

RESOLUTION NO. 2016-015

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ELK GROVE
ADOPTING A MITIGATED NEGATIVE DECLARATION AND MITIGATION
MONITORING REPORTING PROGRAM (MMRP) FOR THE
LAGUNA CREEK TRAIL – CAMDEN SPUR NORTH PROJECT (WTL005)
AND APPROVING THE PROJECT**

WHEREAS, the Laguna Creek Trail – Camden Spur North Project (WTL005) (Project) will construct a multiuse trail along a portion of Laguna Creek from near Camden Park to Beckington Drive/White Peacock Way and another segment from Beckington Drive to MacDonald Park, with a class 2 facility connecting the two segments along Beckington Drive; and

WHEREAS, the City prepared an Initial Study/Mitigated Negative Declaration pursuant to CEQA, attached hereto as Exhibit A and incorporated herein by reference, evaluating the potential environmental effects of the Project; and

WHEREAS, the City determined that the mitigation measures identified in the Initial Study/Mitigated Negative Declaration would reduce environmental impacts to a less than significant level; and

WHEREAS, based on staff's review of the Project, no special circumstances exist that would create a reasonable possibility that this Project will have a significant effect on the environment beyond what was analyzed in the Mitigated Negative Declaration prepared for the Project and disclosed; and

WHEREAS, a Mitigation Monitoring and Reporting Program (MMRP) has been prepared in accordance with CEQA, attached hereto as Exhibit B and incorporated herein by reference, which is designed to ensure compliance with the identified mitigation measures during project implementation and operation; and

WHEREAS, the City distributed the Notice of Intent to Adopt the Mitigated Negative Declaration on December 18, 2015, posting the notice at the Sacramento County Clerk's office, distributing through State Clearinghouse and at the City offices, pursuant to Section 15072 of Chapter 3 of Title 14 of the California Code of Regulations (State CEQA Guidelines); and

WHEREAS, a 30-day review and comment period was opened on December 18, 2015 and closed January 18, 2016, and the Mitigated Negative Declaration was made available to the public during this review period; and

WHEREAS, the City received written comment letters within the 30-day public review period and responded to those comments in the project staff report; and

WHEREAS, the City has considered the comments received during the public review period, and they do not alter the conclusions in the Initial Study and Mitigated Negative Declaration; and

WHEREAS, the City Council has considered the written and oral comments on the proposed project and the Mitigated Negative Declaration; and

WHEREAS, the City of Elk Grove, Development Services, Planning Department, located 8401 Laguna Palms Way, Elk Grove, California 95758 is the custodian of documents and other materials that constitute the record of proceedings upon which the decision to adopt the Mitigated Negative Declaration is based; and

WHEREAS, the City Council has reviewed the Initial Study, the Mitigated Negative Declaration, and the Mitigation Monitoring and Reporting Program and find that these documents reflect their independent judgment.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Elk Grove hereby adopts the Mitigated Negative Declaration and the Mitigation Monitoring and Reporting Program for the Laguna Creek Trail – Camden Spur North Project attached hereto and incorporated herein by this reference based on the following findings:

- 1) On the basis of the whole record, there is no substantial evidence that the Project as designed and mitigated will have a significant effect on the environment. A Mitigated Negative Declaration has been prepared and completed in accordance with the California Environmental Quality Act (CEQA). The Mitigated Negative Declaration reflects the independent judgment and analysis of the City.
- 2) Pursuant to Public Resources Code, Section 21081 and CEQA Guidelines, Section 15091, all of the proposed mitigation measures described in the Mitigated Negative Declaration are feasible, and therefore shall become binding upon the City.
- 3) To the extent that these findings conclude that various proposed mitigation measures outlined in the Mitigated Negative Declaration are feasible and have not been modified, superseded or withdrawn, the City Council hereby binds itself and their assigns and successors in interest to implement those measures. These findings are not merely informational, but constitute a binding set of obligations that will come into effect when the City constructs the Project.

