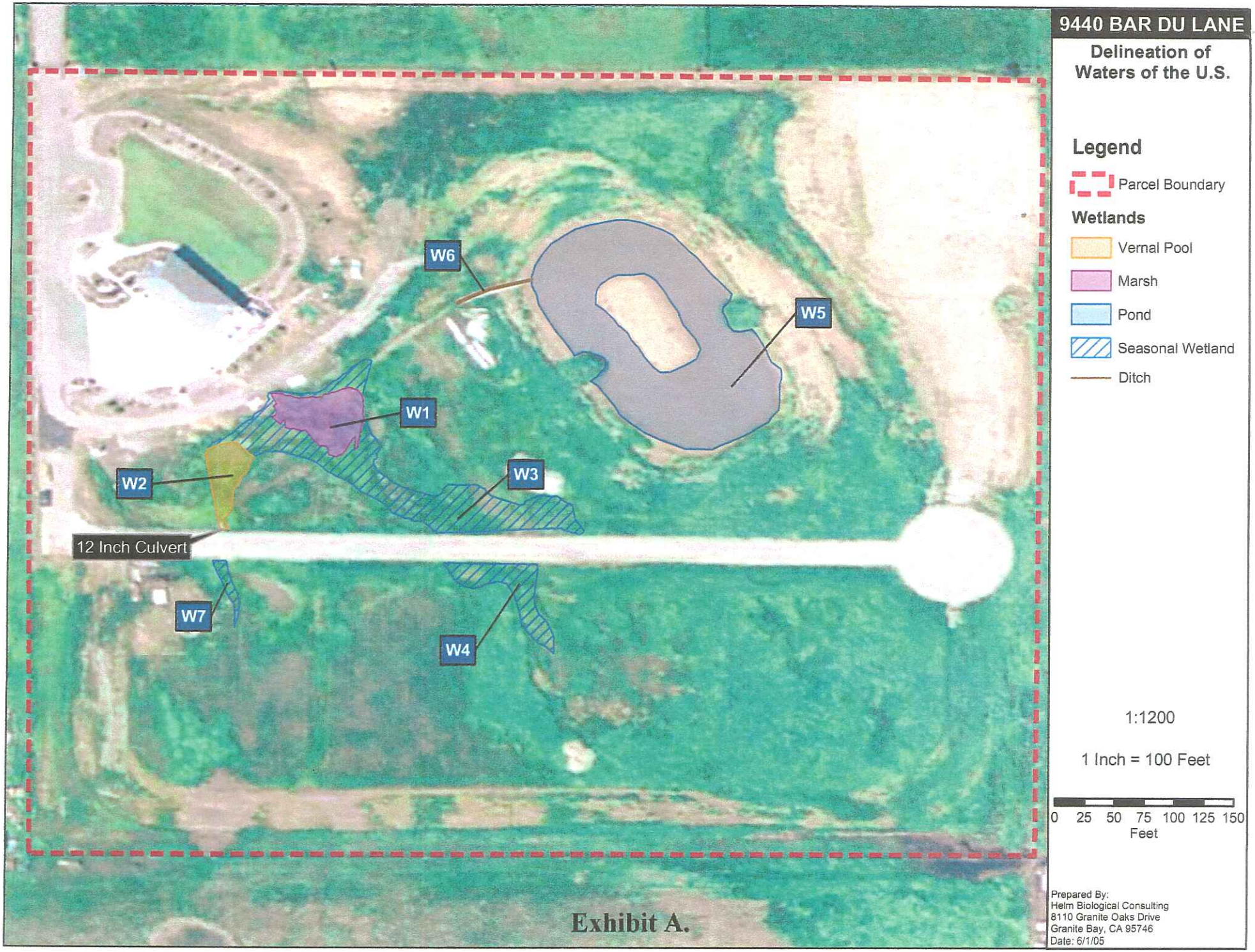
9440 BAR DU LANE
Delineation of Waters of the U.S.
Legend
Parcel Boundary
Wetlands
Vernal Pool
Marsh
Pond
Seasonal Wetland
Ditch
W1
W2
W3
W4
W5
W6
W7
12 Inch Culvert
1:1200
1 Inch = 100 Feet
0 25 50 75 100 125 150
Feet
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Exhibit A.

implementing regulations. Methods generally followed U.S. Fish and Wildlife Service (USFWS) *Interim Survey Guidelines to Permittees for Recovery Permits under Section 10 (a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods* (1996) and are described below.

All areas that potentially could support federally listed large branchiopods were sampled. Potential habitat for large branchiopods is defined as any seasonal inundated depression that on average ponds water two (2) inches or greater in depth for 30 or more consecutive days. Potential habitat characteristics of large branchiopods are based on the life history of Central Valley endemics (Eriksen and Belk 1999; Helm 1998, 1999; Helm and Volmar 2002). Habitats that flow water (e.g., creeks, streams, ephemeral drainages) or semi-to-permanently inundated areas were not considered suitable habitat for federally listed large branchiopods.

Dry-season sampling involved the collection of ten-soil sub-samples mainly from the lowest topographic areas within each basin onsite. Soil samples were placed in liter size plastic freezer bags and marked with the project name, basin number, and date. The soil was then transported to a laboratory for processing and analysis.

In the laboratory, a brine solution was prepared by mixing table salt (NaCl) with lukewarm tap water in a large container. The collected soil material was placed in the brine solution. The soil material was then gently worked by hand to breakdown any persistent soil structure. The organic material rising to the top of the brine solution was skimmed off and placed in a 600-micron diameter pore-size sieve stacked atop a 75-micron diameter pore-size sieve. The soil material was processed through the top sieve by flushing it with lukewarm tap water while gently rubbing it with a soft-bristle brush. The soil retained from the 75-micron diameter pore size sieve was then removed and thinly (1 mm) spread into plastic petri dishes.

The contents of each petri dish were examined under a 10 to 240-power zoom binocular microscope. A minimum of 0.5-hour was spent searching the contents of each petri dish for large branchiopod cysts (embryonic eggs). Dr. Helm's large branchiopod cyst reference collection and scanning electron micrographs of cysts (Hill and Shepard 1998, Mura 1991, and Gilchrist 1978) were used to identify and compare any cysts observed within the soil samples.

RESULTS

Visual examinations of the soils collected from the basins on site did not revealed evidence of large branchiopod presence (i.e., cysts or carapaces of *Lepidurus*) (Table 1).

Table 1. Results of Soil Analysis

Basin No.	Insect parts	Micro-Turbularian Cysts	Cladoceran Ephippia
W1	X		X
W2	X		
W3	X	X	X
W4	X		
W6	X		X
W7	X		X

Representative photographs of the basins onsite are found in Appendix A.

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APPENDIX A. REPRESENTATIVE PHOTOGRAPHS

Bar Du Lane (W2) 07/12/2005

Bar Du Lane (W5) 07/12/2005

Bar Du Lane (W4 and W3 in background)

Preliminary Wetland Delineation

Black Rezone & Tentative Parcel Map Project
APN 121-0080-024

Prepared for

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November 12, 2004

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I. Summary

This preliminary wetland delineation has identified a total of 1.004 acres of wetlands and other water features on the approximately 10 acre site, 1.002 acres of which are described as jurisdictional under the Clean Water Act (CWA) section 404.

The potential jurisdictional wetlands include two vernal pools (with a total area of 0.507 acres) and two seasonal swales (with a total area of 0.051 acres) that are intact and relatively undisturbed. Two areas on site have wetlands that have been enhanced (for a total of 0.386 acres). Roadside ditches at the northern site boundary and in the northwest corner of the site (with a total area of 0.058 acres) also have wetland characteristics.

The proposed project may lead to potential future impacts to wetlands, primarily limited to indirect impacts. It may be possible to avoid the potential impacts by modifying the project; otherwise, potential impacts may be mitigated by incorporating requirements for design guidelines, construction protection measures, and funding on- or off- site preservation and enhancement into the conditions of project approval.

II. Site Overview

The project is a proposed lot split/rezone (Control Number 04-RZB-PMR-045) to create three legal parcels from an approximately 10 acre parcel owned by Maria-Teresa Black (APN 121-0080-024). The existing parcel lies within the Florin-Vineyard "GAP" Community Plan area, and the proposed lot split/rezone is to be included and analyzed in the Environmental Impact Report (EIR) for the Florin-Vineyard Community Plan I.

The property address is 9570 Rogers Road, Sacramento California. It is located in the E1/2 SW1/4 SE1/4 Section 8, T7N R5E, of the U.S.G.S 7.5' series Elk Grove Quadrangle (Figure 1). The entrance to the site is on the corner of Rogers Road and Bar Du Lane. Access is via Rogers Lane west off Bradshaw Road, just south of the California Traction Railroad crossing.

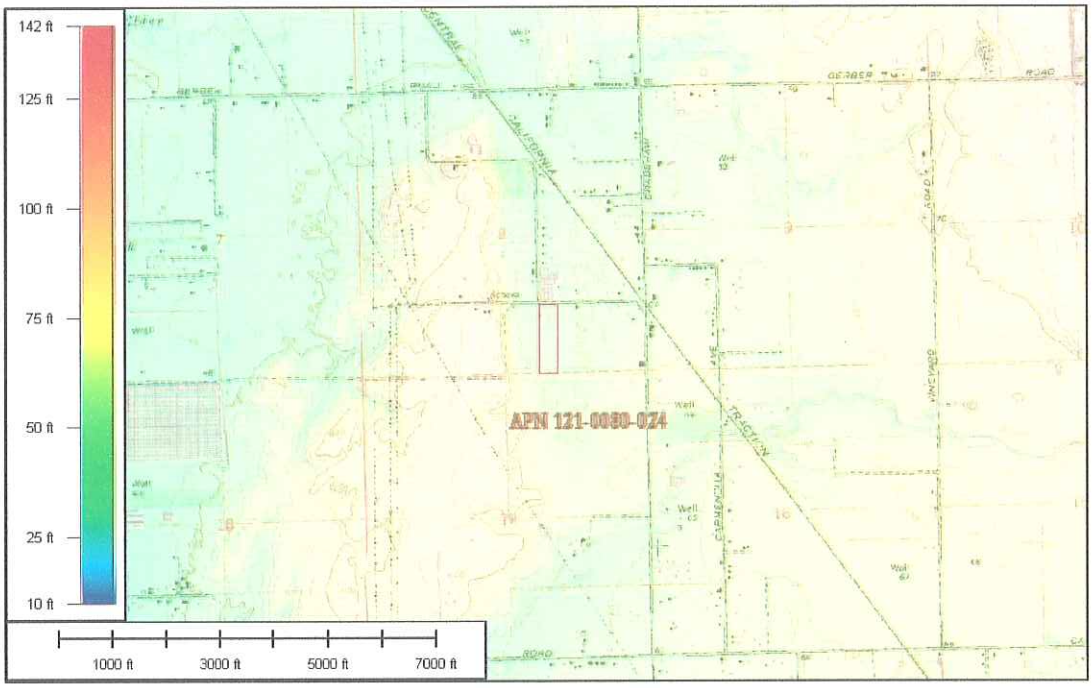

Figure 1: Project Site and Vicinity

III. Methods

To determine the areas subject to regulation pursuant to Clean Water Act (CWA) section 404, a wetland delineation of the project site was conducted. The 1987 U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual (Environmental Laboratory 1987; on-line version) routine approach, level 3 was applied. Vegetation, hydrology, and soils wetland criteria were all evaluated.

Historic aerial photographs of the study area, spanning 1937 to 1993 were reviewed at the Natural Resource Conservation Service (NRCS) field office in Elk Grove, California to assess the historic land use, land cover, and visible indicators of hydrologic or topographic modifications. Recent aerial photography of the study area from 2001 and 2002 was obtained (from the Sacramento County Planning Department and on-line from the USGS TerraServer) as base maps and to assist in the interpretation of hydrology and topography relationships.

The published soils survey for the site (SCS 1993) was reviewed prior to field survey to provide background on the expected soil series and soil properties, including the potential presence of hydric soils.

A large-scale topographic map of the site was created by ENTRIX, Inc. using total station survey equipment to collect spot elevations on approximately 50 foot grid spacing and produce a two-foot contour interval map.

Field survey of the project site was performed by wetland specialists from Valley & Mountain Consulting and Moore Biological Consultants in early November 2004. Initial observations were made on November 1, 2004 and soils were sampled on November 8, 2004 between early season rainstorms. Vegetation observations and feature delineations were completed on November 11, 2004, during a light to moderate rainfall event. Copies of field data sheets are attached as Appendix A.

Hydrophytic vegetation is defined as vegetation adapted to growth in water or on a substrate that is at least periodically deficient in oxygen as a result of saturation. Plant species are categorized by the USACE (Environmental Laboratory 1987) based on frequency of occurrence in wetlands: 1) obligate wetlands species occur in wetlands 99 percent of the time; 2) facultative wetlands plants occur in wetlands 67 to 99 percent of the time; 3) facultative plants that are equally likely to occur in wetlands or uplands; and 4) facultative upland plants that occur in uplands 67 to 99 percent of the time. If greater than 50 percent of the existing vegetation diversity is rated as obligate, facultative, or facultative wetland species, the area is considered to have wetland vegetation.

Field determinations for the presence of hydrophytic vegetation were conducted by visually assessing plant community composition. Plants were identified and categorized into one of the four classifications of hydrophytic vegetation. Wetland indicator status of each species was determined using the *National List of Plant Species That Occur in Wetlands: California (Region 0)* (Reed, 1988).

Hydric soils are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the soil (NRCS 2003). Field determination of hydric soils were made using the NRCS (2003) indicators, predominantly color changes and features that reflect the accumulation or loss of iron, manganese, sulfur, or carbon compounds.

Wetland hydrology was interpreted using the USACE (Environmental Laboratory 1987) definition, including several forms of evidence that water has an overriding influence on the vegetation and soil characteristics due to anaerobic and reducing conditions, respectively.

IV. Results

Overview

The land use history of the site, as reflected in aerial photographs spanning 1937 through 2002) is typical, but less intensive, of neighboring parcels. The site was likely used for grazing for much of the 20th century while some of the neighboring parcels had hay production, irrigated pasture and rural residential development, and more recently, urban development (to the south). On the 1937, 1957, and 1964 photographs, the site lacks distinct property boundaries, and has a natural-appearing mosaic of vegetation and soil similar to the even more distinct complex to the south and east of the parcel. By the 1972 photograph, parcel access from the south and west had been cleared, but there were still no fence lines, structures, or cultivation. Between 1972 and 1984, grading occurred in the northern half of the site, fence lines were established, and by 1987 the northern quarter of the site included leveled and excavated areas and a small building

in the northwest corner. Additional leveling, landscaping and residential construction occurred in the northern quarter of the property during the early 1990s, including construction of the enlarged pond within the landscaped yard and a stormwater overflow detention basin southeast of the main residence. Since the time of the 2002 aerial, on-site disturbance occurred along the west property margin and in the southwest quarter of the parcel to construct an auxiliary dwelling and provide driveway access.

Soils

The project site is in southern Sacramento County, on the low terrace geomorphic surfaces that are extensive throughout the county and common overall along the margins of the Sacramento Valley. The soil mapping units on the project site are the San Joaquin –Galt Complex, 0 to 3 percent slopes (218), the San Joaquin-Galt Complex, leveled (217), and the San Joaquin silt loam, 0 to 3 percent slopes (214) (SCS 1993). The northern quarter of the site is mapped as San Joaquin-Galt Complex, leveled, the central third of the site is mapped as San Joaquin-Galt Complex, 0 to 3 percent slopes, and the southern remainder of the site is mapped as San Joaquin silt loam, 0 to 3 percent slopes. The distribution of the soils within each map unit generally reflects topography and hydrology. Complex micro-topography, shallow and partially interconnected drainage ways, and isolated small depressions produce a coarse mosaic of soil patterns. The San Joaquin soils are generally in the higher areas, on convex slopes or slightly cut and leveled areas. The Galt soils typically occur in small basins, concave areas, or slightly filled depressions (SCS 1993). Inclusions of Clear Lake soils may occur in the 217 and 218 map units, with Durixeralfs, Kimball, or Xerarents inclusions possible in the 217 map unit (SCS 1993). Inclusions in the 214 map unit often include Bruella soils on higher areas, Galt soils in depressions, and Hedge or Kimball soils in other topographic lows (SCS 1993).

The San Joaquin series is a moderately well-drained, moderately deep soil over a duripan (SCS 1993). The SanJoaquin soils have brown (7.5YR 4/4 moist) silt loam in the upper two feet, over clay loam and duripan horizons at depth. San Joaquin soils are classified as fine, mixed, thermic Abruptic Durixeralfs. The upper 23 inches has relatively high permeability (0.6 to 2.0 inches/hour) compared to its lower profile (<0.06 inches/hour). The SanJoaquin soils in these mapping units are hydrologic group D (very slow infiltration rate and very slow rate of water transmission), but not flooded or typically having a water table within 6 feet of the surface (SCS 1993).

The Galt series is a moderately well drained, moderately deep soil over a duripan (SCS 1993). The Galt soils have surface horizons of very dark grayish brown (10YR 3/2 moist) clay and dark brown (10YR 3/3 moist) clay in the upper two feet, over clay and duripan horizons at depth. Galt soils are classified as fine, montmorillonitic, thermic Typic Chromoxererts. The shallow surface horizon (~0-5 inches) has relatively high permeability (0.6 to 2.0 inches/hour), but the remainder of the upper three feet has low permeability (0.06 to 0.2 inches/hour). The Galt soils are hydrologic group D (very slow infiltration rate and very slow rate of water transmission). In these mapping units, Galt soils are not flooded. In map unit 218, the Galt soils are listed as having a high, perched water table December-March (SCS 1993). Galt soils with a perched water table are on the California hydric soils list (NRCS 1995).

Field observations of the upper 16 to 20 inches of soil profiles were made at 10 sampling points in four transects across the site. Field observations confirm dominant series

presence and distributions consistent with the mapping units and topographic patterns. Convex slopes and relatively level upland portions of the site have San Joaquin soils (data points 1A, 2A, 3A, 4C). Some areas of the San Joaquin soil on-site have had their upper profile modified by leveling or clean excavation, which has decreased the depth to duripan (data points 3C, 5, 6). Closed depressions and topographic low spots in the central and eastern portion of the site have Galt soils (data points 1B, 1C, 2B, 3B). The Galt soils on-site exhibit depleted or gleyed matrix colors and redoximorphic features indicative of hydric soils (NRCS 2003). Narrow and elongate topographic low spots near the southern boundary of the site have upper profile textures and horizonation suggestive of the Hedge Series (data points 4A and 4B), with a depleted matrix, redoximorphic features, and redox concentrations indicating hydric soil conditions (NRCS 2003). Relict hydric features were also observed in some of the soil pits (e.g., concretions and nodules), but were not used to determine present hydric soil conditions.

Hydrology

The project site has subdued topography, with a gentle overall slope from south to north (about 0.25%) towards Rogers Road (Figure 2). The elevation is about 60 feet above sea level, with the on-site elevation range limited to about 7 feet. Most of the shallow closed depressions have less than 3 feet local relief.

Site source hydrology is dominated by direct precipitation, with little surface water run-on from upslope contributing areas. Some surface water reaches the roadside ditch on the north boundary of the site off the road surfaces and from the upslope properties to the west. Constructed drainage features on the adjacent parcels to the south and west also limit the naturally low run-on.

The complex microtopography and low permeability subsurface soil conditions of the site are the dominant influence on wetland hydrology. Direct precipitation, surface runoff into isolated depressions, and soil throughflow above impermeable soil horizons provide hydrologic support to the wetland features.

Field observations of the site in general and at 14 data points indicate that all topographic lows (including the roadside ditches and landscaped pond) have wetland hydrology. In addition, some upland/topographic high spots that have been leveled or scraped, for building pads or detention basins, now pond water.

Vegetation

The site is located in the rolling grasslands of Sacramento County. The dominant plant community and wildlife habitat type is annual grassland, vernal pools and seasonal wetlands. The site is routinely mowed, presumably for fire suppression during the summer months, and likely has been disked in the past for the same purpose.

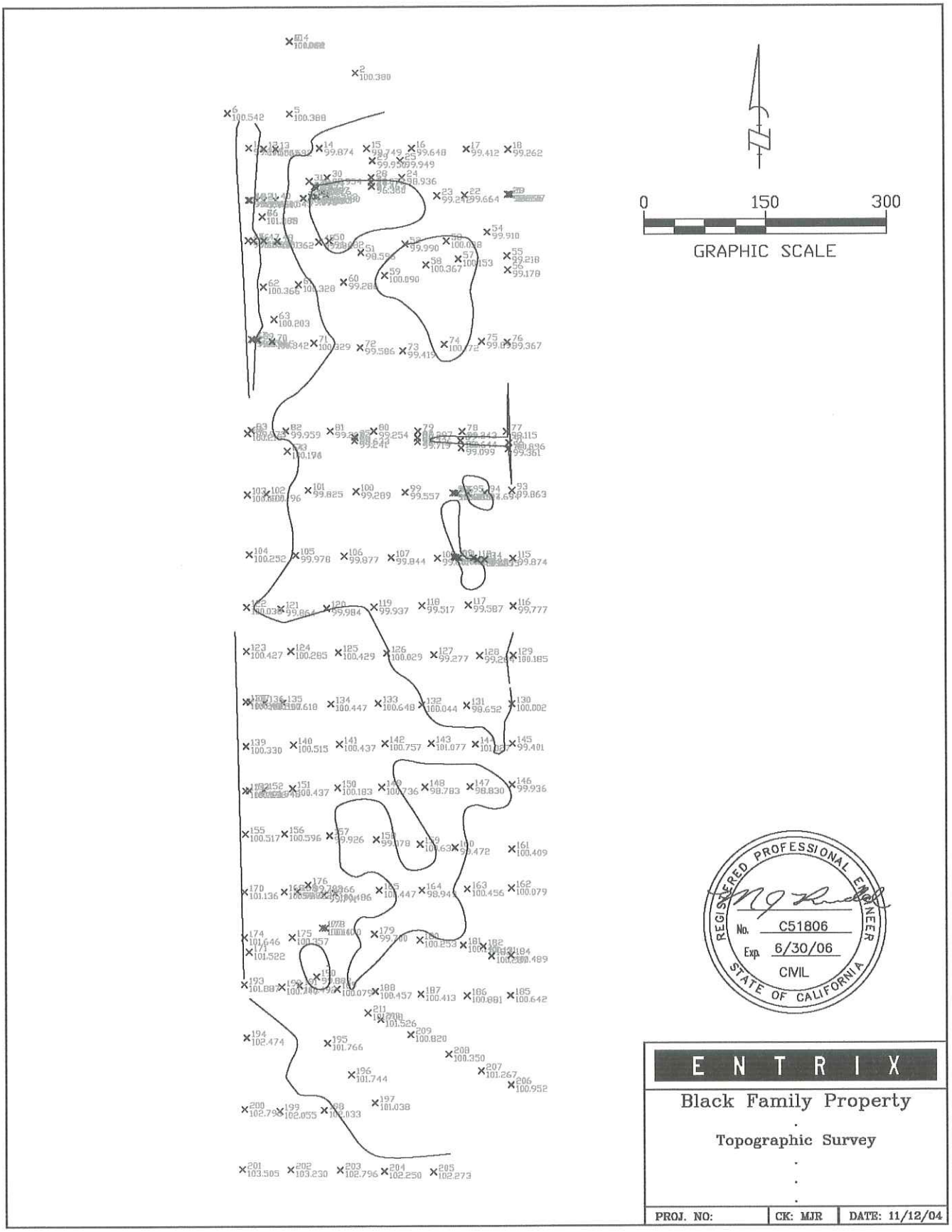

Figure 2: Site Topography

The California Annual Grassland series (Sawyer and Keeler-Wolf, 1995) is the dominant upland plant community naturally occurring in the subject parcel and surrounding areas. A limited variety of annual grassland plant species were found in the project site. The dominant annual grassland species include soft chess brome (*Bromus hordeaceus.*), filaree (*Erodium botrys*), smooth cat's ear (*Hypochaeris glabra*), rattail fescue (*Vulpia myuros*), and perennial ryegrass (*Lolium perenne*).