Evidence: Pursuant to CEQA and the CEQA guidelines, staff prepared an Initial Environmental Study for the Laguna Creek Trail – Camden Spur North Project and mitigation measures have been developed that will reduce potential environmental impacts to less than significant levels. The Initial Environmental Study identified potentially significant adverse effects in the areas of biological resources and noise. Mitigation measures that avoid or mitigate the potentially significant effects to a point where no significant effects would occur were identified in the Initial Study and staff prepared a Mitigated Negative Declaration. Preparation of a Mitigation Monitoring and Reporting Program (MMRP) is required in accordance with the City of Elk Grove regulations and is designed to ensure compliance during project implementation. The City distributed the Notice of Intent to Adopt the Mitigated Negative Declaration on

December 18, 2015. It was posted at the Sacramento County Clerk's office, distributed through State Clearinghouse and at the City offices, pursuant to Section 15072 of Chapter 3 of Title 14 of the California Code of Regulations (State CEQA Guidelines).

A 30-day review and comment period was opened on December 18, 2015 and closed January 18, 2016. The Mitigated Negative Declaration was made available to the public during this review period. The City received written comment letters within the 30-day public review period. These comments do not alter the conclusions of the Initial Study/Mitigated Negative Declaration. On the basis of the Mitigated Negative Declaration, environmental analysis, and the whole record, there is no substantial evidence that the project will have a significant adverse impact on the environment above those addressed within the adopted Mitigated Negative Declaration. A Mitigation Monitoring and Reporting Program (MMRP), which is incorporated herein by this reference has been prepared to ensure compliance during project implementation. The City of Elk Grove, Development Services Planning Department, located at 8401 Laguna Palms Way, Elk Grove, California 95758 is the custodian of documents and other materials that constitute the record of proceedings upon which the decision to adopt the Mitigated Negative Declaration is based.

BE IT FURTHER RESOLVED that the City Council hereby approves the Project.

PASSED AND ADOPTED by the City Council of the City of Elk Grove this 27th day of January 2016.



GARY DAVIS, MAYOR of the
CITY OF ELK GROVE

ATTEST:



JASON LINDGREN, CITY CLERK

APPROVED AS TO FORM:



JONATHAN P. HOBBS,
CITY ATTORNEY

CERTIFICATION
ELK GROVE CITY COUNCIL RESOLUTION NO. 2016-015

STATE OF CALIFORNIA)
COUNTY OF SACRAMENTO) ss
CITY OF ELK GROVE)


I, Jason Lindgren, City Clerk of the City of Elk Grove, California, do hereby certify that the foregoing resolution was duly introduced, approved, and adopted by the City Council of the City of Elk Grove at a regular meeting of said Council held on January 27, 2016 by the following vote:

AYES : **COUNCILMEMBERS:** *Davis, Ly, Detrick, Hume, Suen*

NOES: **COUNCILMEMBERS:** *None*

ABSTAIN : **COUNCILMEMBERS:** *None*

ABSENT: **COUNCILMEMBERS:** *None*



Jason Lindgren, City Clerk
City of Elk Grove, California

EXHIBIT A

**LAGUNA CREEK TRAIL
NORTH CAMDEN SPUR PROJECT**

INITIAL STUDY / MITIGATED NEGATIVE DECLARATION



CITY OF
ELK GROVE

— PROUD HERITAGE. BRIGHT FUTURE. —

PREPARED BY

CITY OF ELK GROVE
DEVELOPMENT SERVICES-PLANNING
8401 LAGUNA PALMS WAY
ELK GROVE, CA 95758

DECEMBER 2015

**LAGUNA CREEK TRAIL NORTH CAMDEN SPUR PROJECT
INITIAL STUDY / MITIGATED NEGATIVE DECLARATION**

Prepared by:

CITY OF ELK GROVE
DEVELOPMENT SERVICES-PLANNING
8401 LAGUNA PALMS WAY
ELK GROVE, CA 95758

DECEMBER 2015

1.0 INTRODUCTION

1.1 Introduction and Regulatory Guidance 1.0-1

1.2 Lead Agency..... 1.0-1

1.3 Purpose and Document Organization..... 1.0-2

2.0 PROJECT DESCRIPTION

2.1 Project Background..... 2.0-1

2.2 Project Purpose and Objectives 2.0-1

2.3 Project Description 2.0-1

2.4 Project Construction..... 2.0-2

2.5 Required Project Approvals 2.0-9

2.6 Other Project Assumptions 2.0-9

2.7 Technical Studies 2.0-9

3.0 INITIAL STUDY CHECKLIST

3.1. Aesthetics..... 3.0-2

3.2. Agriculture and Forest Resources..... 3.0-4

3.3. Air Quality..... 3.0-6

3.4 Biological Resources..... 3.0-20

3.5. Cultural Resources 3.0-55

3.6. Geology and Soils 3.0-60

3.7. Greenhouse Gas Emissions..... 3.0-64

3.8. Hazards and Hazardous Materials 3.0-66

3.9. Hydrology and Water Quality 3.0-70

3.10 Land Use and Planning 3.0-75

3.11. Mineral Resources..... 3.0-78

3.12. Noise. 3.0-79

3.13. Population and Housing. 3.0-88

3.14 Public Services..... 3.0-89

3.15. Recreation. 3.0-90

3.16 Transportation/Traffic. 3.0-92

3.17. Utilities and Service Systems 3.0-95

3.18. Mandatory Findings of Significance 3.0-98

4.0 LIST OF MITIGATION MEASURES..... 4.0-1

5.0 LIST OF PREPARERS 5.0-1

6.0 LIST OF ABBREVIATIONS 6.0-1

7.0 REFERENCES 7.0-1

TABLE OF CONTENTS

LIST OF TABLES

Table 3.3-1 Criteria Air Pollutants Summary of Common Sources and Effects 3.0-8

Table 3.3-2 Summary of Ambient Air Quality Standards 3.0-9

Table 3.3-3 Attainment Status Designations..... 3.0-14

Table 3.3-4 SMAQMD Particulate Matter Screening Levels for Construction Projects 3.0-16

Table 3.4-1 Annual Bat Activity 3.0-42

Table 3.4-2 Impact to Jurisdictional Features 3.0-45

Table 3.10-1 Elk Grove General Plan Land Use Consistency with Laguna Creek Trail North
Camden Spur Project..... 3.0-76

Table 3.12-1 Noise Environment 3.0-81

Table 3.12-2 Performance Standards for Stationary (Non-Transportation) Noise Sources..... 3.0-84

Table 3.12-3 Typical Construction Equipment Noise Levels..... 3.0-85

LIST OF FIGURES

Figure 2.0-1 Regional Vicinity Map..... 2.0-3

Figure 2.0-2 Project Location Map..... 2.0-5

Figure 2.0-3 Project Design 2.0-7

Figure 3.4-1 Biological Study Area 3.0-23

Figure 3.4-2 Biological Study Area and Project Impact Map..... 3.0-33

Figure 3.4-3 CNDDDB Occurrences within One Mile of the BSA..... 3.0-35

Figure 3.4-4 CNDDDB Giant Garter Snake Occurrences in the Vicinity of the BSA 3.0-39

Figure 3.4-5 Impacts to Swainson's Hawk Habitat 3.0-43

Figure 3.4-6 Impacts to Jurisdictional Features..... 3.0-47

Figure 3.5-1 APE Map 3.0-57

APPENDICES

- Appendix A: Natural Environment Study
- Appendix B: Biological Assessment
- Appendix C: Wetland Delineation
- Appendix D: Species List
- Appendix E: Biological Opinion
- Appendix F: Historic Property Survey Report
- Appendix G: Archaeological Survey Report
- Appendix H: Summary Floodplain Encroachment Report

1.0 INTRODUCTION

1.1 INTRODUCTION AND REGULATORY GUIDANCE

This document is an Initial Study (IS) with supporting environmental studies, which provides justification for a Mitigated Negative Declaration (MND) pursuant to the California Environmental Quality Act (CEQA) for the Laguna Creek Trail North Camden Spur Project (Project).