Delineated Features

A total of approximately 1.04 acres of features were delineated on the project site, of which 1.002 acres are described as potential jurisdictional wetlands (Table 1 and Figure 3). Boundaries were determined in the field on the combined basis of microtopography, hydrology, soil characteristics, and changes in vegetation composition.

The conclusions presented herein are the results of the preliminary wetland delineation and are subject to change pending the USACE review, verification, and final determination.

Table 1: Delineated Features: Black Family Parcel

Name	Description	Feature ID	Data Point(s)	Unit Area (acres)	Sub Total Areas (acres)
Vernal Pool	Isolated northern hardpan vernal pool wetland	VP-1	1B,1C	0.129	
		VP-2	2B, 3B	0.378	
					0.507
Wetland Swale	Seasonal Wetland	WS-1	4A	0.0153	
		WS-2	4B	0.0352	
					0.051
Enhanced Wetland	Seasonal wetland	EW-1	3C	0.088	
	Perennial Wetland	EW-2	5	0.298	
					0.386
Detention Basin*	Constructed / maintained Detention Basin	DB	6	0.0383*	0.038*
Roadside Ditch	Disturbed/Constructed Wetland	RD-1	7	0.0207	
		RD-2	7	0.0373	
					0.058
	Total (Potential Jurisdictional Wetlands Only)			**1.002**	**1.002**

* Not included as potential jurisdictional wetlands.

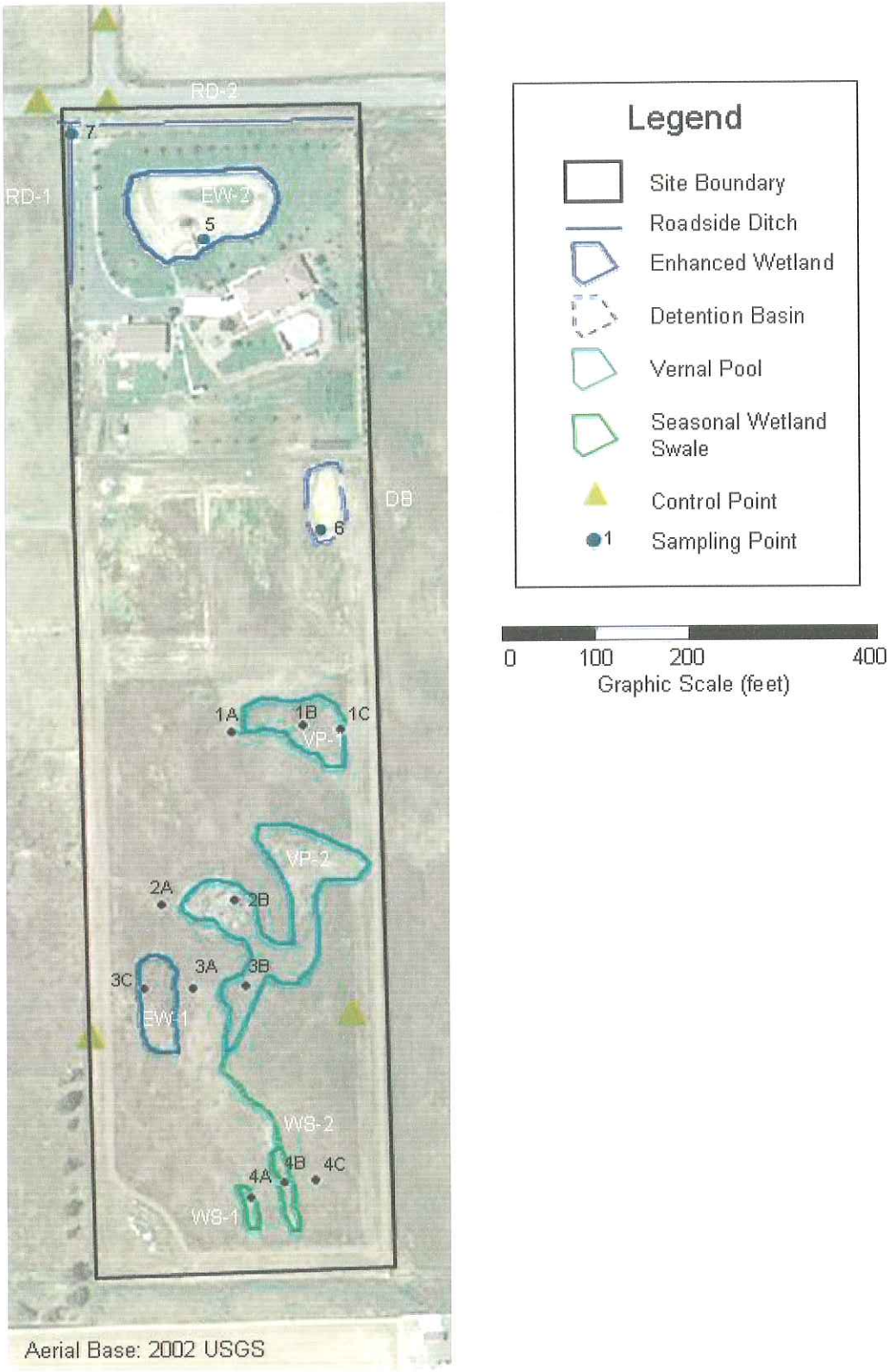

Figure 3: Delineated Features and Sampling Points

Vernal Pools

There are two vernal pools located in the south-central portion of the site, VP-1 (0.129 acres) and VP-2 (0.378 acres), with a total area of 0.507 acres. These vernal pools are strongly defined, possessing a moderate vegetative break and strong indicators of seasonal hydrology and hydric soil indicative of seasonally wet conditions. Vegetation observed within the vernal pools include but is not limited to coyote thistle (*Eryngium vaseyi*), Mediterranean barley (*Hordeum marinum*), vernal pool mint (*Pogogyne zizyphoroides*), and meadow foam (*Limnanthes alba*). Although the site was mowed during the summer for fire suppression, dead vegetation laying on the ground surface and winter shoots were identifiable, especially for species such as meadow foam and filaree.

Photo 1: VP-2

Seasonal Wetland Swales

Two seasonal wetland swales exist in the southern quarter of the site, WS-1 (0.0153 acres) and WS-2 (0.0352 acres), for a total of 0.051 acres. These features are weakly defined, possessing an obscure vegetative break but moderate indicators of hydrology and hydric soil. The northern boundary of both swales, and the northern portion of WS2 have had minor soil fallback related to leveling for the adjacent house pad. Vegetation within the seasonal wetland swales consists of Mediterranean barley, annual beardgrass (*Polypogon monspeliensis*), and toad rush (*Juncus bufonius*). The seasonal wetland swales within the site typically have less plant diversity than the vernal pools and are saturated for a short duration during the wet season.

Photo: Wetland Swales 1 and 2

Enhanced Wetlands

There are two enhanced wetlands (EW-1 and EW-2) on site with a total area of 0.386 acres. EW-1 (0.088 acres) is located just north of the auxiliary residence in the southern portion of the site and EW-2 (0.298 acres) is located near the northern boundary of the project site within the landscaped yard of the main residence.

EW-1 is a seasonal wetland that has been widened and deepened by scraping the surface of the soil within this feature. During the field survey this feature was full of water, although wetland vegetation was observed along the edges and there was a clear break between upland and wetland vegetation. Vegetation within EW-1 consists of vernal pool mint, coyote thistle, toad rush and Mediterranean barley.

EW-2 appears to be a more perennially wet feature that also has been enhanced by scraping the surface of the soil and incorporated in the landscape of the residence. During the field survey this feature contained some water at the deeper portions of the excavated area. Wetland vegetation was observed along the edges and there was a clear break between the lawn and wetland vegetation. Vegetation within EW-2 consists of predominantly wetter species such as common cattail (*Typha latifolia*), umbrella sedge (*Cyperus eragrostis*), and creeping spikerush (*Eleocharis macrostachya*).

Photo: EW-1

Photo: EW-2

Created Detention Basin

There is a detention basin located along the east-central portion of the site with a total area of 0.038 acres. This basin was created in an upland area of the site (per review of historical aerials and soils maps) and is maintained to drain overflow storm water from the main residence and pond. During the field survey this feature contained some water at the deepest portion. As implied above this detention basin is highly maintained and contains very little existing vegetation.

Photo: Detention Basin

Roadside Ditches

There are two sections of ditch within the site with a total area of 0.058 acres. RD-1 (0.0207 acres) is located parallel to and west of the paved driveway. RD-2 (0.0373 acres) is parallel to and on the south side of Rogers Road across the width of the property. Both of these sections of ditch average five feet in width and contain weak hydrophytes such as crabgrass (*Digitaria* sp.), prickly lettuce (*Lactuca serriola*), common spikeweed (*Hemizonia pungens*) and curly dock (*Rumex crispus*). The hydrologic connectivity of these ditches to other waters of the U.S. is unknown at this time.

V. Project Recommendations

Prior agricultural land use and residential development on and adjacent to the project site has modified the natural topography, soils, drainage, and vegetation. Two wetland areas on the site have been enlarged in the area and deepened (EW-1 and EW-2). A part of one wetland (WS-2) has been slightly realigned. Most of the wetlands on-site have not been directly modified. However, the local on-site drainage area contributing to the wetlands have been infringed upon.

The proposed project would create three legal parcels from the existing single parcel. Under the current and proposed land use zoning, future activities on the site could include construction of an additional residence (on the proposed central parcel) and/or associated agricultural or landscaping activities that may affect the surface topography, soils, drainage, and vegetation. There is ample upland area adjacent to the driveway in the central portion of the site to permit a third residence to be constructed without direct wetland impacts. However, it would not be feasible to completely avoid a building envelope within the wetland buffer zone, assuming a 250 ft setback. The rezone will not directly cause new wetlands impacts, but if a third parcel is created with the potential for a single family residence to be constructed, then indirect impact within wetland buffer zones could occur at some point in the future.

The potential indirect wetland impacts of the rezone project, described above, could be completely avoided if the parcel split is limited to two legal parcels (disallowing the potential for a third residence to be constructed). Alternately, the potential wetland impacts of a third residence associated with the rezone project could be mitigated through a combination of design restrictions and construction phase protection measures, preservation and enhancement of on-site wetlands, and/or monetary compensation into the County Wetlands Restoration Trust Fund.

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VII. Appendix A: Field Data Sheets

DATA FORM

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

11 NOV 04

Project/Site	9570/9560 Rogers Road	Date	8 NOV 04
Applicant / Owner	Maria Teresa Black	County	Sacramento
Investigator	Virginia Mahacek / Jim Henke	State	California
Do Normal Circumstances exist on the site?	(YES) NO	Community ID	
Is the site significantly disturbed (Atypical Situation)?	YES (NO)	Transect ID	1
Is the area a potential Problem Area? (If needed, explain on reverse)	YES (NO)	Plot ID	1A

VEGETATION

Dominant Plant Species	~~Stratum~~ STATUS	~~Indicator~~ % Cover	Non-Dominant Plant Species	~~Stratum~~ Status	~~Indicator~~ % Cover
1 Erodium botrys	Upl	45	9 Holocarpha Virgata	Upl	15
2 Bromus hordeaceus	FacU-	20	10		
3 Lolium perenne	Fac	20	11		
4			12		
5			13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) 33%

Remarks Vegetation has been mowed for fire suppression. Plant composition typical of upland community on the site.

HYDROLOGY

☐ Recorded Data (Describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☒ Aerial Photographs
- ☐ Other

☐ No Recorded Data Available

FIELD OBSERVATIONS		
Depth of Surface Water	0	(in)
Depth to Free Water in Pit	> 16	(in)
Depth to Saturated Soil	> 16	(in)

WETLAND HYDROLOGY INDICATORS

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands (NO — shoulder position & convex v. slight)

Secondary Indicators (2 or more Required):
- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

SOILS

8NOV04 mapunit 218 pt 1A

Map Unit Name (Series and Phase): San Joaquin – Galt, 0 to 3%	Drainage Class: D
Taxonomy (Subgroup) Fine mixed thermic Abruptic Durixeralfs	Field Observations Confirm Mapped Type? (YES) NO

artifacts most — San Joaquin

PROFILE DESCRIPTION

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0–3	A1	7.5YR 4/4	7.5YR 4/6	c 1F Fine Faint	SiL crumb
3–15	B2	7.5YR 4/4	7.5YR 4/2	m 1 F and	SiCL w/ sbk ?
				f1f on/chan.	Qd
15+					weakly stratified

HYDRIC SOIL INDICATORS:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks: Redox mottles exhibited, not typical SJ series

not Hydric

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	YES (NO)	Is this Sampling Point Within a Wetland? YES (NO)
Wetland Hydrology Present?	YES (NO)	
Hydric Soils Present?	YES (NO)	

Remarks upland comparison to pts 1B and 1C.

DATA FORM

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

11 NOV 04

Project/Site	9570/9560 Rogers Road	Date	8 NOV 04
Applicant / Owner	Maria Teresa Black	County	Sacramento
Investigator	Virginia Mabrach/Jim Henke	State	California
Do Normal Circumstances exist on the site?	(YES) NO	Community ID	
Is the site significantly disturbed (Atypical Situation)?	YES (NO)	Transect ID	1
Is the area a potential Problem Area? (If needed, explain on reverse)	YES (NO)	Plot ID	1B

VEGETATION

VP1

Dominant Plant Species	~~Stratum~~ Status	~~Indicator~~ % Cover	Dominant Plant Species	~~Stratum~~ Status	~~Indicator~~ % Cover
1 Hordeum marinum	Fac+	60	9 Trifolium variegatum	Facu-	10
2 Eryngium vaseyi	Facw	15	10 Limnanthes alba	Obl+	10
3			11 Rumex crispus	Facu-	5
4			12		
5			13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) 100%

Remarks vegetation has been mowed for fire suppression. most plants are identifiable through forensic botany or are in early stages of winter growth.

HYDROLOGY

☐ Recorded Data (Describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☒ Aerial Photographs
- ☐ Other

☐ No Recorded Data Available

FIELD OBSERVATIONS

Depth of Surface Water	0	(in)
Depth to Free Water in Pit	>16	(in)
Depth to Saturated Soil	>16	(in)

WETLAND HYDROLOGY INDICATORS

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☒ Drainage Patterns in Wetlands in Low point of depression

Secondary Indicators (2 or more Required):
- ☒ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☒ Local Soil Survey Data — Ponded/Perched H_2O in map unit 218
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

SOILS

8 NOV 04 mapunit 218 1B

Map Unit Name (Series and Phase): San Joaquin-Galt 0 to 3	Drainage Class: D
Taxonomy (Subgroup) Fine mont mor thermic Typic Haploxerults	Field Observations Confirm Mapped Type? (YES) NO

PROFILE DESCRIPTION

galt

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1/2-0	O fibric				abrupt smooth
0-4	A1	7.5 4/1	7.5YR 5/6	C 2 d	c lay loam m m surfaces
			10YR 5/3	f 1 p	2 sbk
4-6	A2				
		7.5 4/1	7.5YR 4/6	C 2 d	C 3 sbk
6-12+	A2	7.5 4/1	7.5YR 4/6	f 1 d	C
			10YR 3/3	f 1 p	(also evidence of cracks & slickensides & burned om)

HYDRIC SOIL INDICATORS:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☒ Reducing Conditions
- ☒ Gleyed or Low-Chroma Colors
- ☒ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☒ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

* colors appear more dark gray than typical Galt series

Remarks: surface clay cracking — visible through low dense clay with obvious Redox + mottles throughout upper 12"; larger + more common in upper 6" depleted matrix

Hydric

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(YES) NO	Is this Sampling Point Within a Wetland? (YES) NO
Wetland Hydrology Present?	(YES) NO	
Hydric Soils Present?	(YES) NO	

Remarks transitional portion of VP 1

DATA FORM

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

11 NOV 04

Project/Site	9570/9560 Rogers Road	Date	8 NOV 04
Applicant / Owner	Mama Teresa Black	County	Sacramento
Investigator	Virginia Mahacek/Jim Henke	State	CA
Do Normal Circumstances exist on the site?	(YES) NO	Community ID	
Is the site significantly disturbed (Atypical Situation)?	YES (NO)	Transect ID	1
Is the area a potential Problem Area? (If needed, explain on reverse)	YES (NO)	Plot ID	1C

VEGETATION

VPI

Dominant Plant Species	~~Stratum~~ status	~~Indicator~~ % cover	Dominant Plant Species	~~Stratum~~ status	~~Indicator~~ % cover
1 Limnanthes alba	Obl *	40	9 Hemizonia pungens	Fac	15
2 Hordeum marinum	Fac+	30	10 Trifolium variegatum	FACW-	5
3			11 Pogogyne zizyphoroides	Obl	5
4			12		
5			13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) 100%

Remarks vegetation has been mowed for fire suppression.

HYDROLOGY

- ☐ Recorded Data (Describe in Remarks)
  - ☐ Stream, Lake, or Tide Gauge
  - ☒ Aerial Photographs
  - ☐ Other
- ☐ No Recorded Data Available

FIELD OBSERVATIONS

Depth of Surface Water	0	(in)
Depth to Free Water in Pit	>16	(in)
Depth to Saturated Soil	>16	(in)

WETLAND HYDROLOGY INDICATORS

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☒ Drainage Patterns in Wetlands — possible — on shoulder & margins of depression

Secondary Indicators (2 or more Required):
- ☒ Oxidized Root Channels in Upper 12 Inches — upper 4"
- ☐ Water-Stained Leaves
- ☒ Local Soil Survey Data — if gabt series in mapunit 218
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

SOILS

8 NOV 04 map Unit 218 IC

Map Unit Name (Series and Phase): San Joaquin-Galt 0-3%	Drainage Class: D
Taxonomy (Subgroup) Fine Montmorillonitic Thermic Typic Chromoxerets	Field Observations Confirm Mapped Type? (YES) NO

Galt

PROFILE DESCRIPTION

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-3½	A1	10YR 4/1	7.5YR 4/6	~~M 2d~~ M 1d	SiCl; granular 1sk
3½-13	A2	10YR 4/1	7.5YR 4/6	C 2d	C; 3Sbk
				also f concretions	
13-15+	[ ] for AC	10YR 4/1	—		C; 3Pl
					CS commonly
		(Possibly Reduced matrix?)			

HYDRIC SOIL INDICATORS: Fe Mg Mn Few small

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☒ Reducing Conditions
- ☒ Gleyed or Low-Chroma Colors
- ☒ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☒ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks: Surface texture lighter than 1B; but still looks like depression soils in general surface vertical cracks & darker color, with mottling throughout top 12"
Depleted matrix

Hydric

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(YES) NO	Is this Sampling Point Within a Wetland? (YES) NO
Wetland Hydrology Present?	(YES) NO	
Hydric Soils Present?	(YES) NO	

Remarks In deepest part of VP-1.

DATA FORM

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

11 NOV 04

Project/Site 9570/9560 Rodgers Road		Date 8 NOV 04	
Applicant / Owner Maria Teresa Black		County Sacramento	
Investigator Virginia Mahacek/Jim Henke		State California	
Do Normal Circumstances exist on the site?	YES NO	Community ID	
Is the site significantly disturbed (Atypical Situation)?	YES NO	Transect ID	2
Is the area a potential Problem Area? (If needed, explain on reverse)	YES NO	Plot ID	2A

VEGETATION

Dominant Plant Species	~~Stratum~~ Status	~~Indicator~~ % Cover	Dominant Plant Species	~~Stratum~~ Status	~~Indicator~~ % Cover
1 Holocarpha virgata	Upl	45	9 Bromus hordeaceus	FacU-	15
2 Vulpia myurps	FacU*	30	10 Erodium botrys	Upl	10
3			11		
4			12		
5			13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) Ø

Remarks Vegetation has been mowed for fire suppression. Typical upland vegetation found throughout the site.

HYDROLOGY

☐ Recorded Data (Describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☒ Aerial Photographs
- ☒ Other

☐ No Recorded Data Available

FIELD OBSERVATIONS

Depth of Surface Water	Ø	(in)
Depth to Free Water in Pit	>16	(in)
Depth to Saturated Soil	>16	(in)

WETLAND HYDROLOGY INDICATORS

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

upland (on top)

Secondary Indicators (2 or more Required):
- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

SOILS

8 NOV04 mapunit 218 2A

Map Unit Name (Series and Phase): San Joaquin-Galt 0390	Drainage Class: D
Taxonomy (Subgroup) Fine mixed thermic Aquic Durixeralf	Field Observations Confirm Mapped Type? YES NO

12" pit only — moist — San Joaquin

PROFILE DESCRIPTION

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-7	A1? maybe Mississippian	7.5 4/3	7.5 4/4	c/f	sil 2sbk →
7-12+	A2? maybe nuary t	7.5 4/3	7.5 4/4	c/f	sicl (light) 2sbk →

HYDRIC SOIL INDICATORS:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime — more typ. San Joaquin
- ☑ Reducing Conditions — minor Redox evidence
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks: strong brown silt loam surface texture underlain by strong brown sicl — NON-HYDRIC

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	YES (NO)	Is this Sampling Point Within a Wetland? YES (NO)
Wetland Hydrology Present?	YES (NO)	
Hydric Soils Present?	YES (NO)	

Remarks: Upland comparison to 2B

DATA FORM

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site	9570/9560 Rogers Road	Date	8 NOV 04
Applicant / Owner	Thanna Teresa Black	County	Sacramento
Investigator	Virginia Mahacek	State	California
Do Normal Circumstances exist on the site?	(YES) NO	Community ID	
Is the site significantly disturbed (Atypical Situation)?	YES (NO)	Transect ID	2
Is the area a potential Problem Area? (If needed, explain on reverse)	YES (NO)	Plot ID	3B

VEGETATION

Dominant Plant Species	~~Stratum~~ Status	Indicator % cover	Dominant Plant Species	~~Stratum~~ Status	Indicator % cover
1 Eryngium vaseyi	FacW	30	9 Trifolium variegatum	FacW-	15
2 Limnanthes alba	Obl*	25	10 Rumex crispus	FacW-	10
3 Hordeum marinum	Fact	20	11		
4			12		
5			13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) 100%

Remarks: Vegetation has been mowed for fire suppression. Typical vegetation found within vernal pools throughout the site

HYDROLOGY

☐ Recorded Data (Describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☒ Aerial Photographs
- ☐ Other

☐ No Recorded Data Available

FIELD OBSERVATIONS

Depth of Surface Water	0	(in)
Depth to Free Water in Pit	>16	(in)
Depth to Saturated Soil	>16	(in)

WETLAND HYDROLOGY INDICATORS

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☒ Drift Lines — Some crop debris - yard waste, rearranged by highwater
- ☐ Sediment Deposits
- ☒ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):
- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☒ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

8 NOV 04 Mapunit 218 2B

SOILS

Map Unit Name (Series and Phase): San Joaquin-Galt, 0-3%		Drainage Class: D	
Taxonomy (Subgroup) Fine Montmorillonitic Thermic Typic Chromoxerert		Field Observations Confirm Mapped Type? YES NO	

Galt

PROFILE DESCRIPTION

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
F-0	O/A (overburden & local fill?)				granular
0-8	A1	10YR 4/1	10YR 4/6	c/d	3sbk
			7.5YR 2.5/1	f/p	to granular
					sicl
8-12	A2	10YR 4/2	10YR 4/6	c/d	1PR + 3sbk
					Concretions - basic Fe
					Clay
12-15+	(AC?)	10YR 4/2	7.5YR 4/6	M3,3P	3PR; cl

cgkm below

Gley1 2.5/N C2P

10YR 8/2 C1P

odor

HYDRIC SOIL INDICATORS:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☒ Reducing Conditions
- ☒ Gleyed or Low-Chroma Colors
- ☒ Concretions — large prominent in lower layer also nodules in A2
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☒ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Si? + Fe Mn concretions

Remarks: fine + indistinct mottles upper 12" over cemented layer with nearly continuous Fe Mn concretions.
more prismatic structure than transect 1

Hydric

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	YES NO	Is this Sampling Point Within a Wetland? YES NO	
Wetland Hydrology Present?	YES NO		
Hydric Soils Present?	YES NO		

Remarks Northern portion of VP #2

DATA FORM

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual) 11 NOV 04

Project/Site	9570/9500 Rogers Road	Date	8 NOV 04
Applicant / Owner	Maria Teresa Black	County	Sacramento
Investigator	Virginia Mahacek	State	CA
Do Normal Circumstances exist on the site?	(YES) NO	Community ID	
Is the site significantly disturbed (Atypical Situation)?	YES (NO)	Transect ID	3
Is the area a potential Problem Area? (If needed, explain on reverse)	YES (NO)	Plot ID	3A

VEGETATION

Dominant Plant Species	~~Stratum~~ Status	Indicator % Cover	Dominant Plant Species	Stratum	Indicator
1 Holocarpha virgata	Upl	50	9 Hypochaeris glabra	Upl	15
2 Bromus hordeaceus	FacU-	20	10 Erodium botrys	Upl	15
3			11		
4			12		
5			13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) 0

Remarks vegetation has been mowed for fire suppression.

HYDROLOGY

☐ Recorded Data (Describe in Remarks)

☐ Stream, Lake, or Tide Gauge

☒ Aerial Photographs

☒ Other

☐ No Recorded Data Available

FIELD OBSERVATIONS		
Depth of Surface Water	0	(in)
Depth to Free Water in Pit	>12"	(in)
Depth to Saturated Soil	>12"	(in)

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

☐ Inundated

☐ Saturated in Upper 12 Inches

☐ Water Marks

☐ Drift Lines

☐ Sediment Deposits

☒ Drainage Patterns in Wetlands top of convex area not wetest

Secondary Indicators (2 or more Required):

☐ Oxidized Root Channels in Upper 12 Inches

☐ Water-Stained Leaves

☐ Local Soil Survey Data

☐ FAC-Neutral Test

☐ Other (Explain in Remarks)

SOILS

8NOV04 mapunit 218 3A

Map Unit Name (Series and Phase): SanJoaquin-Galt 0-3	Drainage Class: D
Taxonomy (Subgroup) Fine mixed thermic ~~Aquic~~ Duixeralfic	Field Observations Confirm Mapped Type? YES NO

~12" pit

PROFILE DESCRIPTION

SJ

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-5	A1	7.5YR			SiL
5-10	A2	7.5YR			SiL
10-12+	A3?	7.5YR			SiL

HYDRIC SOIL INDICATORS:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks: color, texture fit SanJoaquin series, - didn't do complete characterization

Non-Hydric

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	YES (NO)	Is this Sampling Point Within a Wetland? YES (NO)
Wetland Hydrology Present?	YES (NO)	
Hydric Soils Present?	YES (NO)	

Remarks Upland comparison pt to 3B and 3C

DATA FORM

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

11 NOV 04

Project/Site	9570/9560 Rogers Road	Date	8 NOV 04
Applicant / Owner	Mona-Teresa Black	County	Sacramento
Investigator	Virginia Manacek/Jim Henke	State	CA
Do Normal Circumstances exist on the site?	(YES) NO	Community ID	
Is the site significantly disturbed (Atypical Situation)?	YES (NO)	Transect ID	3
Is the area a potential Problem Area? (If needed, explain on reverse)	YES (NO)	Plot ID	3B

VEGETATION

Dominant Plant Species	~~Stratum~~ Status	~~Indicator~~ % Cover	Dominant Plant Species	~~Stratum~~ Status	~~Indicator~~ % Cover
1 Plagiobothrys stipitatus	Obl	50	9 Pogogyne ziziphoroides	Obl	+
2 Hordeum marinum	Fac+	30	10		
3 Eryngium vaseyi	Fac W	20	11		
4			12		
5			13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) 100%

Remarks Vegetation has been mowed for fire suppression
+ = present, but not enough to include in composition estimate.

HYDROLOGY

☐ Recorded Data (Describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☒ Aerial Photographs
- ☒ Other

☐ No Recorded Data Available

FIELD OBSERVATIONS

Depth of Surface Water	0	(in)
Depth to Free Water in Pit	>14	(in)
Depth to Saturated Soil	>14	(in)

WETLAND HYDROLOGY INDICATORS

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☒ Drainage Patterns in Wetlands in topo low

Secondary Indicators (2 or more Required):
- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

SOILS

8 NOV 04 mapunit 218 3B

Map Unit Name (Series and Phase): San Joaquin-Galt	Drainage Class: D
Taxonomy (Subgroup) fine-mixed-nonacid thermic Typic Chromoxerept	Field Observations Confirm Mapped Type? YES NO

0 to 1" one burden spoil PROFILE DESCRIPTION Galt

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-1	A1	10YR 4/1			granular, SiCl+
1-8	A1	10YR 4/1	10YR 4/6	C 1,2 d	2 sbk, SiCl+
8-14+	A2	10YR 4/1	7.5YR 4/4	F 2 p	C, 3 pr
	or AC (?)		10YR 2.5/1	F 1 p	

HYDRIC SOIL INDICATORS:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☒ Reducing Conditions
- ☒ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☒ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks: Many mottles in upper 12" – < Color, texture fit Galt series
Surface soil cracks less prominent than in transect 2 or 1, but present gleyed matrix –

Hydric

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	YES NO	Is this Sampling Point Within a Wetland? YES NO
Wetland Hydrology Present?	YES NO	
Hydric Soils Present?	YES NO	

Remarks Southern portion of VP-2

DATA FORM

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site 9570/9560 Rogers Road		Date 11 NOV 04	
Applicant / Owner Maria-Teresa Black		County Sacramento	
Investigator Virginia Mahacek / Jim Henke		State CA	
Do Normal Circumstances exist on the site?	YES (NO)	Community ID	
Is the site significantly disturbed (Atypical Situation)?	(YES) NO	Transect ID 3	
Is the area a potential Problem Area? (If needed, explain on reverse)	YES (NO)	Plot ID 3 C	

area has been enlarged by clean excavation to provide drainage

VEGETATION

Dominant Plant Species	~~Stratum~~ Status	~~Indicator~~ % Cover	Dominant Plant Species	~~Stratum~~ Status	~~Indicator~~ % Cover
1 Pogogyne zizyphoroides	Obl	35	9 Lolium perenne	Fac	5
2 Hordeum marinum	Fact	35	10 Eryngium vaseyi	FacW	5
3 Juncus bufonius	FacW	20	11		
4			12		
5			13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) 100%

Remarks vegetation sparse - + along edge of ponded water at time of survey ⇒ data taken along edge of feature

HYDROLOGY

☐ Recorded Data (Describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☐ Aerial Photographs
- ☒ Other Field observation

☐ No Recorded Data Available

FIELD OBSERVATIONS		
Depth of Surface Water	~3-4	(in)
Depth to Free Water in Pit	—	(in)
Depth to Saturated Soil	—	(in)

WETLAND HYDROLOGY INDICATORS

Primary Indicators:
- ☒ Inundated Ponding
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):
- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

SOILS

Map Unit Name (Series and Phase): San Joaquin	Drainage Class: D
Taxonomy (Subgroup)	Field Observations Confirm Mapped Type? (YES) NO

PROFILE DESCRIPTION

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.

HYDRIC SOIL INDICATORS:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks: Surface colors ≅ San Joaquin; but appears to have had some excavation of A horizon(s).

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(YES) NO	Is this Sampling Point Within a Wetland? (YES) NO
Wetland Hydrology Present?	(YES) NO	
Hydric Soils Present?	YES ? NO	

Remarks Enhanced / Enlarged wetland; assumed soil properties support ponding + likely hydric (not sampled).

DATA FORM

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

11 NOV 04

Project/Site	9570/9560 Rogers Road	Date	8 NOV 04
Applicant / Owner	Maria-Teresa Black	County	Sacramento
Investigator	Virginia Mahacek, Jim Henke	State	CA
Do Normal Circumstances exist on the site?	(YES) NO	Community ID	
Is the site significantly disturbed (Atypical Situation)?	YES (NO)	Transect ID	4
Is the area a potential Problem Area? (If needed, explain on reverse)	YES (NO)	Plot ID	4A

VEGETATION

Dominant Plant Species	~~Stratum~~ Status	~~Indicator~~ % Cover	Dominant Plant Species	~~Stratum~~ Status	~~Indicator~~ % Cover
1 Hordeum marinum	Fac+	35	9 Lolium perenne	Fac	15
2 Eryngium Vaseyi	FacW	30	10		
3 Juncus bufonius	FacW	20	11		
4			12		
5			13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) 100%

Remarks vegetation has been mowed for fire suppression
Typical seasonal wetland plant composition

HYDROLOGY

☐ Recorded Data (Describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☒ Aerial Photographs
- ☒ Other

☐ No Recorded Data Available

FIELD OBSERVATIONS		
Depth of Surface Water	0	(in)
Depth to Free Water in Pit	±12	(in)
Depth to Saturated Soil	~ 10	(in)

WETLAND HYDROLOGY INDICATORS

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☒ Drainage Patterns in Wetlands — topo low — but areas some minor leveling

Secondary Indicators (2 or more Required):
- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

SMV04 mapunit 214 1A inclusion/ graded to Hedge

SOILS

Map Unit Name (Series and Phase): SJ sil 0-3%	Drainage Class: D
Taxonomy (Subgroup) Fine mixed thermic ~~Aquoxic Dunixeralfs~~ Fine Loamy mixed thermic Hapl ic Dunixeralfs	Field Observations Confirm Mapped Type? YES NO

14" pit

PROFILE DESCRIPTION SJ plus mottled → Hedge,

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0 —	A1				
	A2				
12-14+	A3				

HYDRIC SOIL INDICATORS:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☒ Reducing Conditions
- ☒ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks:

like 4B - only slightly shallower; more prominent mottles + more seepage input

Color like San Joaquin

some Horizonation/color/mottles like Hedge series

no concretions, slot depleted matrix

(?) Hydric

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	YES NO	Is this Sampling Point Within a Wetland? YES NO
Wetland Hydrology Present?	YES NO	
Hydric Soils Present?	YES NO	

Remarks Seasonal wetland swale (WS1).

DATA FORM

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

11 NOV 04

Project/Site	9570/9560 Rogers Road	Date	8 NOV 04
Applicant / Owner	Maria-Teresa Black	County	Sacramento
Investigator	Virginia Mahacek/Tom Henke	State	California
Do Normal Circumstances exist on the site?	YES (circled) NO	Community ID	
Is the site significantly disturbed (Atypical Situation)?	YES NO (circled)	Transect ID	4
Is the area a potential Problem Area? (If needed, explain on reverse)	YES NO (circled)	Plot ID	4B

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 Hordeum Marinum	Fac+	45	9 Pogogyne Zizyphoroides	Obl	15
2 Juncus bufonius	FacW	25	10 Lolium perenne	Fac	10
3			11		
4			12		
5			13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) 100%

Remarks vegetation has been mowed

HYDROLOGY

☐ Recorded Data (Describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☒ Aerial Photographs
- ☐ Other

☐ No Recorded Data Available

FIELD OBSERVATIONS		
Depth of Surface Water	0	(in)
Depth to Free Water in Pit	>12	(in)
Depth to Saturated Soil	~ 10	(in)

WETLAND HYDROLOGY INDICATORS

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☒ Drainage Patterns in Wetlands

minor overflow adjacent adjacent lowered wet soil

Secondary Indicators (2 or more Required):
- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

8NOV04 mapunit 214 4B

SOILS

Map Unit Name (Series and Phase): San Joaquin 3-3% Drainage Class: D

Taxonomy (Subgroup) Abruptic Durixeralf Field Observations Confirm Mapped Type? YES NO

16" pit to Haplic Durixeralf

Inclusion grade to Hedge

Hedge mottle

PROFILE DESCRIPTION color like San Joaquin (+)

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-6	A1	7.5YR 4/2	7.5YR 4/3	c1d	1 sbk Si l
			7.5YR 2.5/1	m1d	
6-14	A2	7.5YR 4/2	same	m1d, m2d	2 sbk Si l
14-16+	A3 (or E?)	7.5YR 5/4	7.5YR 4/3	c2d	3 sbk Si cl → to massive
				plus m1 masses	

HYDRIC SOIL INDICATORS:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☒ Reducing Conditions
- ☑ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks) Redwood

Remarks: mottled throughout upper 10" to 14"; at 14"-16" B1, color + texture lo of San Joaquin Sil, nA Galt C
Same horizonation color/mottling like Hedge series
no obvious concretions, but has m1 masses

Hydric (depleted matrix)

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	YES NO	Is this Sampling Point Within a Wetland? YES NO
Wetland Hydrology Present?	YES NO	
Hydric Soils Present?	YES NO	

Remarks Seasonal wetland swale (WS-2) - upper portion

DATA FORM

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

11 NOV 04

Project/Site	9570/9560 Roger Road	Date	8 NOV 04
Applicant / Owner	Mama - Teresa Black	County	Sacramento
Investigator	Virginia Mahacek/Tom Henke	State	CA
Do Normal Circumstances exist on the site?	(YES) NO	Community ID	
Is the site significantly disturbed (Atypical Situation)?	YES (NO)	Transect ID	4
Is the area a potential Problem Area? (If needed, explain on reverse)	YES (NO)	Plot ID	4C

VEGETATION

Dominant Plant Species	~~Stratum~~ Status	Indicator % cover	Dominant Plant Species	~~Stratum~~ Status	Indicator % cover
1 Holocarpha virgata	Upl	35	9 Bromus hordaceus	FacU-	15
2 Vulpia myuros	FacU*	30	10 Hordeum marinum	Fac+	10
3 Erodium botrys	Upl	20	11		
4			12		
5			13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) 0

Remarks vegetation has been mowed & fire suppression. Typical upland vegetation at site.

HYDROLOGY

☐ Recorded Data (Describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☒ Aerial Photographs
- ☒ Other

☐ No Recorded Data Available

FIELD OBSERVATIONS		
Depth of Surface Water	0	(in)
Depth to Free Water in Pit	>12	(in)
Depth to Saturated Soil	>12	(in)

WETLAND HYDROLOGY INDICATORS

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

—NO— on TOP of upland

Secondary Indicators (2 or more Required):
- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

8NOV04 mapunit 214 4C

SOILS

Map Unit Name (Series and Phase):	San Joaquin SL 0 to 3%	Drainage Class:	D
Taxonomy (Subgroup)	Fine mixed thermic Abruptic Durixeralf	Field Observations Confirm Mapped Type?	YES NO

8" pit San Joaquin

PROFILE DESCRIPTION

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-4	A1	7.5YR			sil
4-8+	A2	7.5YR			sil

HYDRIC SOIL INDICATORS:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks: Color, texture, structure upper 8" all consistent with mapped San Joaquin Silt loam
Few, if any mottles
non-Hydric

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	YES (NO)	Is this Sampling Point Within a Wetland?	YES (NO)
Wetland Hydrology Present?	YES (NO)		
Hydric Soils Present?	YES (NO)		

Remarks Upland comparison to 4A, 4B

DATA FORM

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site	9570 / 9560 Rogers Road	Date	11 NOV 04
Applicant / Owner	Maria - Teresa Black	County	Sacramento
Investigator	Virginia Mahacek / Jim Henke	State	CA
Do Normal Circumstances exist on the site?	(YES) NO	Community ID	
Is the site significantly disturbed (Atypical Situation)?	(YES) NO	Transect ID	
Is the area a potential Problem Area? (If needed, explain on reverse)	YES (NO)	Plot ID	5 (CEW-2)

Landscaping Excavation has enlarged area + depth of wetted Pond

VEGETATION

Dominant Plant Species	~~Stratum~~ Status	~~Indicator~~ % Cover	Dominant Plant Species	~~Stratum~~ Status	~~Indicator~~ % Cover
1 Typha latifolia	Obl	35	9		
2 Cyperus eragrostis	FacW	20	10		
3 Aster sp.	Fac	25	11		
4 Eleocharis macrostachya	Obl	20	12		
5			13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) 100%

Remarks Pond in front yard (edges vegetated + small island)

HYDROLOGY

☐ Recorded Data (Describe in Remarks)

☐ Stream, Lake, or Tide Gauge

☒ Aerial Photographs — 2001, 2002

☒ Other Field observations

☐ No Recorded Data Available

FIELD OBSERVATIONS		
Depth of Surface Water	0 to +6	(in)
Depth to Free Water in Pit	—	(in)
Depth to Saturated Soil	—	(in)

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

☐ Inundated

☐ Saturated in Upper 12 Inches

☒ Water Marks — salt + vegetation line from perennial & high water levels

☐ Drift Lines

☐ Sediment Deposits

☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

☐ Oxidized Root Channels in Upper 12 Inches

☐ Water-Stained Leaves

☐ Local Soil Survey Data

☐ FAC-Neutral Test

☐ Other (Explain in Remarks)

SOILS

Map Unit Name (Series and Phase): SanJoaquin, leveled	Drainage Class: D
Taxonomy (Subgroup) notsampled	Field Observations Confirm Mapped Type? (YES) NO

PROFILE DESCRIPTION

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.

HYDRIC SOIL INDICATORS:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(YES) NO	Is this Sampling Point Within a Wetland? (YES) NO
Wetland Hydrology Present?	(YES) NO	
Hydric Soils Present?	YES NO	

Remarks wetland that has been created or enhanced, + incorporated into Landscaping

DATA FORM

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site	9570/9560 Rogers Road	Date	11 Nov 04
Applicant / Owner	Maria-Teresa Black	County	Sacramento
Investigator	Virginia Mahacek / Jim Henke	State	CA
Do Normal Circumstances exist on the site?	(YES) NO	Community ID	
Is the site significantly disturbed (Atypical Situation)?	(YES) NO	Transect ID	
Is the area a potential Problem Area? (If needed, explain on reverse)	YES (NO)	Plot ID	6 - detention basin

Excavated in upland + maintained as SW

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1			9		
2			10		
3			11		
4			12		
5			13		
6			14		
7			15		
8			16		

Not sampled

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-)

Remarks

HYDROLOGY

☐ Recorded Data (Describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☒ Aerial Photographs
- ☒ Other Field observation

☐ No Recorded Data Available

FIELD OBSERVATIONS

Depth of Surface Water	0 to 6	(in)
Depth to Free Water in Pit	—	(in)
Depth to Saturated Soil	—	(in)

WETLAND HYDROLOGY INDICATORS

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):
- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

SOILS

Map Unit Name (Series and Phase): San Joaquin Leveied	Drainage Class: D
Taxonomy (Subgroup)	Field Observations Confirm Mapped Type? (YES) NO

PROFILE DESCRIPTION

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.

HYDRIC SOIL INDICATORS:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks: Surface colors + topo indicate San Joaquin soil that has been excavated + diked to hold storm water overflow (pumped) from around residence.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	YES (NO)	Is this Sampling Point Within a Wetland? YES (NO)
Wetland Hydrology Present?	(YES) NO	
Hydric Soils Present?	YES (NO)	

Remarks

DATA FORM

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site	9570/9560 Rogers Road	Date	11 NOV 04
Applicant / Owner	Maria-Teresa Black	County	Sacramento
Investigator	Virginia Mavracek / Jim Henke	State	CA
Do Normal Circumstances exist on the site?	(YES) NO	Community ID	
Is the site significantly disturbed (Atypical Situation)?	YES (NO)	Transect ID	
Is the area a potential Problem Area? (If needed, explain on reverse)	? YES (NO)	Plot ID	7 (roadside ditches)

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 Digitaria ischaemum	Fact*	35	9 Lactuca Serriola	Fac	5
2 Hordeum marinum	Fact	30	10 Hamizonia pungens	Fac	5
3 Rumex crispus	FacW-	20	11		
4			12		
5			13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) 100%

Remarks vegetation typical of disturbed roadside ditches.

HYDROLOGY

☐ Recorded Data (Describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☒ Aerial Photographs
- ☐ Other

☐ No Recorded Data Available

FIELD OBSERVATIONS

Depth of Surface Water	0 – 4	(in)
Depth to Free Water in Pit	—	(in)
Depth to Saturated Soil	—	(in)

WETLAND HYDROLOGY INDICATORS

Primary Indicators:
- ☒ Inundated – during Field obs - rain storm
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):
- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

SOILS

Map Unit Name (Series and Phase): San Joaquin, leveled	Drainage Class: D
Taxonomy (Subgroup)	Field Observations Confirm Mapped Type? (YES) NO

PROFILE DESCRIPTION

not sampled

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.