The IS/MND is a public document to be used by the City of Elk Grove (City), acting as the CEQA lead agency, to determine whether the proposed project may have a significant effect on the environment pursuant to CEQA. If the lead agency finds substantial evidence that any aspect of the proposed project, either individually or cumulatively, may have a significant effect on the environment that cannot be mitigated, regardless of whether the overall effect of the proposed project is adverse or beneficial, the lead agency is required to prepare an Environmental Impact Report (EIR), use a previously prepared EIR and supplement that EIR, or prepare a subsequent EIR to analyze the project at hand (Public Resources Code Sections 21080(d), 21082.2(d)).

If the agency finds no substantial evidence that the proposed project or any of its aspects may cause a significant impact on the environment with mitigation, an MND shall be prepared with a written statement describing the reasons why the proposed project, which is not exempt from CEQA, would not have a significant effect on the environment, and therefore, why it does not require the preparation of an EIR (State CEQA Guidelines Section 15371).

According to State CEQA Guidelines Section 15070, a Negative Declaration (ND) shall be prepared for a project subject to CEQA when either:

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

This IS/MND has been prepared in accordance with CEQA, Public Resources Code Section 21000 et seq., and the State CEQA Guidelines Title 14 California Code of Regulations (CCR) Section 15000 et seq.

1.2 LEAD AGENCY

The lead agency is the public agency with primary responsibility over a proposed project. Where two or more public agencies will be involved with a project, CEQA Guidelines Section 15051 provides criteria for identifying the lead agency. In accordance with CEQA Guidelines Section 15051(b)(1), "The lead agency will normally be the agency with general governmental powers." The City of Elk Grove Public Works Department has initiated preliminary design of the proposed

1.0 INTRODUCTION

Project and it requires approval from the Elk Grove City Council. Therefore, based on the criteria described above, the lead agency for the proposed Project is the City.

1.3 PURPOSE AND DOCUMENT ORGANIZATION

The purpose of this IS/MND is to evaluate the potential environmental impacts of the proposed Laguna Creek Trail North Camden Spur Project. Mitigation measures have also been established that reduce or eliminate any identified significant and/or potentially significant impacts. This document is divided into the following sections:

1.0 INTRODUCTION

This section provides an introduction and describes the purpose and organization of this document.

2.0 PROJECT DESCRIPTION

This section provides a Project background, a detailed description of the proposed Project, and the process used for notifying and involving the public during Project planning, and describes coordination with relevant agencies and organizations.

3.0 INITIAL STUDY CHECKLIST

This section describes the environmental setting for each of the environmental subject areas; evaluates a range of impacts classified as "no impact," "less than significant," "less than significant with mitigation incorporated," or "potentially significant" in response to the environmental checklist, and provides mitigation measures, where appropriate, to mitigate potentially significant impacts to a less than significant level; and provides an environmental determination of the proposed Project.

4.0 LIST OF MITIGATION MEASURES

This section provides a summary of mitigation measures for the proposed Project.

5.0 LIST OF PREPARERS

This section identifies staff and consultants responsible for preparation of this document.

6.0 LIST OF ABBREVIATIONS

This section is an alphabetical list of abbreviations and acronyms used throughout this document.

7.0 REFERENCES

This section identifies resources used in the preparation of this document.

2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION

The proposed Project is located in the City of Elk Grove, Sacramento County, California. Specifically, the Project site extends from the existing Laguna Creek Trail at the north end of Camden Park to the intersection of Beckington Drive and White Peacock Court and along Beckington Drive to the existing Laguna Creek Trail at MacDonald Park. Refer to **Figure 2.0-1** and **Figure 2.0-2** for the regional vicinity and Project location maps.

2.2 PROJECT PURPOSE AND OBJECTIVES

The City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan identifies the Laguna Creek Trail North Camden Spur Project as a future bicycle and trail project expenditure and shows the proposed Project on Figure 5.1 (Existing and Proposed Bicycle and Pedestrian Network) of the Master Plan. The City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan identifies the need for an off-street multiuse trail system providing connections throughout the City and the Sacramento region. The purpose of the Project is to complete a portion of the Laguna Creek Trail system in the City of Elk Grove from the north end of Camden Park to MacDonald Park via Beckington Drive and to improve bicycle and pedestrian access to recreational areas in the City.