HYDRIC SOIL INDICATORS:

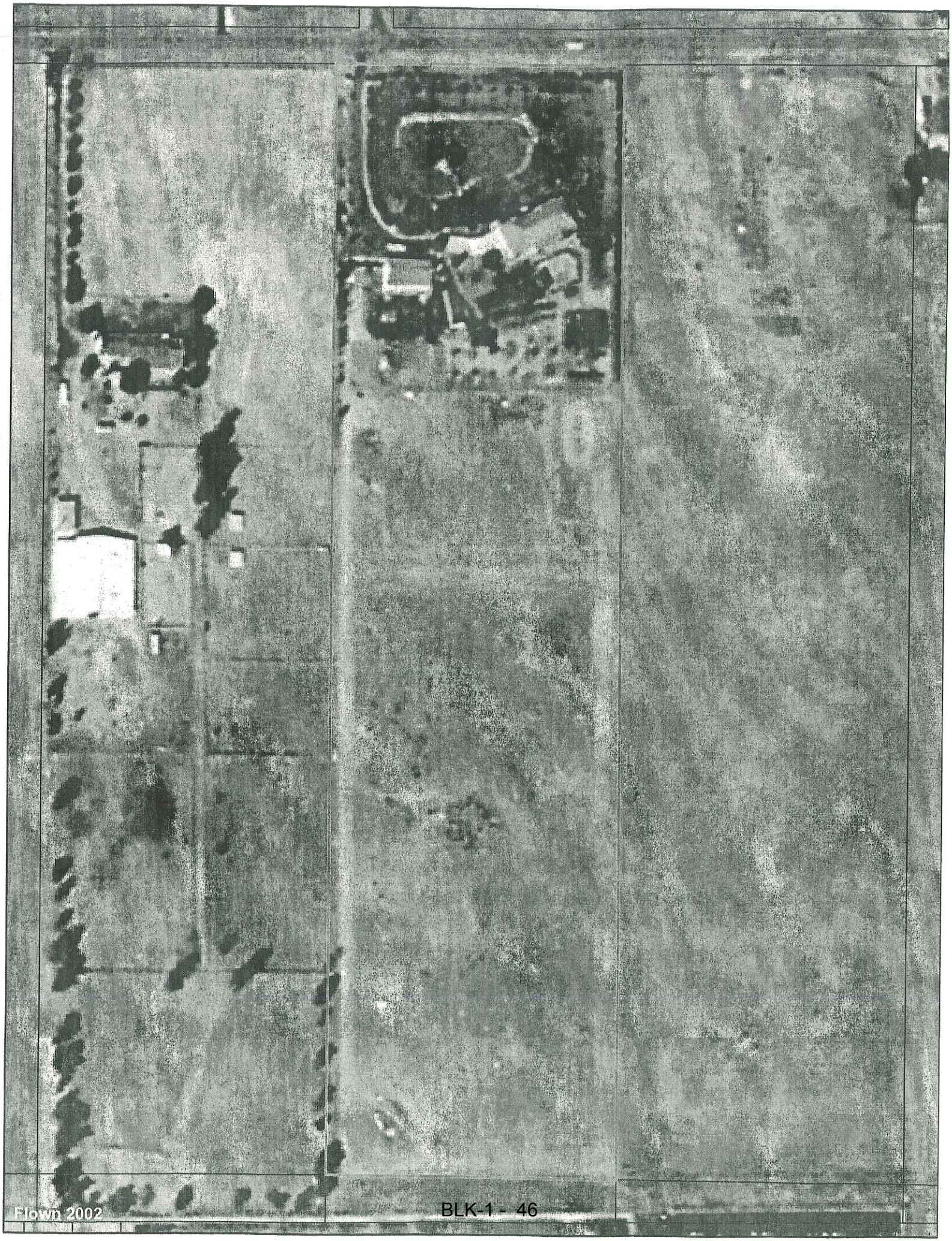
- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

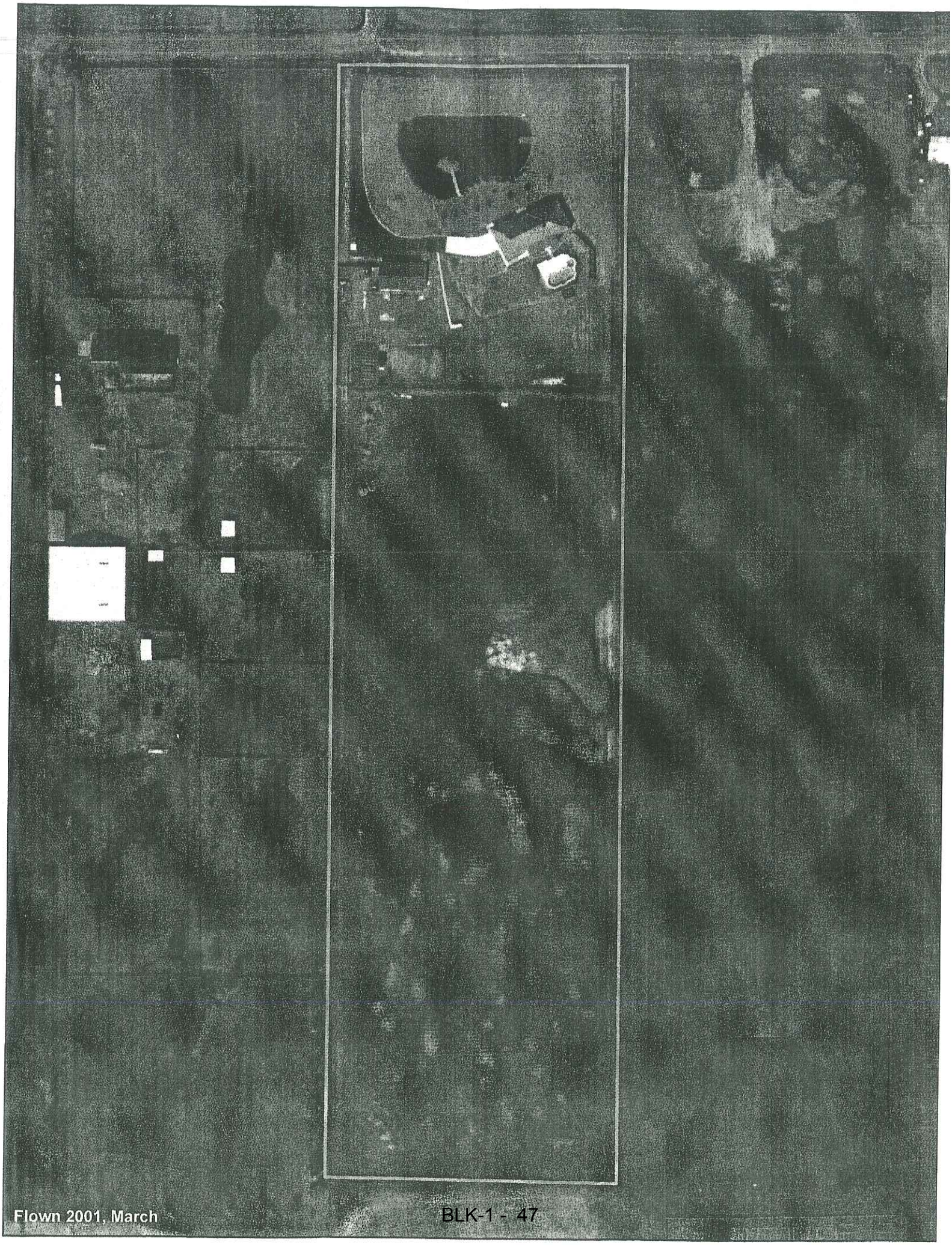
Remarks: assume soil nonhydric characteristics due to long time frame since drainage feature constructed

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(YES) NO	Is this Sampling Point Within a Wetland? YES NO
Wetland Hydrology Present?	(YES) NO	
Hydric Soils Present?	YES ? NO	

Remarks created + maintained drainage feature along driveway and roadside—
Data Pt is west of driveway where driveway drainage ditch meets roadside ditch:
Driveway ditch = 180' x 5' wide
Roadside ditch = 5' wide along entire road frontage


Flown 2002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VIII. Appendix B: Data Point Locations

Table B: Data Point Locations

Point ID	Latitude (N)	Longitude (W)
1A	38° 28' 07.99216"	121° 20' 29.05566"
1B	38° 28' 08.05072"	121° 20' 28.07137"
1C	38° 28' 07.99216"	121° 20' 27.56922"
2A	38° 28' 06.09885"	121° 20' 30.07952"
2B	38° 28' 06.14051"	121° 20' 29.05670"
3A	38° 28' 05.18403	121° 20' 29.66896"
3B	38° 28' 05.20066"	121° 20' 28.93522"
3C	38° 28' 05.20066"	121° 20' 30.37069"
4A	38° 28' 02.87584	121° 20' 28.94143"
4B	38° 28' 03.05007"	121° 20' 28.43214"
4C	38° 28' 03.05007"	121° 20' 28.06079"
5	38° 28' 13.40265"	121° 20' 29.14744"
6	38° 28' 10.69365"	121° 20' 27.86721"
7	38° 28' 14.70834"	121° 20' 31.40895"

Data point locations were recorded at the time of field survey using a Trimble GeoXT GPS device, which was also used to map the wetland feature boundaries shown on Figure 3.

Page: 1

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Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name:

Project Name: Rancho Siesta

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2008 TOTALS (lbs/day unmitigated)	8.34	57.36	33.06	166.02	3.64	169.67	34.68	3.35	38.03	4,866.00
2009 TOTALS (lbs/day unmitigated)	138.13	54.23	31.80	166.02	3.45	169.47	34.68	3.17	37.85	4,866.23

CONNOR ARBORIST SERVICES

Post Office Box 277754
Sacramento, California 95827-7754
Phone (916) 726-1427 • Fax (916) 484-1023

May 10, 2005

Isaac Magana
8955 McCoy Avenue
Sacramento, Ca. 95829

Re: Arborist report on Black Walnuts at above address

Dear Isaac,

As per our discussion I have prepared this arborist report describing 7 Black Walnut trees growing on your property located at 8955 McCoy Avenue in Sacramento. Most of the trees are older specimens in fair condition. These are growing around structures in a rural setting. There is evidence that the trees have been pruned in the past, but most do have structural issues and would benefit from some remedial work if there is to be intensive use in the future. At present the trees are relatively stable for the current amount of human activity.

I have included a marked up site plan giving very approximate locations of the tree trunks. Aluminum number tags have been affixed to the trunks of the trees for field identification. Please feel free to call if you have any questions regarding this report.

Sincerely,

George M. Connor
ISA Certified Arborist #587

Tree #1 Black Walnut Juglans hindsii
DBH: 26 "
DLR: 25 '
Structure: Fair to poor, basal decay north side of trunk, large limb removed to east
Vigor: Fair
Dripline environment: Lawn, gravel driveway
Recommendation: Prune and fertilize

Tree #2 Black Walnut Juglans hindsii
DBH: 23 "
DLR: 25 '
Structure: Fair to poor, basal decay northwest and south sides
Vigor: Fair
Dripline environment: Lawn, house, driveway
Recommendation: Prune and fertilize

Tree #3 Black Walnut Juglans hindsii
DBH: 24 " at 4 feet
DLR: 20 '
Structure: Fair to poor, basal cavity south side, breakout wounds in upper canopy
Vigor: Fair
Dripline environment: Lawn, house
Recommendation: Prune and fertilize

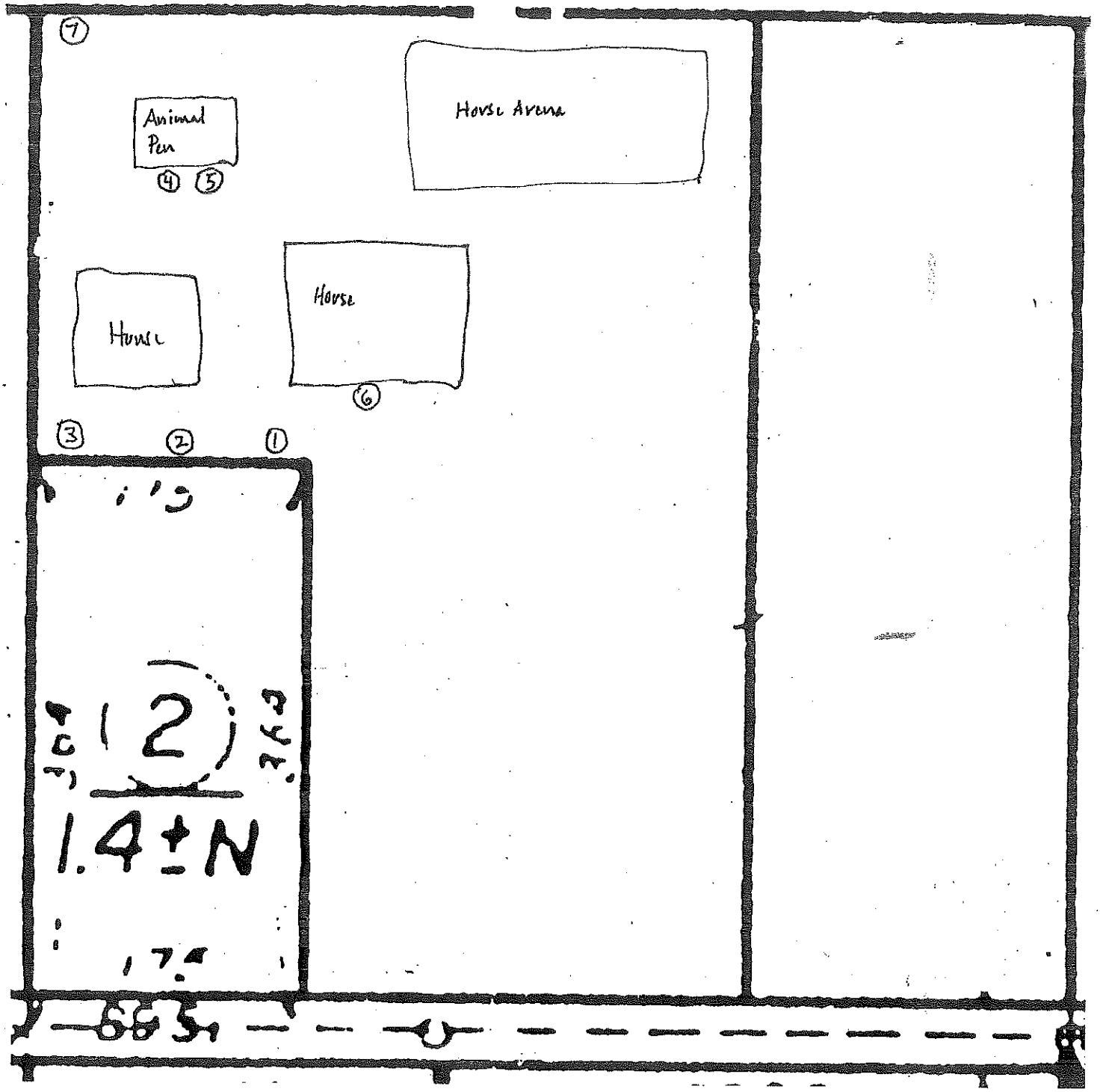
Tree #4 Black Walnut Juglans hindsii
DBH: 17 "
DLR: 30 '
Structure: Fair to poor, callusing stub of cut off trunk west side at 2 feet, topping cuts
Vigor: Fair
Dripline environment: Gravel driveway, animal pen
Recommendation: Prune and fertilize

Tree #5 Black Walnut Juglans hindsii
DBH: 22 " at 3 feet
DLR: 30 '
Structure: Fair, leans to east due to crowding
Vigor: Fair, above average amount of dead wood
Dripline environment: Gravel driveway, animal pen
Recommendation: Prune and fertilize

Note: A Paradox Walnut tree is growing within the animal pen a few feet northwest of tree #4. This tree has not been included due to the fact that only Juglans hindsii specimens are described in this report.

Tree #6 Black Walnut Juglans hindsii
DBH: 22 "
DLR: 35 '
Structure: Fair, some breakout wounds in upper canopy
Vigor: Fair
Dripline environment: Gravel driveway, house 8 feet from base of trunk to west
Recommendation: Prune and fertilize

Tree #7 Black Walnut Juglans hindsii
DBH: 12 "
DLR: 15 '
Structure: Fair, leans to east
Vigor: Fair, slightly above average amount of dead wood
Dripline environment: Edge of pasture, horse corral
Recommendation: No work necessary


7
Animal Pen
4
5
Horse Arena
Horse
Horse
6
3
2
1
2
1.4±N

Page: 1

12/18/2008 12:29:17 PM

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name:

Project Name: champion oaks centex

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2008 TOTALS (lbs/day unmitigated)	10.34	62.17	34.27	0.01	213.05	3.77	216.82	44.50	3.46	47.97	5,544.88
2009 TOTALS (lbs/day unmitigated)	633.53	58.79	68.78	0.06	213.05	3.56	216.61	44.50	3.27	47.77	7,706.58

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	19.52	4.34	12.54	0.00	0.04	0.04	5,410.96

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	27.15	26.29	319.95	0.24	38.99	7.55	24,520.43

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SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	46.67	30.63	332.49	0.24	39.03	7.59	29,931.39

JURISDICTIONAL DELINEATION AND SPECIAL STATUS SPECIES EVALUATION

CHAMPION OAK DEVELOPMENT

SACRAMENTO COUNTY, CALIFORNIA

SEPTEMBER 2004

Prepared For:

LAW OFFICE OF STEPHEN P. BELZER
1201 K Street, Suite 1230
Sacramento, California 95814

Prepared By:

GIBSON & SKORDAL, LLC
Wetland Consultants
2277 Fair Oaks Blvd., Suite 395
Sacramento, California 95825

INTRODUCTION

The purpose of this report is to present the results of a jurisdictional delineation and special status species evaluation conducted for the Champion Oak Development Property.

LOCATION

The study area includes a ± 59.5-acre parcel located south of McCoy Avenue, west of Passalis Lane, and immediately northeast of the intersection of Gerber Road and Elk Grove-Florin Road in the Florin-Vineyard Community Plan development area. It lies in the southwest ¼ of Section 6, Township 7 North, Range 6 East of Sacramento County, California (Latitude 38° 29' North, Longitude 121° 22' West). Figure 1 is a vicinity map.

METHODOLOGY

Field studies were conducted on September 9, 2004 for the purpose of delineating existing waters and wetlands in the study area and evaluating special status species and their habitats.

Jurisdictional Delineation

The boundaries of potential waters and wetlands, data points, and other site features were surveyed in the field by Gibson & Skordal, LLC utilizing a Trimble GPS data logger with sub-meter accuracy. The delineation map was prepared by layering the GPS field data over aerial photography flown in May of 2002 by the United States Geological Survey (USGS).

The **"Corps of Engineers Wetlands Delineation Manual"**[1] was used as the standard of determining whether specific areas are wetlands potentially subject to regulation under Section 404 of the Clean Water Act. Corps of Engineers' regulations (33 CFR 328) was used to determine the presence of waters of the United States other than wetlands. The **"National List of Plant Species That Occur in Wetlands: California (Region 0)"**[2] was used to determine the wetland indicator status of plants observed in the study area. The **"Soil Survey of Sacramento County, California"**[3] was used to evaluate soil mapping in the study area.

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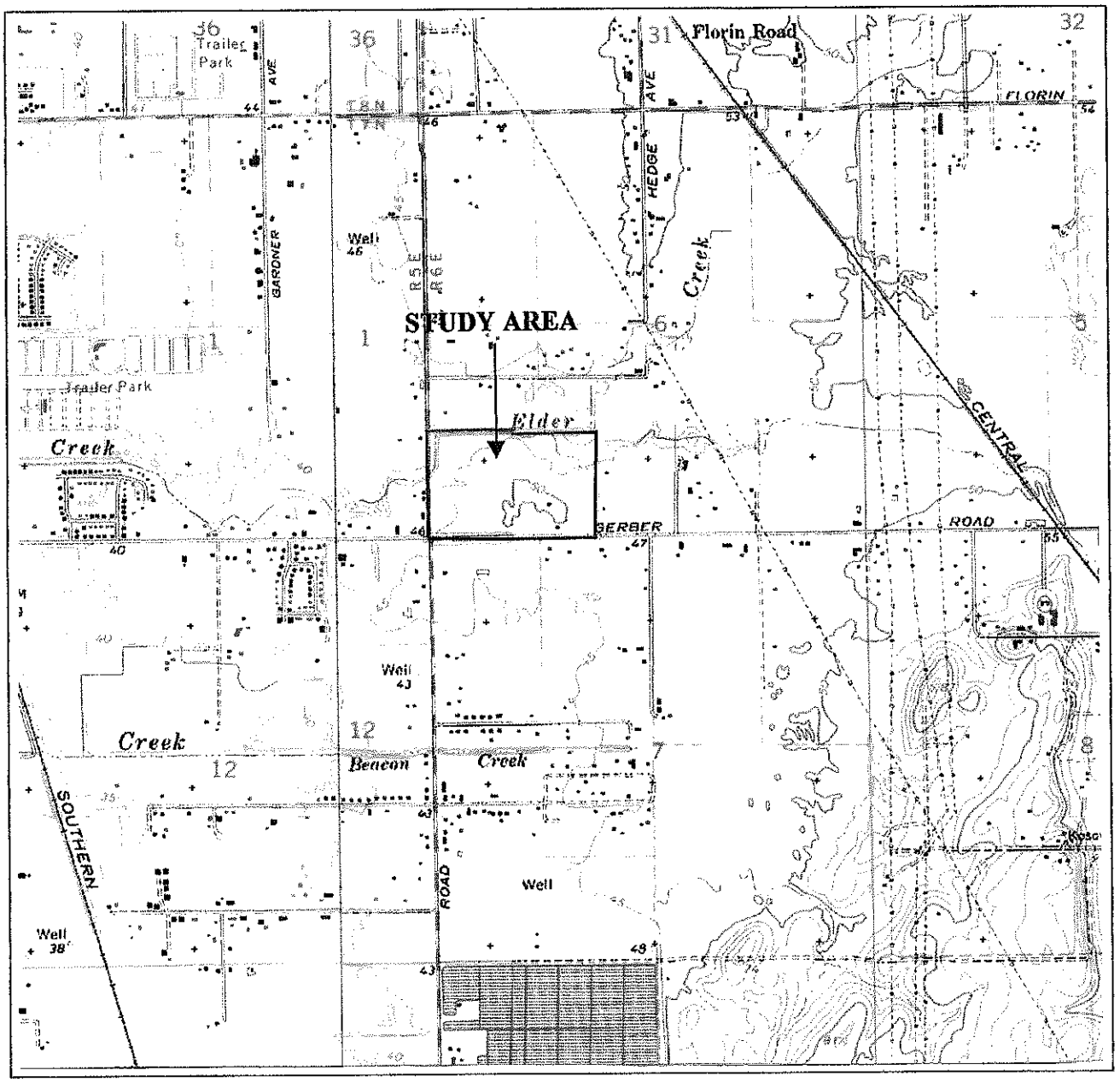
[1] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station. Vicksburg, Miss.

[2] Reed, P.B. 1988. National List of Plant Species That Occur In Wetlands: California (Region 0). Biological Report 88(26.10). May 1988. National Ecology Research Center, National Wetlands Inventory, U.S. Fish & Wildlife Service, St. Petersburg, Florida.

[3] USDA, Soil Conservation Service. 1993. Soil Survey of Sacramento County, California.

FIGURE 1

VICINITY MAP



↑
N
(Scale: 1 Inch = 2000 Feet)

Source: Elk Grove 7.5 Minute USGS Topographic Quadrangle

Detailed data on vegetation, soils, and hydrology characteristics was taken in the field. Data forms documenting the basis for determining which areas are wetland or upland are provided in Appendix A.

Special Status Species Evaluation

The special status species evaluation includes those species identified as having relative scarcity and/or declining populations by the United States Fish & Wildlife Service (USFWS) or California Department of Fish & Game (CDFG). Special status species include those formally listed as threatened or endangered, those proposed for formal listing, candidates for Federal listing, and those considered to be Species of Concern by USFWS or Species of Special Concern by CDFG. In addition to these, we also included those species considered to be "special animals" or "fully protected" by the CDFG and those plant species considered to be rare, threatened or endangered in California by the California Native Plant Society (CNPS).

In our evaluation, we considered those special status species documented by the California Natural Diversity Database (CNDDB) as occurring in the vicinity of the study area. A record search of the CNDDB was conducted for the Elk Grove, Florin, and Carmichael 7.5 Minute USGS quadrangles to identify all documented sightings of special status species in the vicinity of the study area. In addition to these species, we included other special status species that may have some potential for occurring in the study area based on historical range data and/or the presence of suitable habitat.

GENERAL SITE CONDITIONS AND HABITATS

The study area supports the Champions Links Golf Course facility that is generally bounded by existing ranchettes and/or Elder Creek to the north, ranchettes and an access road to the east, Gerber Road to the south, and Elk Grove-Florin Road to the west. The golf course facility includes an executive nine-hole golf course with a driving range, six golf course ponds, and associated clubhouse, pro-shop, and parking facilities.

A majority of the study area is maintained as fairway turf and/or range fairway turf that is sprinkler irrigated and mowed on a regular basis as part of golf course operations. The fairways are generally dominated by Bermuda grass (*Cynodon dactylon*). Other common associates include annual bluegrass (*Poa annua*), dallis grass (*Paspalum dilatatum*), and perennial rye (*Lolium perenne*). Numerous planted trees present along the fairways or in association with the clubhouse facility include California walnut (*Juglans californica*), California sycamore

(*Plantanus racemosa*), Fremont cottonwood (*Populus fremontii*), English walnut (*Juglans regia*), arroyo willow (*Salix lasiolepis*), coyote willow (*Salix hindsiana*), and a variety of exotic poplar, pines and other ornamentals.

Soils in the study area are mapped as San Joaquin silt loam, leveled, 0 to 1 percent slopes; and San Joaquin silt loam, 0 to 3 percent slopes. San Joaquin soils are moderately deep, moderately well-drained soils that occur on low terrace features. Although they are not listed as hydric, they do have hydric inclusions in depressions and drainageways. Figure 2 provides a soils map for the site.

EXISTING WETLANDS

We identified a total of 3.8 acres of potential waters and wetlands in the study area including 0.66 acre of emergent wetlands, 2.07 acres of golf course ponds, a 0.19 acre channelized drainage, and 0.88 acre of creek channel associated with Elder Creek. Table 1 gives the areas of potential waters and wetlands by type and reference number. Appendix B provides a delineation map showing the location of potential waters and wetlands, data points, and the study area boundary. Appendix C provides a list of plant species observed in the study area including their status as wetland indicators.

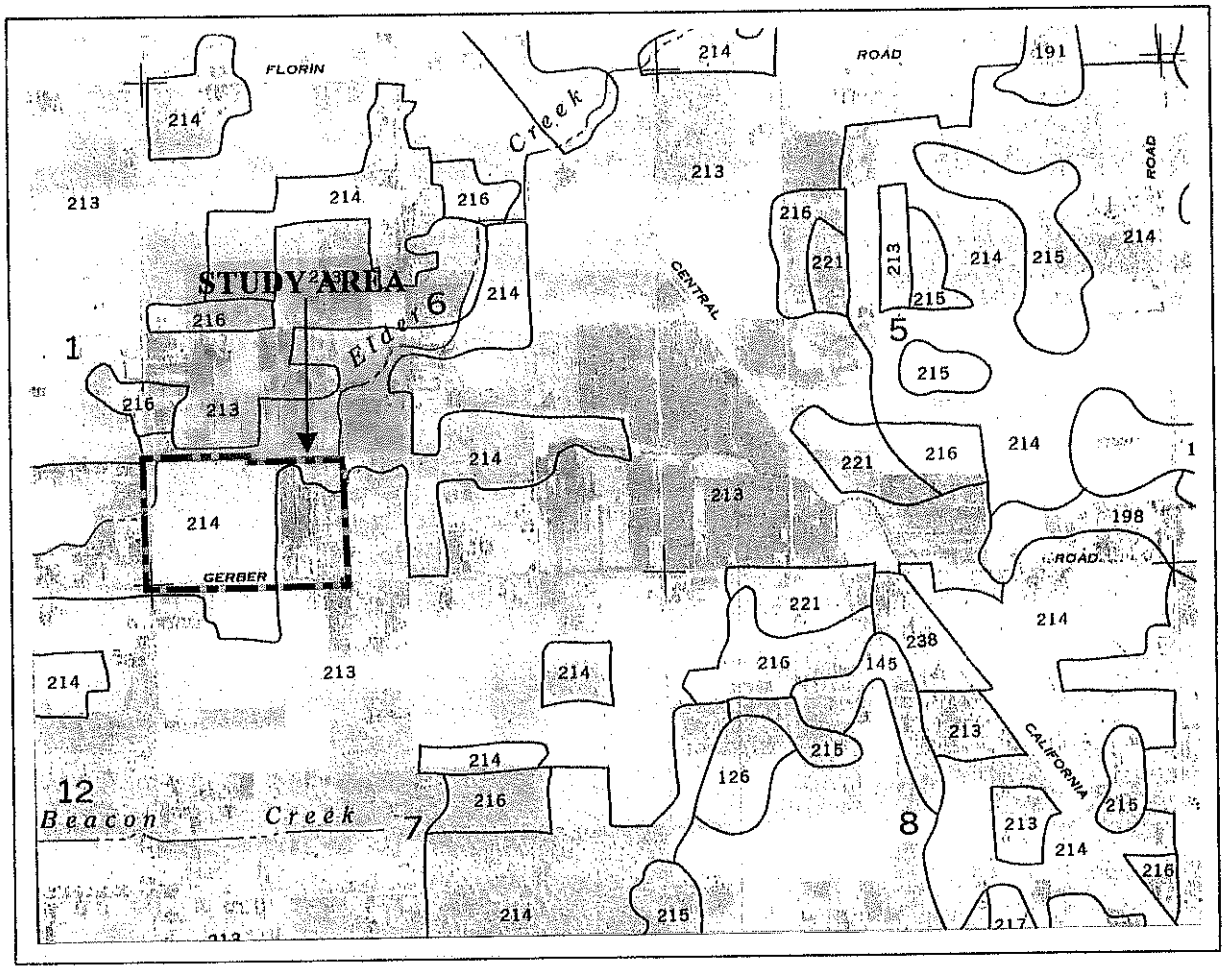
Emergent Wetlands & Ponds

We identified five emergent wetlands (EM1-EM5) ranging from 903-sq. ft. to 23,723-sq. ft. in area, and six golf course ponds (P1-P6) ranging from 1,196-sq. ft. to 26,827-sq. ft in area that are present in the study area. A majority of the emergent wetlands and ponds are associated with the golf course and driving range and/or were historically created as part of the Champions Links golf course development project.

The emergent wetlands generally occur in deep defined basins that are heavily augmented by fairway run-off and irrigation run-off generated by the golf course. As a result, they sustain long-term ponding conditions that persist for most, if not all, of the growing season. EM1-EM4 generally sustain marsh habitat dominated by cattails (*Typha spp.*). Other common associates include floating primrose (*Ludwigia peploides*), tall flatsedge (*Cyperus eragrostis*), dallis grass (*Paspalum dilatatum*), bearded sprangle-top (*Leptochloa fascicularis*), smartweed (*Polygonum sp.*), and willow-herb (*Epilobium sp.*). EM5 occurs within a sloping depression along the northern boundary that functions as a drainage swale for the golf course. It supports emergent wetland habitat similar to EM1-EM4, but it also supports a riparian scrub component that includes arroyo willow, coyote willow, Fremont cottonwood, and California walnut.

FIGURE 2

SOILS MAP



Soil Unit	Soil Name	Soil Classification	Drainage Class
213	San Joaquin silt loam, leveled, 0-1% slopes	Abruptic Durixeralfs	moderately well drained
214	San Joaquin silt loam, 0-3% slopes	Abruptic Durixeralfs	moderately well drained

Source: USDA, Soil Conservation Service. 1993. Soil Survey of Sacramento County, California

TABLE 1

AREAS OF POTENTIAL WATERS AND WETLANDS IDENTIFIED ON THE CHAMPION OAK DEVELOPMENT PROPERTY

Emergent Wetlands:

Ref. #		Area (Sq.Ft.)
EM1		903
EM2		1,258
EM3		1,296
EM4		1,613
EM5		23,723
Total	=	28,793 Sq. Ft. or 0.66 Acre

Golf Course Ponds:

Ref. #		Area (Sq.Ft.)
P1		25,449
P2		7,589
P3		10,643
P4		26,827
P5		1,196
P6		18,621
Total	=	90,325 Sq. Ft. or 2.07 Acres

Elder Creek: = 38,545 Sq. Ft. or 0.88 Acre

Channelized Drainage (CH1): = 8,275 Sq. Ft. or 0.19 Acre

TOTAL POTENTIAL WATERS AND WETLANDS = 3.8 Acres

All of the existing ponds in the study area were historically constructed as part of the initial golf course development and they are currently used and maintained as golf course ponds. P2-P6 are isolated ponds that were historically constructed entirely in uplands. P1 was constructed on a surface drainage feature (CH1). The ponds generally support a mix of open water and emergent marsh habitats that are maintained by golf course irrigation and run-off.

Channelized Drainage

We identified an intermittent drainage that bisects the northeast corner of the study area and drains into Elder Creek at the northern boundary of the site. The drainage has been modified and channelized as part of the original golf course development. It is characterized by a broad linear drainageway that sustains intermittent flow and/or inundation conditions that are significantly augmented by irrigation and golf course-generated run-off. The drainage channel supports an emergent wetland plant community generally dominated by tall flatsedge, dallis grass, smartweed, and knot grass (*Paspalum distichum*).

Elder Creek

We identified a total of 0.88 acre (38,545-sq. ft.) of creek channel associated with Elder Creek as it extends along a portion of the northern boundary and along the western boundary of the study area. Elder Creek is generally characterized by a deeply incised channel bed and bank, and it sustains perennial flow conditions that are augmented by summer irrigation and urban run-off.

Associated emergent wetland vegetation within the creek channel includes floating primrose, smartweed, tall flatsedge, dallis grass, knotgrass, smartweed, bearded sprangle-top, willow herb, and annual rabbit-foot grass. Sparse trees along the top of the bank of the creek include coyote willow and California walnut.

Jurisdictional Status

Existing wetlands and waters in the study area including EM5, P1, and CH1 are part of surface drainage features or they have a direct hydrology connection with surface drainage features that drain into Elder Creek. Given this surface connection with a tributary to navigable waters, these areas are subject to regulation by the Corps of Engineers (Corps) under Section 404 of the Clean Water Act.

The remaining wetlands and waters in the study area, including EM1-EM4 and P2-P6, appear to be isolated depressions that lack a surface connection with drainage features. Most if not all of these areas were historically created as part of the golf course development, and some of them may have been created as part of mitigation measures.

If the Corps determines that EM1-EM4 and P2-P6 are "*adjacent wetlands*" given their relatively close proximity to jurisdictional drainage features, they may be subject to Section 404 regulation by the Corps. However, the Corps may also determine these areas are isolated waters/wetlands that do not meet the criteria for classification as "*adjacent wetlands*". Under the latter scenario, they would not be subject to Section 404 regulation.

SPECIAL STATUS SPECIES FINDINGS

Table 2 provides a list of special status species that were evaluated including their listing status, habitat associations, and whether potential habitats occur in the study area. Of the twenty-four special status species evaluated in Table 2, ten species including the bank swallow, Bogg's Lake hedge-hyssop, California tiger salamander, giant garter snake, Sacramento orcutt grass, slender orcutt grass, Swainson's hawk, valley elderberry longhorn beetle, vernal pool fairy shrimp, and vernal pool tadpole shrimp are Federal and/or State listed threatened and/or endangered species. The following is a detailed summary of special status species and their habitats as they relate to the study area.

Swainson's Hawk and Other Raptors

Swainson's hawk (*Buteo swainsoni*) is a raptor species currently listed as threatened in California by the CDFG. They typically nest in tall cottonwoods, valley oaks, or willows associated with riparian corridors with adjacent grassland, pasture, and/or cropland with a high density of rodents. The Central Valley population typically breeds and nests in late spring through early summer before migrating to Central America and South America for the fall and winter seasons.

Based on CNDDB sighting records, active Swainson's hawk nests have been documented within a 3 to 5-mile radius of the study area including several older nests that were located along the east side of Highway 99 between Calvine Road and Sheldon Road, and a number of nests within Deer Creek and the Cosumnes River corridor to the south.

The golf course fairways and golf range turf that comprises a majority of the study area lacks sufficient rodent populations generally associated with suitable raptor foraging habitat. As such, these areas provide low potential for raptor foraging. There are patches of annual grassland

TABLE 2

EVALUATION OF SPECIAL STATUS SPECIES HABITATS FOR THE CHAMPION OAK DEVELOPMENT PROPERTY

	State Status	Federal Status	CNPS Listing	Habitat Association	Potential Habitat In Study Area
Birds					
Accipiter cooperi (Cooper's hawk)	Species of Special Concern	None		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes -suitable nesting & marginal foraging habitat
Accipiter striatus (sharp-shinned hawk)	Species of Special Concern	None		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Yes -suitable nesting & marginal foraging habitat
Agelaius tricolor (tricolored blackbird)	Species of Special Concern	Species of Concern		Colonial nester in cattails, bullrush, or blackberries associated with marsh habitats.	Yes -suitable foraging & nesting haitat
Athene cunicularia (burrowing owl)	Species of Special Concern	Species of Concern		Nests in abandoned ground squirrel burrows associated with open grassland habitats.	Yes -habitat present, but no owls observed on site.
Buteo swainsoni (Swainson's hawk)	Threatened	None		Nests in tall cottonwoods, valley oaks or willows. Forages in fields, cropland, irrigated pature, and grassland near large riparian corridors.	Yes -suitable nesting & marginal foraging habitat
Circus cyaneus (northern harrier)	Species of Special Concern	None		Forages in open grasslands, nests on ground in shrubby vegetation.	Yes -marginal nesting & foraging habitat
Elanus leucurus (white-tailed kite)	Fully Protected	None		Nests in riparian corridors along streams and rivers, and forages in nearby grasslands and fields.	Yes -suitable nesting & marginal foraging habitat
Riparia riparia (bank swallow)	Threatened	Species of Concern		Colonial nester in vertical cliffs and banks associated with riparian zones along streams, rivers, and lakes.	No
Amphibians & Reptiles					
Ambystoma trigrinum californiense (California tiger salamander)	Species of Special Concern	Threatened		Breeds in ponds or other deeply ponded wetlands, and uses gopher holes and ground squirrel burrows in adjacent grasslands for upland refugia/foraging.	No -marginal habitat in ponds/EM's, but not highly suitable for CTS
Clemmys marmorata marmorata (northwestern pond turtle)	Species of Special Concern	Species of Concern		Ponds, rivers, streams, wetlands, and irrigation ditches with associated marsh habitat.	Yes
Scaphiopus hammondii (western spadefoot)	Species of Special Concern	Species of Concern		Breeds in vernal pools, seasonal wetlands and associated swales. Forages and hibernates in adjacent grasslands.	No
Thamnophis gigas (giant garter snake)	Threatened	Threatened		Rivers, canals, irrigation ditches, rice fields, and other aquatic habitats with slow moving water and heavy emergent vegetation.	Yes -marginal habitat exists, but lacks nexis with known GGS sites

TABLE 2

EVALUATION OF SPECIAL STATUS SPECIES HABITATS FOR THE CHAMPION OAK DEVELOPMENT PROPERTY

Invertebrates					
Branchinecta lynchi (vernal pool fairy shrimp)	None	Threatened		Vernal pools and other seasonally ponded wetlands.	No
Branchinecta mesovallensis (midvalley fairy shrimp)	None	None		Vernal pools and other seasonally ponded wetlands.	No
Desmocerus californicus dimorphus (valley elderberry longhorn beetle)	None	Threatened		Dependent upon elderberry plant (Sambucus mexicana) as primary host species	No
Lepidurus packardi (vernal pool tadpole shrimp)	None	Endangered		Vernal pools and other deeply ponded seasonal wetlands.	No
Linderiella occidentalis (California linderiella)	None	None		Vernal pools and other seasonally ponded wetlands.	No
Plants					
Downingia pusilla (dwarf downingia)	None	None	CNPS-2	Vernal pools	No
Gratiola heterosepala (Bogg's Lake hedge-hyssop)	Endangered	None	CNPS-1B	Vernal pools and margins of lakes/ponds	No
Juncus leiospermus var. ahartii (Ahart's dwarf rush)	None	Species of Concern	CNPS-1B	Vernal pools	No
Legenere limosa (legenere)	None	Species of Concern	CNPS-1B	Vernal pools	No
Orcuttia tenuis (slender orcutt grass)	Endangered	Threatened	CNPS-1B	Vernal pools	No
Orcuttia viscida (Sacramento orcutt grass)	Endangered	Threatened	CNPS-1B	Vernal pools	No
Sagittaria sanfordii (Sanford's arrowhead)	None	Species of Concern	CNPS-1B	Deep aquatic habitats associated with canals, drainages, and ditches.	Yes -habitat present, but species was not found in surveys.

habitat including the abandoned field in the southeast corner and a fringe along the northern boundary south of Elder Creek that would provide marginally suitable foraging habitat for Swainson's hawk. The grassland habitat also provides potential foraging for other raptors including northern harrier, white-tailed kite, sharp-shinned hawk, Cooper's hawk, and red-tailed hawk. Additionally, there are a number of suitable nest trees in the study area that provide potential nesting habitat for most of these raptors.

Burrowing owl (*Athene cunicularia*) is a ground nesting raptor species afforded protection by CDFG as a species of special concern due to potentially declining populations in the Central Valley of California. They typically inhabit open grassland habitats where they nest in abandoned ground squirrel burrows and other nesting cavities associated with raised mounds, levees, or soft berm features. The grassland/pasture habitat in the study area provides suitable foraging habitat for burrowing owls. However, we did not observe any burrowing owls or evidence of burrowing owl nesting activity in the study area.

Tricolored Blackbird

Tricolored blackbirds (*Agelaius tricolor*) are afforded protection by CDFG as a species of special concern due to declining populations in the region. They are colonial nesters preferring to nest in dense stands of cattails and/or bullrush, but they also commonly nest in blackberry thickets associated with drainages, ditches, and canals. There have been a number of documented sightings of tricolored blackbird nesting colonies in the Florin and Elk Grove quadrangles, but the locations have been excluded from CNDDB records for protection issues.

Portions of Elder Creek, EM5, and some of the other emergent wetlands and ponds in the study area support suitable nesting habitat for tricolored blackbirds. However, surveys were conducted too late in the summer to adequately evaluate potential tricolored nesting activity at the site.

California Tiger Salamander

The California tiger salamander (*Ambystoma trigrinum californiense*) is a Federal threatened species and a California Species of Special Concern that typically breeds in seasonal or permanent ponds. California tiger salamander (CTS) may also breed in deeper ponded vernal pools, seasonal wetlands and/or other seasonal pools within swales or channels. They typically spend a majority of their life cycle living below ground in ground squirrel burrows or pocket gopher burrows in grasslands situated adjacent to suitable breeding sites.

The emergent wetlands and ponds in the study area support suitable habitat conditions associated with CTS breeding habitats. However, the current land use (i.e. golf course operation) would greatly reduce any reasonable potential for CTS to utilize these habitats. Additionally, CTS has not been documented as occurring in the Florin or Elk Grove USGS quadrangle areas. Also, the study area occurs outside the "*critical habitat*" areas for this species as designated by USFWS. Given this and given the disturbances of the current golf course operations, the potential for CTS to occur in the study area appears to be very low.

Giant Garter Snake

Giant garter snake (GGS) is designated as a Federal threatened and State threatened species afforded special protection by USFWS and CDFG. GGS is generally associated with larger canals, irrigation ditches, and other semi-permanent to permanent aquatic sites with slow moving water and an abundance of emergent vegetation. The closest documented GGS sightings in relation to the study area include a 2002 sighting in a ditch along Waterman Road located east of Highway 99 and south of Elk Grove, and a 1982 sighting in the Elk Grove Creek situated roughly 0.4 mile west of Highway 99 and ½ mile north of Elk Grove Boulevard.

Based on CNDDB records, GGS has not been documented in Elder Creek or any of its tributaries located east of Highway 99. Regardless, the study area does support marginally suitable breeding habitat for GGS including portions of Elder Creek along the western boundary of the site. The USFWS may or may not consider this to be potential habitat for GGS.

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (*Desmocerus californicus*) is a Federal threatened species that is dependent upon the elderberry plant (*Sambucus sp.*) as a primary host species. Elderberry shrubs are a common component of riparian areas throughout the Sacramento Valley region, and they have been documented as occurring at numerous locations in the vicinity of the study area.

Given the absence of elderberry shrubs in the study area, there is no potential for valley elderberry longhorn beetle to occur at the site.

Vernal Pool Branchiopods

Federally listed vernal pool branchiopods including the threatened vernal pool fairy shrimp (*Branchinecta lynchi*) and the endangered vernal pool tadpole shrimp (*Lepidurus packardi*) have been documented as occurring in Elk Grove and Florin USGS quadrangles. Other non-listed

branchiopods known to occur in the region include California linderiella (*Linderiella occidentalis*) and midvalley fairy shrimp (*Branchinecta mesovallensis*).

The branchiopod species listed above are generally restricted to vernal pools and/or other seasonally ponded wetlands that sustain inundation during the winter before drying up in the late spring. The existing emergent wetlands and ponds in the study area do not provide suitable habitat for special status branchiopods given their extended ponding regimes and perennial nature. Given this, there is little if any potential for special status branchiopods to occur at the site.

Special Status Plants

Special status plant species identified on the CNDDB as occurring in the vicinity of the study area, or may potentially occur in the area, include Ahart's dwarf rush (*Juncus leiospermus ahartii*), Bogg's Lake hedge-hyssop (*Gratiola heterosepala*), dwarf downingia (*Downinia pusilla*), legenere (*Legenere limosa*), Sacramento orcutt grass (*Orcuttia viscida*), slender orcutt grass (*Orcuttia tenuis*), and Sanford's arrowhead (*Sagittaria sanfordii*).

Ahart's dwarf rush, Bogg's Lake hedge-hyssop, dwarf downingia, legenere, Sacramento orcutt grass, and slender orcutt grass are all strongly associated with vernal pool habitats. Bogg's Lake hedge-hyssop can also occur around the perimeter of lakes and ponds. Conversely, Sanford's arrowhead generally occurs in deep aquatic habitats associated with drainages, canals, and larger ditches that sustain inundation and/or slow moving water into early summer.

Portions of the emergent wetlands, ponds, channelized drainage, and Elder Creek sustain aquatic habitat conditions suitable for supporting Sanford's arrowhead. However, we did not observe this species present in the study area during our field surveys. Given the absence of suitable wetland habitats, there is little if any potential for Ahart's dwarf rush, Bogg's Lake hedge-hyssop, dwarf downingia, legenere, Sacramento orcutt grass, or slender orcutt grass to occur at the site.

SUMMARY

We identified a total of 3.8 acres of potential waters and wetlands in the study area including 0.66 acre of emergent wetlands, 2.07 acres of golf course ponds, a 0.19-acre channelized drainage, and 0.88 acre of creek channel associated with Elder Creek. Some or all of these areas are subject to regulation by the Corps under Section 404 of the Clean Water Act.

In regards to special status species and their habitats, a number of special status raptors including Swainson's hawk, sharp-shinned hawk, Cooper's hawk, white-tailed kite, northern harrier, and burrowing owl may have a reasonable potential for occurring in the study area based on the presence of potential foraging and/or nesting habitat. In the event that future development of the site occurs during the raptor nesting season, we recommend that a raptor nesting survey be completed within two weeks of the start of project construction.

Portions of the existing emergent wetlands, ponds, and Elder Creek channel in the study area provide potential habitat for northwestern pond turtle, tricolored blackbird (nesting), and Sanford's arrowhead. Elder Creek may also provide marginal habitat for giant garter snake, and the existing emergent wetlands and ponds may provide marginal habitat for California tiger salamander. In our opinion, however, the potential for either of these species to occur in the study area would be low given the lack or documented sightings in the vicinity and given the current land uses at the site.

Other Federal or State listed species including the bank swallow, Bogg's Lake hedge-hyssop, Sacramento orcutt grass, slender orcutt grass, valley elderberry longhorn beetle, vernal pool fairy shrimp, and vernal pool tadpole shrimp would have little if any potential for occurring in the study area based on the absence of potential or suitable habitat.

APPENDIX A

DATA FORMS

GIBSON & SKORDAL

ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: Champion Oak Development	Date: 9-9-04
Applicant/Owner: Stephen P. Belzer	City/County: Sacramento Co.
Investigator(s): D. Skordal	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Emergent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 1
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: A

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Typha angustifolia (D)		OBL	9.		
2. Ludwigia peploides		OBL	10.		
3. Cyperus eragrostis		FACW	11.		
4. Polygonum sp.		OBL	12.		
5. Epilobium sp.		FACW-OBL	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ✓ Water Marks
- ___ Drift Lines
- ✓ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ✓ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ✓ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Located in defined depression w/ algae matrix, oxidized rootchannels etc. Area constructed as part of golf course!

SOILS

Map Unit Name (Series and Phase): (213) San Joaquin silt loam, leveled, 0-1% slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-8	7.5YR 3/4	yes / heavy		fine sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ✓ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: Hydric Soils assumed based on strong indicators of aquic Moisture regime!

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	No	Is this Data Point Within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No	
Hydric Soils Present?	Yes	No	

Remarks:

GIBSON & SKORDAL

ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: Champion Oak Development	Date: 9-9-04
Applicant/Owner: Stephen P. Belzer	City/County: Sacramento Co.
Investigator(s): D. Skordal	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Adjacent upland - G.C. fairway
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 1
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: B

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Cynodon dactylon (D)		FAC	9.		
2. Poa annua		FACW	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100% FAC

Remarks: Maintained golf course fairway

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Located on sloping "fairway" → area is irrigated and mowed as part of golf course operations.

SOILS

Map Unit Name (Series and Phase): (2/3) San Joaquin silt loam, leveled, 0-1% slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-6	7.5 YR 3/4	None		fine sandy silt loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	FAC	Yes (circled)	No
Wetland Hydrology Present?		Yes	No (circled)
Hydric Soils Present?		Yes	No (circled)

Is this Data Point Within a Wetland? Yes No (circled)

Remarks: Non-wetland

GIBSON & SKORDAL

ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: Champion Oak Development	Date: 9-9-04
Applicant/Owner: Stephen P. Belzer	City/County: Sacramento Co.
Investigator(s): D. Skordal	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Upland grassland (disked)
Is the site significantly disturbed (Atypical Situation)? Disked (Yes) No	Transect ID:
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: 2

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Bromus mollis (D)		FACU-	9.		
2. Vulpia myuros (D)		FACU	10.		
3. Bromus diandrus		UPL	11.		
4. Lolium perenne		FAC	12.		
5. Holocarpha virgata		UPL	13.		
6. Cynodon dactylon (D)		FAC	14.		
7. Briza minor		FACW-	15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 33%

Remarks: Fallow field supporting grassland habitat that has been sprinkler irrigated & mowed/disked in last several months.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Gently sloping to nearly level terrain adjacent to golf course fairway. Area lacks wetland hydrology indicators.

SOILS

Map Unit Name (Series and Phase): (213) San Joaquin silt loam, leveled, 0-1% slopes

Drainage Class: Mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Durixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-8	10YR 4/4	None		loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	No
Wetland Hydrology Present?	Yes	No
Hydric Soils Present?	Yes	No

Is this Data Point Within a Wetland? Yes No

Remarks: Non-wetland

GIBSON & SKORDAL

ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: Champion Oak Development	Date: 9-9-04
Applicant/Owner: Stephen P. Belzer	City/County: Sacramento Co.
Investigator(s): D. Skordal	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Emergent Wetland - Swale
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: 3
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: A

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Typha latifolia (D)	H	OBL	9.		
2. Polygonum sp. (D)	H	OBL	10.		
3. Ludwigia peploides (D)	H	OBL	11.		
4. Salix lasiolepis (D)	T/SH	FACW	12.		
5. Juncus effusus	H	OBL	13.		
6. Rubus procerus	SH	FAC	14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ✓ Sediment Deposits/Organic Detritus/Algae
- ✓ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ✓ Oxidized Root Channels in Upper 12 inches
- ✓ Water-Stained Leaves
- ___ Local Soil Survey Data
- ✓ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Linear sloping depression w/ algae mattes, water stains & oxidized root channels. Heavily augmented by Golf Course run-off!

SOILS

Map Unit Name (Series and Phase): (214) - San Joaquin silt loam, 0-3 % slopes

Drainage Class: mod. well drained

Field Observations Confirm Mapped Type? Yes No

Taxonomy (Subgroup): Abruptic Duixeralfs

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
Hydric Soils Assumed				

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ✓ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: Hydric soils assumed based on strong indicators of aquic moisture regime!

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is this Data Point Within a Wetland? (Yes) No
Wetland Hydrology Present?	(Yes)	No	
Hydric Soils Present?	(Yes)	No	

Remarks:

GIBSON & SKORDAL

ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: Champion Oak Development	Date: 9-9-04
Applicant/Owner: Stephen P. Belzer	City/County: Sacramento Co.
Investigator(s): D. Skordal	State: California
Do Normal Circumstances exist on the site? (Yes) No	Community ID: Golf Course Fairway - Uplands
Is the site significantly disturbed (Atypical Situation)? Maintained Fairway (Yes) No	Transect ID: 3
Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Data Point ID: B

VEGETATION

Plant Species Dominant (D) - Associate (A)	Stratum	Indicator	Plant Speices Dominant (D) - Associated (A)	Stratum	Indicator
1. Cynodon dactylon (D)		FAC	9.		
2. Lolium perenne		FAC	10.		
3. Paspalum dilatatum		FAC	11.		
4. Poa annua		FACW	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Streams, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depths of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits/Organic Detritus
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Sloping terrain lacking indicators of wetland hydrology. Area is irrigated & mowed as part of fairway maintenance.

SOILS

Map Unit Name (Series and Phase): (214) - San Joaquin silt loam, 0-3 % slopes

Drainage Class: mod. well drained

Taxonomy (Subgroup): Abruptic Durixeralfs

Field Observations Confirm Mapped Type? Yes No

Profile Description:

Depth (inches)	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-6	10YR 4/6	none		fine sandy loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretion in upper 3 inches
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Fairway (Yes) No

Wetland Hydrology Present? Yes (No)

Hydric Soils Present? Yes (No)

Is this Data Point Within a Wetland? Yes (No)

Remarks: Non-wetland

APPENDIX B

DELINEATION MAP

APPENDIX C

PLANT LIST

LIST OF PLANTS OBSERVED ON THE CHAMPION OAK DEVELOPMENT PROPERTY AND THEIR STATUS AS WETLAND INDICATOR SPECIES

Scientific Name	Common Name	Status [1&2]
Alisma plantago-aquatica	broad-leaf water plantain	OBL
Amsinckia intermedia	fiddleneck	UPL
Asclepias fascicularis	slender milkweed	FAC
Avena fatua	wild oats	UPL
Avena barbata	slender oats	UPL
Baccharis pilularis	coyote brush	UPL
Boisduvalia densiflora	dense flower spike-primrose	OBL
Brassica sp.	mustard	NI
Briza minor	little quaking grass	FACW-
Brodiaea sp.	brodiaea	---
Bromus diandrus (*B. rigidus*)	rip-gut grass	UPL
Bromus mollis	soft chess	FACU-
Centaurea solstitialis	yellow star-thistle	UPL
Cichorium intybus	chicory	UPL
Cirsium sp.	thistle	---
Conyza canadensis	Canada horseweed	FAC
Cynodon dactylon	Bermuda grass	FAC
Cyperus eragrostis	tall flatsedge	FACW
Echinochloa crusgalli	barnyard grass	FACW
Eleocharis macrostachya	creeping spikerush	OBL
Eremocarpus setigerus	doveweed	UPL
Erodium sp.	filaree	UPL
Festuca arundinacea	tall fescue	FAC-
Ficus carica	fig	UPL
Geranium dissectum	cut-leaf geranium	UPL
Holocarpha virgata	tarweed	UPL
Hordeum hystrix (*H. geniculatum*)	Mediterranean barley	FAC
Hordeum leporinum	hare barley	UPL
Hypochaeris glabra	smooth cats tongue	UPL
Juglans californica	California walnut	UPL
Juglans regia	English walnut	UPL
Juncus bufonius	toad rush	FACW+
Juncus effusus	soft rush	FACW
Lactuca serriola	prickly lettuce	FAC
Leptochloa fascicularis	bearded sprangle-top	OBL

[1] Reed, P.B. 1988. National List of Plant Species That Occur in Wetlands: California (Region 0). Biological Report 88(26.10) May 1988. National Ecology Research Center, National Wetland Inventory, U.S. Fish and Wildlife Service, St. Petersburg, Fl.

[2] OBL = obligate; FACW = facultative wetland; FAC = facultative; FACU = facultative upland; UPL = upland; and NI = no indicator.

Scientific Name	Common Name	Status
Leontodon leysseri	hairy hawkbit	FACU
Lolium perenne (*L. multiflorum*)	perennial ryegrass	FAC*
Lippia nodiflora	common frog-fruit	FACW
Lotus corniculatus	bird's foot trefoil	FAC
Lotus purshianus	Spanish clover	FAC
Ludwigia peploides	floating primrose	OBL
Lythrum hyssopifolia	loosestrife	FACW
Malva sp.	mallow	---
Mentha pulegium	penny-royal	OBL
Paspalum dilatatum	dallis grass	FAC
Paspalum distichum	knot grass	OBL
Plantago lanceolata	English plantain	FAC-
Plantanus racemosa	California sycamore	FACW
Poa annua	annual bluegrass	FACW-
Polygonum aviculare	knotweed	FAC
Polypogon monspeliensis	annual rabbit-foot grass	FACW+
Populus fremontii	Fremont cottonwood	FACW
Raphanus sativus	wild radish	UPL
Rorippa sp.	yellow-cress	---
Rosa californica	wild rose	FAC+
Rubus procerus	Himalayan blackberry	FAC
Rumex conglomeratus	clustered dock	FACW
Rumex crispus	curly dock	FACW-
Salix hindsiana	sandbar willow	FACW
Salix lasiolepis	arroyo willow	FACW
Silybum marianum	milk thistle	UPL
Taeniatherum caput-medusae	medusa-head	UPL
Trifolium sp.	clover	---
Typha angustifolia	narrow-leaf cattail	OBL
Typha latifolia	broad-leaf cattail	OBL
Vicia villosa	winter vetch	---
Vulpia myuros	rat-tail fescue	FACU
Xanthium strumarium	rough cocklebur	FAC+

SIERRA NEVADA ARBORISTS

ELK GROVE RESERVE

CHAMPIONS GOLF LINKS PROJECT

Florin Vineyard Community Plan Area
(County of Sacramento, California)

***INITIAL* ARBORIST REPORT**
AND
INVENTORY SUMMARY

OCT. 1 2004

Submitted by:

Edwin E. Stirtz, Consulting Arborist
ISA Certified Arborist WE-0510A
Member, American Society of Consulting Arborists
SIERRA NEVADA ARBORISTS

September 7, 2004

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APPENDIX

Correspondence from Sacramento County DERA dated March 11, 2004

COPYRIGHT STATEMENT

This consultant's report, dated September 7, 2004, is for the exclusive and confidential use of the Elk Grove Reserve concerning redevelopment of the Champions Golf Links project located within the Florin Vineyard Community Plan area (County of Sacramento), 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

September 7, 2004

Mr. Steven P. Belzer
LAW OFFICE OF STEVEN P. BELZER
1201 K Street, Suite 1230
Sacramento, California 95814

Re: ***Initial Arborist Report and Inventory Summary:***
Champions Golf Links Project -- County of Sacramento, California

Dear Mr. Belzer:

During the period September 1-6, 2004, Sierra Nevada Arborists visited the Champions Golf Links project site located within the Florin Vineyard Community Plan area in the County of Sacramento, California. The purpose of these site visits was to conduct field inspections to identify, inventory and evaluate all trees within the project boundaries which measure 4 inches and greater in diameter at breast height ("DBH"), specifically including the identification of any native oaks, California Sycamore, Northern California Black Walnut, Oregon Ash, Goodding's Black Willow, California Box Elder and White Alder, as well as any other significant trees which measure 19 inches DBH and larger, as described in Item No. 5 contained in the letter from the Sacramento County Department of Environmental Review & Assessment ("DERA") dated March 11, 2004. The trees which met the defined criteria were identified in the field with a round, metal-stamped number tag beginning with Tree No. 1 which was affixed to the tree's trunk. For your reference, the numbers utilized in this report correspond to the tree tag affixed to the tree in the field, and those numbers have been rough-plotted on the enclosed Tentative Parcel Map dated March 8, 2004, which was provided for reference by Bruce Walters of MacKay & Somps Civil Engineers.

INVENTORY SUMMARY

As you will see, 553 trees totaling 5,466 aggregate diameter inches have been documented within this report. Our site visit found that the vast majority of these trees are ***non-native species*** which are not protected by the County of Sacramento Tree Preservation and Protection Ordinance; however, these trees have been memorialized within this report due to their size (i.e., all trees which measure 4"+ DBH) to accurately document the trees' species, diameter and dripline measurements for mapping purposes as requested by DERA. For ease of reference, these trees have been separately highlighted in blue within the accompanying Inventory Summary.

503 Anthony Court ◆ Roseville, CA 95678 ◆ 916-784-7940 ◆ 916-784-1901 Fax

Our site visits found 108 trees totaling 1,815 aggregate diameter inches which may be protected either due to their species and/or size. Composition of these 108 trees include:

1 Interior Live Oak (*Quercus wislizenii*) totaling 7 aggregate diameter inches;
60 California Black Walnut *(Juglans hindsii)* totaling 1,086 aggregate diameter inches;
1 Goodding Black Willow (*Salix gooddingii*) totaling 12 aggregate diameter inches;
22 White Alder *(Alnus rhombifolia)* totaling 114 aggregate diameter inches;
2 Oregon Ash (*Fraxinus latifolia*) totaling 22 aggregate diameter inches; and
22 non-native species which measure 19"+DBH totaling 574 aggregate diameter inches.

Recommended Removals

At this time we have recommended the removal of five trees from the project site due to noted structural defects. For ease of reference, the trees which have been recommended for removal have been highlighted in green within the accompanying Inventory Summary. It should also be noted that several trees within the project boundaries currently possess structural defects and/or characteristics which warrant further evaluation and/or annual monitoring to assess the trees' ongoing structural integrity. For reference, these trees have been separately highlighted in yellow within the Inventory Summary. At this juncture these trees have not been recommended for removal since development plans have not yet been finalized. We draw your attention to these trees, however, and note that ***precaution should be taken if development and/or pedestrian activity will occur within the fall zone of these trees.*** If retained, these trees should be monitored on an annual basis by an ISA Certified Arborist to assess the trees' ongoing structural integrity and potential for hazard in a developed environment.

Construction Impact Assessment

Please note that while this is a detailed review of the trees within the current project boundaries specific tree impacts cannot be definitively assessed until development plans have been finalized. As you know, trees are living organisms whose condition may change at any time. Therefore, a complete assessment of construction impacts and specific mitigation recommendations cannot be made until those development plans have been refined and finalized. At that time an ISA Certified Arborist should review the improvement plans to provide an analysis of construction impacts, including identification of trees which may require removal for home construction and other contemplated development activities. This will be particularly important if home construction and/or pedestrian activities will fall within or near the fall zone of a tree which has been noted as having structural defects, questionable long-term longevity, or a conditional rating which is less than "fair". The review should also include an assessment of impacts which will be sustained by those trees which will be preserved within the project boundaries, along with associated mitigation recommendations. In the meantime, this report provides recommendations for pre-construction maintenance, as well as General Preservation Recommendations which should be utilized as a guideline for the protection of trees which may be preserved within the development area.

GENERAL COMMENTS AND ARBORIST'S DISCLAIMER

As you know, a tree permit and/or authorization to develop should be obtained from the County of Sacramento approving contemplated development activities, including the removal of protected trees, within the project area. All terms and conditions of the tree permit are the sole and exclusive responsibility of the developer. It should also be noted that prior to final inspection the County *may* require written verification from an ISA Certified Arborist certifying the approved removal activities and/or implementation of the mitigation measures outlined for the preserved trees on the site. Sierra Nevada Arborists cannot provide written Certification of Compliance unless we have been provided with a copy of the approved site development plans and applicable permits, and are on site to monitor and observe regulated activities during the course of construction. Therefore, it will be necessary for the developer to notify Sierra Nevada Arborists well in advance (at least 48-hours prior notice) of any regulated activities which are scheduled to occur on site so that those activities can be properly monitored and documented for compliance certification.

Lastly, at this juncture we believe implementation of the general recommendations outlined within this report will attempt to afford the trees the best possibility for survival. However, these recommendations and their implementation should not be viewed as a guarantee or warranty against the trees' ultimate demise and/or failure in the future, and are being provided solely for the purpose of obtaining development authorization from the County of Sacramento. Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of the trees and ***attempt to reduce the risk of living near trees***. Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Since trees are living organisms, conditions are often hidden within the tree and below ground, and their condition may change at any time. Arborists cannot guarantee that a tree will be healthy and/or safe under all circumstances, or for a specific period of time. Likewise remedial treatments cannot be guaranteed. Trees can be managed but they cannot be controlled. To develop and live near trees is to accept some degree of risk and the only way to eliminate all risk associated with trees is to eliminate all of the trees. ***An entity who develops land and/or builds homes with a tree in the vicinity should be aware of this Arborists' Disclaimer and be further advised that the developer and their future homeowners assume the risk that a tree could at any time suffer a branch and/or limb failure, blow over in a storm and/or fail for no apparent reason which may cause bodily injury or property damage.*** Sierra Nevada Arborists cannot predict acts of nature including, without limitation, storms of sufficient strength which can take down even a healthy tree. The information contained within this report is believed to be true to the best of the author's knowledge and experience as of the date it was prepared; however, certain conditions may exist which only a comprehensive, scientific, investigation might reveal which should be performed by other consulting professionals. Neither this author nor Sierra Nevada Arborists has assumed any responsibility for liability associated with the trees on or adjacent to the Champions Golf Links project site, their future demise and/or any damage which may result therefrom.

Thank you for allowing Sierra Nevada Arborists to assist you with this review and analysis. 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
Member, American Society of Consulting Arborists

EES/ks
Enclosures
cc: Mr. Bruce Walters, MacKay & Somps (w/enclosures)

ELK GROVE RESERVE
Champions Golf Links Project [DERA Control No. 04-RZB-0139]
County of Sacramento, California
ARBORIST INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ARBORIST REMOVALS (inches)	NOTABLE CHARACTERISTICS	MAINTENANCE RECOMMENDATIONS
						RT CR	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
1	Chinese Pistache	*(Pistachia chimensis)*		9	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
2	Chinese Pistache	*(Pistachia chimensis)*		7	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
3	Chinese Pistache	*(Pistachia chimensis)*		6	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
4	Chinese Pistache	*(Pistachia chimensis)*		5	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
5	Deodar Cedar	*(Cedrus deodara)*		14	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
6	Chinese Pistache	*(Pistachia chimensis)*		11	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
7	Chinese Pistache	*(Pistachia chimensis)*		6	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
8	Deodar Cedar	*(Cedrus deodara)*		14	20	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
9	Chinese Pistache	*(Pistachia chimensis)*		6	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
10	Chinese Pistache	*(Pistachia chimensis)*		7	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
11	Chinese Pistache	*(Pistachia chimensis)*		5	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
12	Chinese Pistache	*(Pistachia chimensis)*		4	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
13	Camphor Tree	*(Cinnamonum camphora)*	2,2,3,3,4,4	18	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
14	Chinese Pistache	*(Pistachia chimensis)*		5	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
15	Chinese Pistache	*(Pistachia chimensis)*		7	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
16	Chinese Pistache	*(Pistachia chimensis)*		8	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
17	Chinese Pistache	*(Pistachia chimensis)*		7	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
18	Chinese Pistache	*(Pistachia chimensis)*		5	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
19	Chinese Pistache	*(Pistachia chimensis)*		4	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
20	Chinese Pistache	*(Pistachia chimensis)*		4	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
21	Chinese Pistache	*(Pistachia chimensis)*		4	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
22	Chinese Pistache	*(Pistachia chimensis)*		5	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
23	Chinese Pistache	*(Pistachia chimensis)*		4	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
24	Chinese Pistache	*(Pistachia chimensis)*		4	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
25	Raywood Ash	*(Fraxinus oxycarpa)*		4	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
26	Raywood Ash	*(Fraxinus oxycarpa)*		9	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
27	Raywood Ash	*(Fraxinus oxycarpa)*		7	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
28	Raywood Ash	*(Fraxinus oxycarpa)*		6	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
29	Raywood Ash	*(Fraxinus oxycarpa)*		6	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
30	Raywood Ash	*(Fraxinus oxycarpa)*		7	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
31	Raywood Ash	*(Fraxinus oxycarpa)*		6	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
32	Raywood Ash	*(Fraxinus oxycarpa)*		7	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
33	Raywood Ash	*(Fraxinus oxycarpa)*		6	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
34	Raywood Ash	*(Fraxinus oxycarpa)*		6	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
35	Raywood Ash	*(Fraxinus oxycarpa)*		4	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
36	Chinese Pistache	*(Pistachia chimensis)*		4	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
37	Chinese Pistache	*(Pistachia chimensis)*		4	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
38	Chinese Pistache	*(Pistachia chimensis)*		4	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
39	Chinese Pistache	*(Pistachia chimensis)*		4	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
40	Chinese Pistache	*(Pistachia chimensis)*		5	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
41	Chinese Pistache	*(Pistachia chimensis)*		4	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
42	Chinese Pistache	*(Pistachia chimensis)*		5	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
43	Chinese Pistache	*(Pistachia chimensis)*		5	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
44	Coast Redwood	*(Sequoia sempervirens)*		5	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
45	Fremont Cottonwood	*(Populus fremontii)*		14	22	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
46	Fremont Cottonwood	*(Populus fremontii)*		12	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
47	Fremont Cottonwood	*(Populus fremontii)*		9	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
48	Fremont Cottonwood	*(Populus fremontii)*		13	19	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
49	Fremont Cottonwood	*(Populus fremontii)*		15	20	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
50	Aleppo Pine	*(Pinus halepensis)*	6,8	14	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
51	Aleppo Pine	*(Pinus halepensis)*		11	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
52	Coast Redwood	*(Sequoia sempervirens)*		10	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								

ELK GROVE RESERVE
Champions Golf Links Project [DERA Control No. 04-RZB-0139]
County of Sacramento, California
ARBORIST INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ARBORIST REMOVALS (inches)	NOTABLE CHARACTERISTICS	MAINTENANCE RECOMMENDATIONS
						RT CR	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
53	Coast Redwood	*(Sequoia sempervirens)*		10	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
54	Southern Magnolia	*(Magnolia grandiflora)*		5	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
55	Deodar Cedar	*(Cedrus deodara)*		8	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
56	Raywood Ash	*(Fraxinus oxycarpa)*		7	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
57	Coast Redwood	*(Sequoia sempervirens)*		9	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
58	Coast Redwood	*(Sequoia sempervirens)*		5	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
59	Coast Redwood	*(Sequoia sempervirens)*		4	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
60	Coast Redwood	*(Sequoia sempervirens)*		11	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
61	Raywood Ash	*(Fraxinus oxycarpa)*		7	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
62	Raywood Ash	*(Fraxinus oxycarpa)*		7	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
63	Coast Redwood	*(Sequoia sempervirens)*		11	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
64	Coast Redwood	*(Sequoia sempervirens)*		11	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
65	Coast Redwood	*(Sequoia sempervirens)*		9	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
66	Mulberry Tree	*(Morus sp.)*	2,3,3,3,4	15	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
67	Willow Oak	*(Quercus phellos)*		7	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
68	Willow Oak	*(Quercus phellos)*		6	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
69	Willow Oak	*(Quercus phellos)*		6	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
70	Fremont Cottonwood	*(Populus fremontii)*		13	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
71	Fremont Cottonwood	*(Populus fremontii)*		13	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
72	Coast Redwood	*(Sequoia sempervirens)*		5	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
73	Willow Oak	*(Quercus phellos)*		5	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
74	London Plane	*(Platanus acerfolia)*		6	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
75	London Plane	*(Platanus acerfolia)*		6	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
76	Aleppo Pine	*(Pinus halepensis)*		6	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
77	Fremont Cottonwood	*(Populus fremontii)*	3,4,5,5,5,6,6,6	40	19	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
78	Fremont Cottonwood	*(Populus fremontii)*	3,13	16	18	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
79	Fremont Cottonwood	*(Populus fremontii)*	3,12	15	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
80	Fremont Cottonwood	*(Populus fremontii)*	2,2,2	6	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
81	Fremont Cottonwood	*(Populus fremontii)*		15	20	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
82	Fremont Cottonwood	*(Populus fremontii)*		12	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
83	Fremont Cottonwood	*(Populus fremontii)*		15	21	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
84	Fremont Cottonwood	*(Populus fremontii)*		14	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
85	Pacific Willow	*(Salix lasiandra)*		4	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
86	Fremont Cottonwood	*(Populus fremontii)*		11	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
87	Willow Oak	*(Quercus phellos)*		5	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
88	Willow Oak	*(Quercus phellos)*		7	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
89	Willow Oak	*(Quercus phellos)*		7	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
90	Coast Redwood	*(Sequoia sempervirens)*		7	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
91	Coast Redwood	*(Sequoia sempervirens)*		8	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
92	Coast Redwood	*(Sequoia sempervirens)*		9	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
93	Fremont Cottonwood	*(Populus fremontii)*		11	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
94	Fremont Cottonwood	*(Populus fremontii)*		12	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
95	Fremont Cottonwood	*(Populus fremontii)*		11	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
96	Fremont Cottonwood	*(Populus fremontii)*		13	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
97	Fremont Cottonwood	*(Populus fremontii)*		12	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
98	Fremont Cottonwood	*(Populus fremontii)*	9,13	22	22	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Weak primary crotch	Clean out crown; install single direct pick cable to help support primary crotch
99	Fremont Cottonwood	*(Populus fremontii)*		15	21	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
100	London Plane	*(Platanus acerfolia)*		7	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
101	Fremont Cottonwood	*(Populus fremontii)*		11	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
102	Fremont Cottonwood	*(Populus fremontii)*		16	19	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								

ELK GROVE RESERVE
Champions Golf Links Project [DERA Control No. 04-RZB-0139]
County of Sacramento, California
ARBORIST INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ARBORIST REMOVALS (inches)	NOTABLE CHARACTERISTICS	MAINTENANCE RECOMMENDATIONS
						RT CR	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
103	Fremont Cottonwood	*(Populus fremontii)*		11	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
104	Fremont Cottonwood	*(Populus fremontii)*		4	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
105	Fremont Cottonwood	*(Populus fremontii)*	6,11	17	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
106	Goodding Black Willow	*(Salix gooddingii)*	2,2,2,3,3	12	15	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
107	Fremont Cottonwood	*(Populus fremontii)*		13	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
108	Fremont Cottonwood	*(Populus fremontii)*	7,11	18	18	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
109	Fremont Cottonwood	*(Populus fremontii)*		15	19	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
110	Coast Redwood	*(Sequoia sempervirens)*		5	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
111	Fremont Cottonwood	*(Populus fremontii)*		17	21	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
112	Fremont Cottonwood	*(Populus fremontii)*		7	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
113	Pacific Willow	*(Salix lasiandra)*	2,3	5	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
114	Pacific Willow	*(Salix lasiandra)*	4,6,8	18	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
115	Pacific Willow	*(Salix lasiandra)*	5,8	13	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
116	Pacific Willow	*(Salix lasiandra)*		5	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
117	Pacific Willow	*(Salix lasiandra)*		13	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
118	Fremont Cottonwood	*(Populus fremontii)*		6	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
119	Fremont Cottonwood	*(Populus fremontii)*		17	23	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
120	Fremont Cottonwood	*(Populus fremontii)*		13	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
121	Fremont Cottonwood	*(Populus fremontii)*		13	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
122	Fremont Cottonwood	*(Populus fremontii)*		12	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
123	Fremont Cottonwood	*(Populus fremontii)*		4	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
124	Fremont Cottonwood	*(Populus fremontii)*		5	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
125	Fremont Cottonwood	*(Populus fremontii)*	2,3	5	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
126	London Plane	*(Platanus acerfolia)*		8	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
127	Pacific Willow	*(Salix lasiandra)*	3,3,3,3,4,4,4, 5,5,5,6,6,6	57	17	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
128	Mulberry Tree	*(Morus sp.)*	2,2,3,3,4	14	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
129	Arroyo Willow	*(Salix lasiolepsis)*	3,3,3,4,4,4	21	23	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
130	Arroyo Willow	*(Salix lasiolepsis)*	4,5,7	16	20	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
131	Arroyo Willow	*(Salix lasiolepsis)*	3,3,4,4,4	18	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
132	Fruitless Mulberry	*(Morus alba)*	2,3	5	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
133	Fruitless Mulberry	*(Morus alba)*	1,2,3	6	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
134	Fremont Cottonwood	*(Populus fremontii)*		7	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
135	Arroyo Willow	*(Salix lasiolepsis)*	2,2,3,3,3,3,3	19	19	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
136	Coast Redwood	*(Sequoia sempervirens)*		6	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
137	Fremont Cottonwood	*(Populus fremontii)*		7	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
138	Fremont Cottonwood	*(Populus fremontii)*		7	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
139	Fremont Cottonwood	*(Populus fremontii)*		12	18	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
140	Fremont Cottonwood	*(Populus fremontii)*		8	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
141	Fremont Cottonwood	*(Populus fremontii)*	4,4	8	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
142	Fremont Cottonwood	*(Populus fremontii)*		12	18	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
143	Deodar Cedar	*(Cedrus deodara)*		4	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
144	Coast Redwood	*(Sequoia sempervirens)*		8	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
145	Deodar Cedar	*(Cedrus deodara)*		6	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
146	Aleppo Pine	*(Pinus halepensis)*		9	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
147	Coast Redwood	*(Sequoia sempervirens)*		9	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
148	Coast Redwood	*(Sequoia sempervirens)*		7	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
149	Aleppo Pine	*(Pinus halepensis)*		7	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
150	Aleppo Pine	*(Pinus halepensis)*		6	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
151	Coast Redwood	*(Sequoia sempervirens)*		4	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								

ELK GROVE RESERVE
Champions Golf Links Project [DERA Control No. 04-RZB-0139]
County of Sacramento, California
ARBORIST INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ARBORIST REMOVALS (inches)	NOTABLE CHARACTERISTICS	MAINTENANCE RECOMMENDATIONS
						RT CR	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
152	Coast Redwood	*(Sequoia sempervirens)*		8	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
153	Coast Redwood	*(Sequoia sempervirens)*		7	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
154	Aleppo Pine	*(Pinus halepensis)*		6	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
155	Coast Redwood	*(Sequoia sempervirens)*		8	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
156	White Alder	*(Alnus rhombifolia)*		9	11	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
157	White Alder	*(Alnus rhombifolia)*		4	8	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
158	Incense Cedar	*(Calocedrus decurrens)*		5	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
159	Coast Redwood	*(Sequoia sempervirens)*		4	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
160	Coast Redwood	*(Sequoia sempervirens)*		7	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
161	White Alder	*(Alnus rhombifolia)*		5	9	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
162	White Alder	*(Alnus rhombifolia)*		6	12	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
163	Coast Redwood	*(Sequoia sempervirens)*		5	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
164	Coast Redwood	*(Sequoia sempervirens)*		6	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
165	Aleppo Pine	*(Pinus halepensis)*		7	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
166	Coast Redwood	*(Sequoia sempervirens)*		5	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
167	Coast Redwood	*(Sequoia sempervirens)*		8	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
168	Coast Redwood	*(Sequoia sempervirens)*		10	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
169	Raywood Ash	*(Fraxinus oxycarpa)*		10	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
170	Aleppo Pine	*(Pinus halepensis)*		6	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
171	Coast Redwood	*(Sequoia sempervirens)*		7	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
172	Coast Redwood	*(Sequoia sempervirens)*		5	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
173	Aleppo Pine	*(Pinus halepensis)*		9	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
174	Aleppo Pine	*(Pinus halepensis)*		9	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
175	Aleppo Pine	*(Pinus halepensis)*		7	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
176	Aleppo Pine	*(Pinus halepensis)*	3,3,3	9	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
177	Raywood Ash	*(Fraxinus oxycarpa)*		7	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
178	Coast Redwood	*(Sequoia sempervirens)*		9	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
179	Raywood Ash	*(Fraxinus oxycarpa)*		7	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
180	Coast Redwood	*(Sequoia sempervirens)*		4	5	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
181	London Plane	*(Platanus acerfolia)*		5	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
182	London Plane	*(Platanus acerfolia)*		6	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
183	Coast Redwood	*(Sequoia sempervirens)*		8	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
184	Willow Oak	*(Quercus phellos)*		7	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
185	Willow Oak	*(Quercus phellos)*		6	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
186	Willow Oak	*(Quercus phellos)*		8	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
187	London Plane	*(Platanus acerfolia)*		8	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
188	London Plane	*(Platanus acerfolia)*		5	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
189	London Plane	*(Platanus acerfolia)*		6	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
190	Coast Redwood	*(Sequoia sempervirens)*		5	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
191	Coast Redwood	*(Sequoia sempervirens)*		5	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
192	White Alder	*(Alnus rhombifolia)*		6	10	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
193	White Alder	*(Alnus rhombifolia)*		4	8	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
194	Weeping Willow	*(Salix babylonica)*	4,4,5,7	20	18	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
195	Raywood Ash	*(Fraxinus oxycarpa)*		4	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
196	Raywood Ash	*(Fraxinus oxycarpa)*		6	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
197	Aleppo Pine	*(Pinus halepensis)*		8	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
198	Aleppo Pine	*(Pinus halepensis)*		9	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
199	Aleppo Pine	*(Pinus halepensis)*		9	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
200	Aleppo Pine	*(Pinus halepensis)*		8	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
201	London Plane	*(Platanus acerfolia)*		5	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
202	London Plane	*(Platanus acerfolia)*		7	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
203	White Alder	*(Alnus rhombifolia)*		4	8	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown

ELK GROVE RESERVE
Champions Golf Links Project [DERA Control No. 04-RZB-0139]
County of Sacramento, California
ARBORIST INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ARBORIST REMOVALS (inches)	NOTABLE CHARACTERISTICS	MAINTENANCE RECOMMENDATIONS
						RT CR	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
204	Raywood Ash	*(Fraxinus oxycarpa)*		5	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
205	White Alder	*(Alnus rhombifolia)*		4	8	Fair	Fair	Fair	Fair	Fair	Fair			
206	Coast Redwood	*(Sequoia sempervirens)*		10	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
207	Coast Redwood	*(Sequoia sempervirens)*		17	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
208	London Plane	*(Platanus acerfolia)*		9	19	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
209	London Plane	*(Platanus acerfolia)*		8	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
210	Coast Redwood	*(Sequoia sempervirens)*		16	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
211	London Plane	*(Platanus acerfolia)*		5	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
212	Deodar Cedar	*(Cedrus deodara)*		8	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
213	Aleppo Pine	*(Pinus halepensis)*		7	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
214	Aleppo Pine	*(Pinus halepensis)*		9	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
215	Aleppo Pine	*(Pinus halepensis)*		10	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
216	Coast Redwood	*(Sequoia sempervirens)*		6	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
217	London Plane	*(Platanus acerfolia)*		5	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
218	Coast Redwood	*(Sequoia sempervirens)*		7	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
219	Incense Cedar	*(Calocedrus decurrens)*		8	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
220	Coast Redwood	*(Sequoia sempervirens)*		10	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
221	Coast Redwood	*(Sequoia sempervirens)*		10	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
222	Coast Redwood	*(Sequoia sempervirens)*		9	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
223	Aleppo Pine	*(Pinus halepensis)*		5	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
224	Coast Redwood	*(Sequoia sempervirens)*	4,5	9	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
225	Incense Cedar	*(Calocedrus decurrens)*		6	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
226	Coast Redwood	*(Sequoia sempervirens)*		6	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
227	Coast Redwood	*(Sequoia sempervirens)*		5	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
228	Aleppo Pine	*(Pinus halepensis)*		6	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
229	Coast Redwood	*(Sequoia sempervirens)*		8	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
230	Deodar Cedar	*(Cedrus deodara)*		5	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
231	Coast Redwood	*(Sequoia sempervirens)*		9	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
232	Coast Redwood	*(Sequoia sempervirens)*		10	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
233	Aleppo Pine	*(Pinus halepensis)*		7	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
234	Deodar Cedar	*(Cedrus deodara)*		6	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
235	Coast Redwood	*(Sequoia sempervirens)*		11	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
236	Coast Redwood	*(Sequoia sempervirens)*		9	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
237	Coast Redwood	*(Sequoia sempervirens)*		7	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
238	Coast Redwood	*(Sequoia sempervirens)*		10	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
239	Incense Cedar	*(Calocedrus decurrens)*		8	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
240	Coast Redwood	*(Sequoia sempervirens)*		9	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
241	Coast Redwood	*(Sequoia sempervirens)*		5	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
242	Coast Redwood	*(Sequoia sempervirens)*		7	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
243	Aleppo Pine	*(Pinus halepensis)*		9	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
244	London Plane	*(Platanus acerfolia)*		8	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
245	Coast Redwood	*(Sequoia sempervirens)*		10	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
246	Incense Cedar	*(Calocedrus decurrens)*		8	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
247	Coast Redwood	*(Sequoia sempervirens)*		9	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
248	Incense Cedar	*(Calocedrus decurrens)*		9	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
249	Coast Redwood	*(Sequoia sempervirens)*		10	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
250	Aleppo Pine	*(Pinus halepensis)*		6	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
251	Aleppo Pine	*(Pinus halepensis)*		6	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
252	Aleppo Pine	*(Pinus halepensis)*	4,4	8	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
253	Fremont Cottonwood	*(Populus fremontii)*		9	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
254	Fremont Cottonwood	*(Populus fremontii)*		9	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
255	Fremont Cottonwood	*(Populus fremontii)*		10	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								

ELK GROVE RESERVE
Champions Golf Links Project [DERA Control No. 04-RZB-0139]
County of Sacramento, California
ARBORIST INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ARBORIST REMOVALS (inches)	NOTABLE CHARACTERISTICS	MAINTENANCE RECOMMENDATIONS
						RT CR	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
256	Fremont Cottonwood	*(Populus fremontii)*		10	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
257	London Plane	*(Platanus acerfolia)*		5	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
258	White Alder	*(Alnus rhombifolia)*		5	7	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
259	London Plane	*(Platanus acerfolia)*		4	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
260	White Alder	*(Alnus rhombifolia)*		4	7	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
261	London Plane	*(Platanus acerfolia)*		5	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
262	White Alder	*(Alnus rhombifolia)*		4	8	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
263	London Plane	*(Platanus acerfolia)*		4	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
264	London Plane	*(Platanus acerfolia)*		4	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
265	White Alder	*(Alnus rhombifolia)*		6	8	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
266	Willow Oak	*(Quercus phellos)*	2,5	7	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
267	Willow Oak	*(Quercus phellos)*		7	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
268	White Alder	*(Alnus rhombifolia)*		5	8	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
269	Raywood Ash	*(Fraxinus oxycarpa)*		7	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
270	Coast Redwood	*(Sequoia sempervirens)*		5	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
271	Coast Redwood	*(Sequoia sempervirens)*		7	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
272	Coast Redwood	*(Sequoia sempervirens)*		10	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
273	Coast Redwood	*(Sequoia sempervirens)*		11	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
274	Coast Redwood	*(Sequoia sempervirens)*		12	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
275	Coast Redwood	*(Sequoia sempervirens)*		10	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
276	London Plane	*(Platanus acerfolia)*		6	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
277	London Plane	*(Platanus acerfolia)*		7	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
278	White Alder	*(Alnus rhombifolia)*	2,2	4	6	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
279	White Alder	*(Alnus rhombifolia)*		5	9	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
280	Black Locust	*(Robinia pseudoacacia)*	2,3,3,4	12	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
281	White Alder	*(Alnus rhombifolia)*		6	9	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
282	Aleppo Pine	*(Pinus halepensis)*		5	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
283	Coast Redwood	*(Sequoia sempervirens)*		5	5	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
284	London Plane	*(Platanus acerfolia)*		6	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
285	Pacific Willow	*(Salix lasiandra)*	2,2,2,2,2,3,3,4	20	12	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
286	Coast Redwood	*(Sequoia sempervirens)*		4	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
287	Coast Redwood	*(Sequoia sempervirens)*		9	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
288	Coast Redwood	*(Sequoia sempervirens)*		9	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
289	Coast Redwood	*(Sequoia sempervirens)*		9	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
290	London Plane	*(Platanus acerfolia)*		6	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
291	London Plane	*(Platanus acerfolia)*		6	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
292	London Plane	*(Platanus acerfolia)*		5	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
293	London Plane	*(Platanus acerfolia)*	8,8	16	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
294	Fremont Cottonwood	*(Populus fremontii)*		15	24	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
295	Fremont Cottonwood	*(Populus fremontii)*		12	18	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
296	Fremont Cottonwood	*(Populus fremontii)*		14	19	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
297	Fremont Cottonwood	*(Populus fremontii)*		11	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
298	Fremont Cottonwood	*(Populus fremontii)*		13	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
299	Pacific Willow	*(Salix lasiandra)*		6	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
300	Brazilian Pepper	*(Schinus terebinthifolius)*	4,4	8	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
301	California Black Walnut	*(Juglans hindsii)*		19	18	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
302	California Black Walnut	*(Juglans hindsii)*	4,5,6,6,8,8	37	25	Poor to fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing basal/lower trunk wound, northeast side, to 1' above grade with minor to moderate interior decay and hollowing; trunks lean west; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***

ARBORIST INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ARBORIST REMOVALS (inches)	NOTABLE CHARACTERISTICS	MAINTENANCE RECOMMENDATIONS
						RT CR	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
303	California Black Walnut	*(Juglans hindsii)*	19,28	47	32	Poor	Poor	Poor to fair	Poor to fair	Poor	Poor to fair	47	Callusing basal/lower trunk cavities, north and south sides, to 4' above grade with significant interior decay and hollowing extending through trunk; above average amount of deadwood; somewhat sparse foliage	***Recommend removal due to noted defects***
304	California Black Walnut	*(Juglans hindsii)*	4,6	10	19	Poor to fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing basal wounds, east and west sides, with moderate interior decay and hollowing; trunks bend east and south, suppressed; slightly above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
305	Oregon Ash	*(Fraxinus latifolia)*	1,1,2,2,3,3	12	11	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
306	California Black Walnut	*(Juglans hindsii)*	4,4,6,6	20	16	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
307	California Black Walnut	*(Juglans hindsii)*		7	12	Fair	Fair	Fair	Fair	Fair	Fair		TAG ON POST 30' SOUTH OF TRUNK	Clean out crown
308	California Black Walnut	*(Juglans hindsii)*	2,2,2	6	8	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
309	Fremont Cottonwood	*(Populus fremontii)*		17	25	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
310	Fremont Cottonwood	*(Populus fremontii)*	11,18	29	26	Fair	Fair	Fair	Fair	Fair				Clean out crown
311	Fremont Cottonwood	*(Populus fremontii)*	2,2	4	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
312	Deodar Cedar	*(Cedrus deodara)*		4	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
313	Fremont Cottonwood	*(Populus fremontii)*		14	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
314	Coast Redwood	*(Sequoia sempervirens)*		4	5	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
315	Coast Redwood	*(Sequoia sempervirens)*		4	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
316	Fremont Cottonwood	*(Populus fremontii)*		14	18	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
317	Coast Redwood	*(Sequoia sempervirens)*		5	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
318	Coast Redwood	*(Sequoia sempervirens)*		6	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
319	Fremont Cottonwood	*(Populus fremontii)*		15	20	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
320	Coast Redwood	*(Sequoia sempervirens)*		6	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
321	California Black Walnut	*(Juglans hindsii)*	2,2,3,3,3	13	10	Fair	Fair	Fair	Fair	Fair	Fair		Measured at 3' above grade	Clean out crown
322	Oregon Ash	*(Fraxinus latifolia)*	5,5	10	13	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
323	Fremont Cottonwood	*(Populus fremontii)*		18	23	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
324	Fremont Cottonwood	*(Populus fremontii)*		17	22	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
325	Fremont Cottonwood	*(Populus fremontii)*		14	20	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
326	California Black Walnut	*(Juglans hindsii)*		16	24	Fair	Fair	Poor to fair	Fair	Poor to fair	Fair		Branches grow in convoluted fashion	Clean out crown
327	Chinese Tallow	*(Sapium sebiferum)*		6	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
328	Aleppo Pine	*(Pinus halepensis)*		5	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
329	Southern Magnolia	*(Magnolia grandiflora)*		4	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
330	Deodar Cedar	*(Cedrus deodara)*		4	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
331	Chinese Tallow	*(Sapium sebiferum)*		6	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
332	Deodar Cedar	*(Cedrus deodara)*		4	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
333	Southern Magnolia	*(Magnolia grandiflora)*		5	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
334	Chinese Tallow	*(Sapium sebiferum)*		5	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
335	Aleppo Pine	*(Pinus halepensis)*		5	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
336	Weeping Willow	*(Salix babylonica)*		15	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY							Measured at 3' above grade	
337	Fremont Cottonwood	*(Populus fremontii)*		8	20	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
338	Pacific Willow	*(Salix lasiandra)*		5	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
339	Aleppo Pine	*(Pinus halepensis)*		8	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
340	Fremont Cottonwood	*(Populus fremontii)*		9	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
341	Fremont Cottonwood	*(Populus fremontii)*		9	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
342	Fremont Cottonwood	*(Populus fremontii)*		11	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
343	Fremont Cottonwood	*(Populus fremontii)*		6	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
344	Fremont Cottonwood	*(Populus fremontii)*		14	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
345	Aleppo Pine	*(Pinus halepensis)*		7	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
346	Deodar Cedar	*(Cedrus deodara)*		4	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
347	Deodar Cedar	*(Cedrus deodara)*		4	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
348	Fremont Cottonwood	*(Populus fremontii)*	4,4,5	13	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								

ELK GROVE RESERVE
Champions Golf Links Project [DERA Control No. 04-RZB-0139]
County of Sacramento, California
ARBORIST INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ARBORIST REMOVALS (inches)	NOTABLE CHARACTERISTICS	MAINTENANCE RECOMMENDATIONS
						RT CR	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
349	Fremont Cottonwood	*(Populus fremontii)*		9	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
350	Pacific Willow	*(Salix lasiandra)*	7,14	21	18	Poor to fair	Fair	Fair	Fair	Poor to fair	Fair		Root crown/buttress roots partially exposed from bank erosion; slightly above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
351	Interior Live Oak	*(Quercus wislizenii)*		7	11	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Embedded wire, lower trunk	Clean out crown; cut wire at trunk
352	Coast Redwood	*(Sequoia sempervirens)*		4	5	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
353	Coast Redwood	*(Sequoia sempervirens)*		7	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
354	Coast Redwood	*(Sequoia sempervirens)*		6	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
355	Deodar Cedar	*(Cedrus deodara)*		4	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
356	Pine Tree	*(Pinus sp.)*		4	5	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
357	Aleppo Pine	*(Pinus halepensis)*		8	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
358	Aleppo Pine	*(Pinus halepensis)*		7	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
359	London Plane	*(Platanus acerfolia)*		8	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
360	California Black Walnut	*(Juglans hindsii)*	5,5	10	13	Poor to fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Exposed buttress roots and portions of the root crown due to bank erosion; minor to moderate lower trunk defects/decay, various locations; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
361	California Black Walnut	*(Juglans hindsii)*		9	16	Poor to fair	Fair	Fair	Fair	Poor to fair	Fair		Northerly area of root crown are exposed due to bank erosion; slightly above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
362	California Black Walnut	*(Juglans hindsii)*		10	15	Poor to fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Root crown partially exposed due to bank erosion, north side; minor to moderate lower trunk defects/decay, various locations; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
363	California Black Walnut	*(Juglans hindsii)*	9,10	19	17	Poor to fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Portions of root crown exposed due to bank erosion, north side; callusing lower trunk cavity, southwest side, 1.5' to 3' above grade with moderate to significant interior decay and hollowing; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
364	California Black Walnut	*(Juglans hindsii)*	7,7	14	20	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
365	California Black Walnut	*(Juglans hindsii)*	12,16,26	54	23	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
366	California Black Walnut	*(Juglans hindsii)*	6,9	15	16	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing lower trunk cavity, southeast side, 3' above grade with moderate interior decay and hollowing	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
367	California Black Walnut	*(Juglans hindsii)*		14	17	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing lower trunk wounds, east side, 3' to 7' above grade with minor to moderate interior decay and hollowing; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
368	California Black Walnut	*(Juglans hindsii)*	17,18	35	26	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing lower trunk cavity, west side, 3' above grade with minor to moderate interior decay and hollowing; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
369	California Black Walnut	*(Juglans hindsii)*	13,14	27	29	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing lower trunk cavity, east side, 2.5' above grade with moderate interior decay and hollowing; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
370	California Black Walnut	*(Juglans hindsii)*		4	10	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing lower trunk wounds, north and south sides, at 3' above grade with minor to moderate interior decay and hollowing; slightly above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
371	California Black Walnut	*(Juglans hindsii)*	10,11	21	20	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing lower trunk cavity 3' above grade, west side, with minor interior decay and hollowing	Clean out crown
372	California Black Walnut	*(Juglans hindsii)*		10	12	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing lower trunk cavity 3' above grade, west side, with minor interior decay and hollowing; slightly above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
373	California Black Walnut	*(Juglans hindsii)*	9,12	21	18	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing lower trunk cavity, east side, 3' above grade with minor to moderate interior decay and hollowing; slightly above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***

ELK GROVE RESERVE
Champions Golf Links Project [DERA Control No. 04-RZB-0139]
County of Sacramento, California
ARBORIST INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ARBORIST REMOVALS (inches)	NOTABLE CHARACTERISTICS	MAINTENANCE RECOMMENDATIONS
						RT CR	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
374	London Plane	*(Platanus acerfolia)*		6	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
375	London Plane	*(Platanus acerfolia)*		5	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
376	London Plane	*(Platanus acerfolia)*		4	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
377	London Plane	*(Platanus acerfolia)*	4,5	9	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
378	London Plane	*(Platanus acerfolia)*		5	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
379	London Plane	*(Platanus acerfolia)*		5	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
380	Raywood Ash	*(Fraxinus oxycarpa)*		5	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
381	Chinese Tallow	*(Sapium sebiferum)*		4	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
382	California Black Walnut	*(Juglans hindsii)*	8,12	20	17	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
383	California Black Walnut	*(Juglans hindsii)*	9,14	23	22	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
384	California Black Walnut	*(Juglans hindsii)*		11	18	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing lower trunk cavity, east side; minor to moderate interior decay and hollowing; slightly above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
385	California Black Walnut	*(Juglans hindsii)*	6,9,9	24	14	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing lower trunk wounds, various locations, with minor to moderate decay; slightly above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
386	California Black Walnut	*(Juglans hindsii)*		11	12	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing lower trunk wounds, various locations, with minor decay	Clean out crown
387	California Black Walnut	*(Juglans hindsii)*		15	13	Poor to fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing basal cavity, east side, with minor to moderate decay; callusing lower trunk wound, west side, at 3' above grade; callusing lower trunk cavity, east side, at 3.5' above grade with minor to moderate interior decay and hollowing; slightly above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
388	California Black Walnut	*(Juglans hindsii)*		11	12	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
389	California Black Walnut	*(Juglans hindsii)*	6,8	14	17	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
390	Plum Tree	*(Prunus sp.)*	2,2,2,3,4,4	17	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
391	Weeping Willow	*(Salix babylonica)*		15	21	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
392	California Black Walnut	*(Juglans hindsii)*		21	26	Poor	Poor	Poor to fair	Fair	Poor	Fair	21	Callusing basal/lower trunk cavity, south side, to 8' above grade with moderate to significant interior decay and hollowing; above average amount of deadwood	***Recommend removal due to noted defects***
393	English Walnut	*(Juglans regia)*		18	20	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
394	English Walnut	*(Juglans regia)*		23	25	Poor	Poor	Fair	Fair	Poor	Fair	23	Callusing basal/lower trunk cavity, west side, to 7' above grade with moderate to significant interior decay	***Recommend removal due to noted defects***
395	Raywood Ash	*(Fraxinus oxycarpa)*		4	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
396	Raywood Ash	*(Fraxinus oxycarpa)*		5	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
397	Raywood Ash	*(Fraxinus oxycarpa)*		5	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
398	California Black Walnut	*(Juglans hindsii)*	9,9	18	14	Poor to fair	Poor	Poor to fair	Fair	Poor	Fair	18	Callusing basal/lower trunk cavity and wound to 6' above grade, west side, with moderate to significant interior decay; above average amount of deadwood	***Recommend removal due to noted defects***
399	California Black Walnut	*(Juglans hindsii)*	10,11	21	16	Poor to fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing basal/lower trunk wound, east side, to 6' above grade with minor to moderate interior decay and hollowing; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
400	English Walnut	*(Juglans regia)*		11	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
401	Bradford Pear	*(Pyrus calleryana)*		4	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
402	Bradford Pear	*(Pyrus calleryana)*		5	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
403	Bradford Pear	*(Pyrus calleryana)*		5	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
404	Fremont Cottonwood	*(Populus fremontii)*	1,1,2,2	6	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
405	Coast Redwood	*(Sequoia sempervirens)*		4	5	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
406	Fremont Cottonwood	*(Populus fremontii)*		11	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
407	Coast Redwood	*(Sequoia sempervirens)*	2,2	4	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
408	Coast Redwood	*(Sequoia sempervirens)*		7	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								

ARBORIST INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ARBORIST REMOVALS (inches)	NOTABLE CHARACTERISTICS	MAINTENANCE RECOMMENDATIONS
						RT CR	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
409	Chinese Pistache	*(Pistachia chimensis)*		5	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
410	Bradford Pear	*(Pyrus calleryana)*		4	5	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
411	Bradford Pear	*(Pyrus calleryana)*		4	5	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
412	Fremont Cottonwood	*(Populus fremontii)*		7	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
413	Fremont Cottonwood	*(Populus fremontii)*		8	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
414	Fremont Cottonwood	*(Populus fremontii)*		11	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
415	Fremont Cottonwood	*(Populus fremontii)*		11	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
416	Coast Redwood	*(Sequoia sempervirens)*		4	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
417	Coast Redwood	*(Sequoia sempervirens)*		5	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
418	Coast Redwood	*(Sequoia sempervirens)*		4	5	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
419	Mulberry Tree	*(Morus sp.)*		24	22	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing lower trunk wound, east side, at 4' above grade with minor interior decay; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
420	Coast Redwood	*(Sequoia sempervirens)*		6	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
421	Coast Redwood	*(Sequoia sempervirens)*		6	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
422	California Black Walnut	*(Juglans hindsii)*	3,3,4,6	16	12	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing lower trunk cavity, north side, 4' above grade with moderate interior decay and hollowing	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
423	Deodar Cedar	*(Cedrus deodara)*		10	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
424	Olive Tree	*(Olea europaea)*	3,3,3,4,4,5,5	27	15	Poor to fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing basal/lower trunk wounds, north side; minor to moderate decay	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
425	California Black Walnut	*(Juglans hindsii)*	3,4,4,4	15	10	Poor to fair	Fair	Fair	Fair	Poor to fair	Fair		Callusing basal wound, northwest side, with minor interior decay; slightly above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
426	California Black Walnut	*(Juglans hindsii)*	5,5,6,6	22	14	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing central cavity 1' above grade with minor interior decay; slightly above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
427	California Black Walnut	*(Juglans hindsii)*	2,3,3,8	16	12	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing lower trunk wound, south side, 1' to 2' above grade with minor to moderate interior decay; slightly above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
428	California Black Walnut	*(Juglans hindsii)*	3,3,4,4,4,5,5,6	34	15	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing central wound between the stems with minor interior decay	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
429	California Black Walnut	*(Juglans hindsii)*		20	16	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing lower trunk cavity, west side, at 3' above grade with moderate interior decay and hollowing; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
430	California Black Walnut	*(Juglans hindsii)*	9,10,12	31	14	Poor to fair	Poor	Poor to fair	Fair	Poor	Fair	31	Callusing basal/lower trunk cavities to 7' above grade, primarily on north and east sides, with moderate to significant interior decay and hollowing; above average amount of deadwood	***Recommend removal due to noted defects***
431	English Walnut	*(Juglans regia)*	9,9	18	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
432	English Walnut	*(Juglans regia)*	5,6,7	18	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
433	English Walnut	*(Juglans regia)*	5,6,7	18	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
434	English Walnut	*(Juglans regia)*		17	20	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
435	English Walnut	*(Juglans regia)*	10,15	25	22	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
436	English Walnut	*(Juglans regia)*		9	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
437	English Walnut	*(Juglans regia)*		21	19	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing lower trunk wound at 5' above grade with minor to moderate decay, north side; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
438	English Walnut	*(Juglans regia)*	9,13	22	20	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
439	California Black Walnut	*(Juglans hindsii)*	5,7,12	24	15	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
440	English Walnut	*(Juglans regia)*		12	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
441	English Walnut	*(Juglans regia)*		21	25	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown

ELK GROVE RESERVE
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ARBORIST INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ARBORIST REMOVALS (inches)	NOTABLE CHARACTERISTICS	MAINTENANCE RECOMMENDATIONS
						RT CR	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
442	English Walnut	*(Juglans regia)*		20	21	Fair	Fair	Poor to fair	Fair	Fair	Fair		Measured at 3' above grade; above average amount of deadwood	Clean out crown
443	California Black Walnut	*(Juglans hindsii)*	2,2,2	6	7	Poor to fair	Fair	Fair	Fair	Poor to fair	Fair		Callusing basal wound, south side, with minor to moderate decay	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
444	California Black Walnut	*(Juglans hindsii)*	14,15	29	22	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
445	Date Palm	*(Phoenix dactyliera)*		34	13	Fair	Fair	Fair	Fair	Fair	Fair			Prune out dead fronts
446	Date Palm	*(Phoenix dactyliera)*		36	14	Fair	Fair	Fair	Fair	Fair	Fair			Prune out dead fronts
447	California Black Walnut	*(Juglans hindsii)*	4,4,4	12	11	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
448	California Black Walnut	*(Juglans hindsii)*	8,8	16	16	Poor to fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing basal/lower trunk wounds, southwest side, to 4' above grade with minor to moderate interior decay; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
449	California Black Walnut	*(Juglans hindsii)*		14	16	Fair	Fair	Fair	Fair	Fair	Fair		Slightly above average amount of deadwood	Clean out crown
450	California Black Walnut	*(Juglans hindsii)*		16	16	Fair	Poor to fair	Poor to fair	Fair	Poor to fair	Fair		Callusing lower trunk wound, north side, 1' to 2' above grade with minor interior decay; above average amount of deadwood	Clean out crown
451	Olive Tree	*(Olea europaea)*	2,2,3,4	11	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
452	California Black Walnut	*(Juglans hindsii)*	5,5,5,6,6	27	14	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Central cavity at 2' above grade; minor to moderate interior decay; slightly above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
453	California Black Walnut	*(Juglans hindsii)*	3,3,3,3	12	10	Poor to fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing basal/lower trunk wounds, all sides, to 1.5' above grade with minor to moderate interior decay	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
454	California Black Walnut	*(Juglans hindsii)*	2,3,4,6	15	13	Poor to fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing basal/lower trunk wound, west side, to 3' above grade with moderate to significant interior decay; slightly above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
455	California Black Walnut	*(Juglans hindsii)*	2,4,4,5	15	12	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing lower trunk wound, north side, 1.5' above grade with moderate interior decay; above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
456	California Black Walnut	*(Juglans hindsii)*	4,5,5,5,6	25	14	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing lower trunk wound, east side, 1' above grade with minor to moderate interior decay; slightly above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
457	Fremont Cottonwood	*(Populus fremontii)*		10	17	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
458	Fremont Cottonwood	*(Populus fremontii)*		7	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
459	California Black Walnut	*(Juglans hindsii)*	3,3,4,4	14	12	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing lower trunk wound 1' to 2' above grade, south side, with moderate interior decay; slightly above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
460	Fremont Cottonwood	*(Populus fremontii)*		10	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
461	Fremont Cottonwood	*(Populus fremontii)*		7	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
462	Fremont Cottonwood	*(Populus fremontii)*		8	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
463	Fremont Cottonwood	*(Populus fremontii)*		9	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
464	Fremont Cottonwood	*(Populus fremontii)*		10	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
465	Fremont Cottonwood	*(Populus fremontii)*		9	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
466	Fremont Cottonwood	*(Populus fremontii)*		7	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
467	Olive Tree	*(Olea europaea)*		12	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY							Measured at 3' above grade	
468	Olive Tree	*(Olea europaea)*	7,7	14	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
469	California Black Walnut	*(Juglans hindsii)*	8,8	16	12	Fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair		Callusing lower trunk wounds 2' to 5' above grade, various locations, with minor to moderate decay; above average amount of deadwood; somewhat sparse foliage	Subsurface liquid fertilization injection; clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
470	Olive Tree	*(Olea europaea)*	2,2,2,3,3,3	15	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
471	California Black Walnut	*(Juglans hindsii)*	5,6	11	9	Fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair		Callusing lower trunk wounds, various locations, with minor to moderate decay; above average amount of deadwood; sparse foliage	Subsurface liquid fertilization injection; clean out crown; ***recommend annual inspection by an ISA Certified Arborist; longevity questionable***

ELK GROVE RESERVE
Champions Golf Links Project [DERA Control No. 04-RZB-0139]
County of Sacramento, California
ARBORIST INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ARBORIST REMOVALS (inches)	NOTABLE CHARACTERISTICS	MAINTENANCE RECOMMENDATIONS
						RT CR	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
472	California Black Walnut	*(Juglans hindsii)*		5	6	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing trunk wound 4' to 6' above grade, north side, with moderate interior decay; slightly above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
473	California Black Walnut	*(Juglans hindsii)*	6,6,7	19	14	Fair	Fair	Poor to fair	Fair	Fair	Fair		Above average amount of deadwood	Clean out crown
474	California Black Walnut	*(Juglans hindsii)*	4,5	9	8	Fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair	Poor to fair		Callusing lower trunk wounds, various locations, with minor to moderate decay; above average amount of deadwood; sparse foliage	Subsurface liquid fertilization injection; clean out crown; ***recommend annual inspection by an ISA Certified Arborist; longevity questionable***
475	California Black Walnut	*(Juglans hindsii)*	3,7,11	20	11	Fair	Poor to fair	Fair	Fair	Poor to fair	Fair		Callusing lower trunk wounds 3' to 5' above grade, various locations, with minor to moderate decay; slightly above average amount of deadwood	Clean out crown; ***recommend annual inspection by an ISA Certified Arborist***
476	Fremont Cottonwood	*(Populus fremontii)*		16	23	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
477	Raywood Ash	*(Fraxinus oxycarpa)*		6	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
478	Raywood Ash	*(Fraxinus oxycarpa)*		5	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
479	Raywood Ash	*(Fraxinus oxycarpa)*		5	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
480	Raywood Ash	*(Fraxinus oxycarpa)*		7	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
481	Pine Tree	*(Pinus sp.)*		7	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
482	London Plane	*(Platanus acerfolia)*		9	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
483	Raywood Ash	*(Fraxinus oxycarpa)*		12	19	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
484	Coast Redwood	*(Sequoia sempervirens)*		12	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
485	Coast Redwood	*(Sequoia sempervirens)*		8	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
486	Weeping Willow	*(Salix babylonica)*	5,5,5,6	21	16	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
487	Fremont Cottonwood	*(Populus fremontii)*	12,15	27	21	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
488	Coast Redwood	*(Sequoia sempervirens)*		4	5	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
489	Black Locust	*(Robinia pseudoacacia)*		4	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
490	Coast Redwood	*(Sequoia sempervirens)*		5	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
491	Coast Redwood	*(Sequoia sempervirens)*		4	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
492	Fremont Cottonwood	*(Populus fremontii)*		8	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
493	Fremont Cottonwood	*(Populus fremontii)*		11	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
494	Fremont Cottonwood	*(Populus fremontii)*		13	18	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
495	Coast Redwood	*(Sequoia sempervirens)*		5	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
496	Coast Redwood	*(Sequoia sempervirens)*		7	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
497	Fremont Cottonwood	*(Populus fremontii)*	7,10	17	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
498	Fremont Cottonwood	*(Populus fremontii)*		13	18	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
499	Deodar Cedar	*(Cedrus deodara)*		8	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
500	Raywood Ash	*(Fraxinus oxycarpa)*		13	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
501	Aleppo Pine	*(Pinus halepensis)*	3,4	7	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
502	Aleppo Pine	*(Pinus halepensis)*		7	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
503	London Plane	*(Platanus acerfolia)*		11	16	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
504	London Plane	*(Platanus acerfolia)*	7,11	18	21	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
505	Coast Redwood	*(Sequoia sempervirens)*		6	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
506	Coast Redwood	*(Sequoia sempervirens)*		7	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
507	Coast Redwood	*(Sequoia sempervirens)*		8	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
508	Coast Redwood	*(Sequoia sempervirens)*		8	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
509	Raywood Ash	*(Fraxinus oxycarpa)*		9	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
510	Raywood Ash	*(Fraxinus oxycarpa)*		7	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
511	Aleppo Pine	*(Pinus halepensis)*		6	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
512	White Alder	*(Alnus rhombifolia)*		4	6	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
513	White Alder	*(Alnus rhombifolia)*		4	5	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
514	White Alder	*(Alnus rhombifolia)*		4	6	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
515	White Alder	*(Alnus rhombifolia)*		8	12	Fair	Fair	Fair	Fair	Fair	Fair		Measured at 3' above grade	Clean out crown
516	White Alder	*(Alnus rhombifolia)*	3,4	7	8	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
517	Deodar Cedar	*(Cedrus deodara)*		6	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								

ELK GROVE RESERVE
Champions Golf Links Project [DERA Control No. 04-RZB-0139]
County of Sacramento, California
ARBORIST INVENTORY SUMMARY

TREE#	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT						ARBORIST REMOVALS (inches)	NOTABLE CHARACTERISTICS	MAINTENANCE RECOMMENDATIONS
						RT CR	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR			
518	Deodar Cedar	*(Cedrus deodara)*		6	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
519	White Alder	*(Alnus rhombifolia)*		6	9	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
520	Aleppo Pine	*(Pinus halepensis)*	3,6	9	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
521	Deodar Cedar	*(Cedrus deodara)*		6	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
522	Aleppo Pine	*(Pinus halepensis)*		6	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
523	London Plane	*(Platanus acerfolia)*		7	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
524	London Plane	*(Platanus acerfolia)*		4	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
525	London Plane	*(Platanus acerfolia)*		5	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
526	London Plane	*(Platanus acerfolia)*		6	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
527	Raywood Ash	*(Fraxinus oxycarpa)*		5	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
528	Raywood Ash	*(Fraxinus oxycarpa)*		7	12	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
529	Raywood Ash	*(Fraxinus oxycarpa)*		9	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
530	Raywood Ash	*(Fraxinus oxycarpa)*		9	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
531	Chinese Pistache	*(Pistachia chimensis)*		5	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
532	Chinese Pistache	*(Pistachia chimensis)*		5	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
533	Chinese Pistache	*(Pistachia chimensis)*		4	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
534	Chinese Pistache	*(Pistachia chimensis)*		4	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
535	Chinese Pistache	*(Pistachia chimensis)*		4	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
536	Deodar Cedar	*(Cedrus deodara)*		9	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
537	Purple Leaf Flowering Plum	*(Prunus cerasifera)*	1,1,1,2,2	5	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
538	Purple Leaf Flowering Plum	*(Prunus cerasifera)*	1,1,1,1,2,2	8	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
539	Purple Leaf Flowering Plum	*(Prunus cerasifera)*	1,1,1,1,2,2,2	10	7	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
540	Purple Leaf Flowering Plum	*(Prunus cerasifera)*	2,2,2,3,3,3,3	18	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
541	Purple Leaf Flowering Plum	*(Prunus cerasifera)*	2,2,3,3,3,4	17	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
542	Coast Redwood	*(Sequoia sempervirens)*		12	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
543	Coast Redwood	*(Sequoia sempervirens)*		7	6	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
544	Purple Leaf Flowering Plum	*(Prunus cerasifera)*	2,2,3,3,3,4,4	24	13	Fair	Fair	Fair	Fair	Fair	Fair			Clean out crown
545	Cherry Tree	*(Prunus sp.)*	1,2,2,2,2,3	12	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
546	Raywood Ash	*(Fraxinus oxycarpa)*		4	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
547	European White Birch	*(Betula pendula)*	2,3,3,4	12	15	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
548	European White Birch	*(Betula pendula)*	1,3,3	7	11	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
549	Coast Redwood	*(Sequoia sempervirens)*		7	9	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
550	Coast Redwood	*(Sequoia sempervirens)*		7	10	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
551	European White Birch	*(Betula pendula)*	2,2,2	6	8	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
552	European White Birch	*(Betula pendula)*	3,4	7	13	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								
553	Plum Tree	*(Prunus sp.)*	2,2,3,4	11	14	NON-ORDINANCE SPECIES/SIZE; DATA PROVIDED FOR MAP ONLY								

TOTAL INVENTORIED TREES = 553 Trees (5466 aggregate diameter inches)
TOTAL RECOMMENDED TREE REMOVALS = 5 Trees (140 aggregate diameter inches)
PRECAUTIONARY TREES SEPARATELY HIGHLIGHTED FOR REFERENCE

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.

STREET AND UTILITY MITIGATIVE MEASURES

Generally, impacts from street construction alone are less of an impact than those occurring with dry and wet utility construction. Often it is very difficult or impossible to effectively preserve a tree with more than 30% of its critical root zone area falling within the PUE/street.

Dry Utilities.

Since dry utilities are typically located behind the curb and gutter and/or sidewalks, where applicable, they fall within the closest proximity to trees preserved outside of the roadway. The dry utilities tend to be shallow, within the top 5 feet of the soil profile. Unfortunately, in this region that is also typically where tree roots are found. Where possible, dry utilities should be routed on the opposite side of the street from tree locations. This would require more street crossings than normally planned; however, impacts to trees would be greatly lessened. In some circumstances, hand digging the utilities through critical root zone areas may be an option. Since the dry utility profile is usually 3-4 in depth and includes multiple conduits or plumbing due to the various utilities, boring beneath the critical root zone area is not usually effective.

Wet Utilities.

The greatest conflicts with wet utilities typically arise from deep sanitary sewers or storm drains. Soil conditions and safety concerns often require than trench openings at ground level be quite large. Therefore, the storm and sewer locations must be carefully considered. In some circumstances where a particularly valuable tree may be impacted by wet utilities boring may be an option. Since water main construction tends to be more shallow than storm drains or sewers, and flow lines are not as critical, boring can often be most effective in preserving tree roots.

Streets/Hardscape.

Should the street construction sections be 18" or less, the percentage of encroachment into the critical root zone area may be able to exceed 20%. If this is possible, determinations cannot be made until an accurate evaluation of the root system profiles on the site has been completed. It is impossible to preserve roots within the street section profile. Further, the construction of the street alters the gaseous exchange and oxygen to the tree's root system. In some circumstances aeration systems may mitigate a small portion of these impacts.

Hardscape (concrete slabs, walkways, etc.) should be minimized within the critical root zone area. Grade cuts in excess of 12" should be avoided. In some circumstances aeration systems may be required to reduce root system stress.

CONCLUSION

In an effort to minimize tree removals in the early phases of a project a category for potential tree removals should be established. This category would include those trees which are located in areas that would expose them to moderate or significant encroachments and/or construction impacts. As construction occurs and construction staking is installed, assessment of impacts are much more accurate than those based simply on plan review. At that time, determinations by the Project Arborist and Agency Representatives may result in preservation of trees which may have previously appeared as requiring removal on the plans.

DEFINITIONS AND RATINGS

Within this report you will find the following information defined as follows:

Tree Number:	Corresponds to aluminum tag attached to the tree.
Species Identification:	Scientific and common species name.
Diameter ("DBH"):	This is the trunk diameter as measured at breast height (industry standard 4.5 feet above ground level).
Dripline radius ("DLR"):	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.

Structure and Vigor Ratings:

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.

Encroachment Ratings:

MINOR - No anticipated long-term negative effects

MODERATE – Potential long-term negative effects

SIGNIFICANT – Probable long-term negative effects

Maintenance Recommendations:

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.

SUBSURFACE LIQUID FERTILIZATION INJECTION/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.

EIR ACKNOWLEDGMENTS

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Civil Engineering Solutions - Preliminary Drainage Study

Donald Ballanti, Certified Consulting Meteorologist – Air Quality Assessment

Economic & Planning Systems – Florin Vineyard Community Plan Public Facilities Financing Plan

Fehr and Peers – Traffic Impact Analysis

Gibson & Skordal, LLC - Biological Baseline Information Report

MacKay & Somps Civil Engineers, Inc. – Sanitary Sewer Master Plan

MWH, Inc. – Master Water Study for the Florin-Vineyard Community Plan

Peak & Associates, Inc. – Cultural Resources Study

Peterson, Brustad, Pivetti, Inc. – California American Water Supply Assessment