The following are specific objectives of the proposed Project:

- Improve local bicycle and pedestrian access and circulation.
- Provide a safe means of access for bicycle and pedestrian users to recreational areas in the City.
- Continuation of the existing Laguna Creek Trail so the trail can be as long and continuous as possible.
- Improve local air quality and reduce emissions by providing an alternative means of transportation.

2.3 PROJECT DESCRIPTION

EXISTING SETTING

Laguna Creek Trail currently extends from the north and south ends of Camden Park and continues along Laguna Creek from the south corner of Camden Park at Bond Road to just south of the intersection of Bond Road and Waterman Road. Existing land uses surrounding the proposed Project include park and open space, agricultural residential, and residential. Specifically, the surrounding area is zoned for agricultural/residential, open space, and low density residential uses. The proposed Project site is partially located on urban/developed land in a residential neighborhood and partially located on land used for parks and open space. Lots in the area zoned for residential use within the Project area are designated for 5 dwelling units per acre. Beckington Drive begins at Harding Hall Drive where it extends west, terminating as a cul-de-sac, and east for approximately 200 feet where it then runs south, terminating at White Peacock Court. Laguna Creek runs west through the Project area, south of the proposed Project location and adjacent to the existing Laguna Creek Trail.

2.0 PROJECT DESCRIPTION

Currently, Laguna Creek Trail is split into three stretches—the longest stretch extending for 2.25 miles from south of the Bond Road/Waterman Road intersection along Laguna Creek to the northern end of Camden Park; the next longest stretch extending for approximately 1 mile from the east of Mix Park along Whitehouse Creek to just north of MacDonald Park; and the shortest stretch extending for approximately one-third mile from Camden Lake to Whitehouse Creek. Refer to **Figure 2.0-3** for the Project design.

PROPOSED PROJECT

The City of Elk Grove proposes to extend a multiuse trail from the west end of the existing Laguna Creek Trail at the northern tip of Camden Park to MacDonald Park via Beckington Drive. Laguna Creek Trail offers access to Old Town Elk Grove, Camden Lake, residential neighborhoods, and many retail centers and restaurants. Camden Park's main feature is Laguna Creek Trail, which is used as a scenic horse and jogging trail. MacDonald Park features a soccer field, open play area, and playground equipment. The proposed Project is partially located within the 100-year floodplain.

The proposed Project would connect the two longest segments of Laguna Creek Trail from the existing path at the northern tip of Camden Park for approximately 700 feet of Class 1 facility to south of White Peacock Court/Beckington Drive, then along an approximate 1,050-foot-long Class 2 facility on Beckington Drive, and from White Peacock Court/Beckington Drive for approximately 200 feet of Class 1 facility to the existing path at MacDonald Park. Approximately 115 feet of existing Class 1 facility between homes facing White Peacock Court will require minor improvements and striping, and the approximate 1,050-foot Class 2 facility on Beckington Drive will require only striping. The proposed Project will be constructed generally within existing public right of ways and streets; however, minor acquisition and construction easements will be required. The Project is consistent with the Elk Grove General Plan, the Elk Grove Bicycle and Pedestrian Master Plan, and the Elk Grove Trails Master Plan. Each of these plans identifies the need for an off-street multiuse trail system providing connections throughout the City and the Sacramento region.

RIGHT-OF-WAY

The proposed Project will be constructed generally within existing public right of ways and streets; however, minor acquisition and construction easements will be required.

FUNDING

Federal funds (Congestion Management and Air Quality Improvement Program [CMAQ]) have been allocated for the Project in addition to City of Elk Grove Measure A funds and the City's Local Transportation Fund.

2.4 PROJECT CONSTRUCTION

Analysis contained in this IS/MND has taken into consideration activities within the entire Project area, including proposed contractor staging areas. All mitigation measures included as part the Project would be implemented throughout these areas.

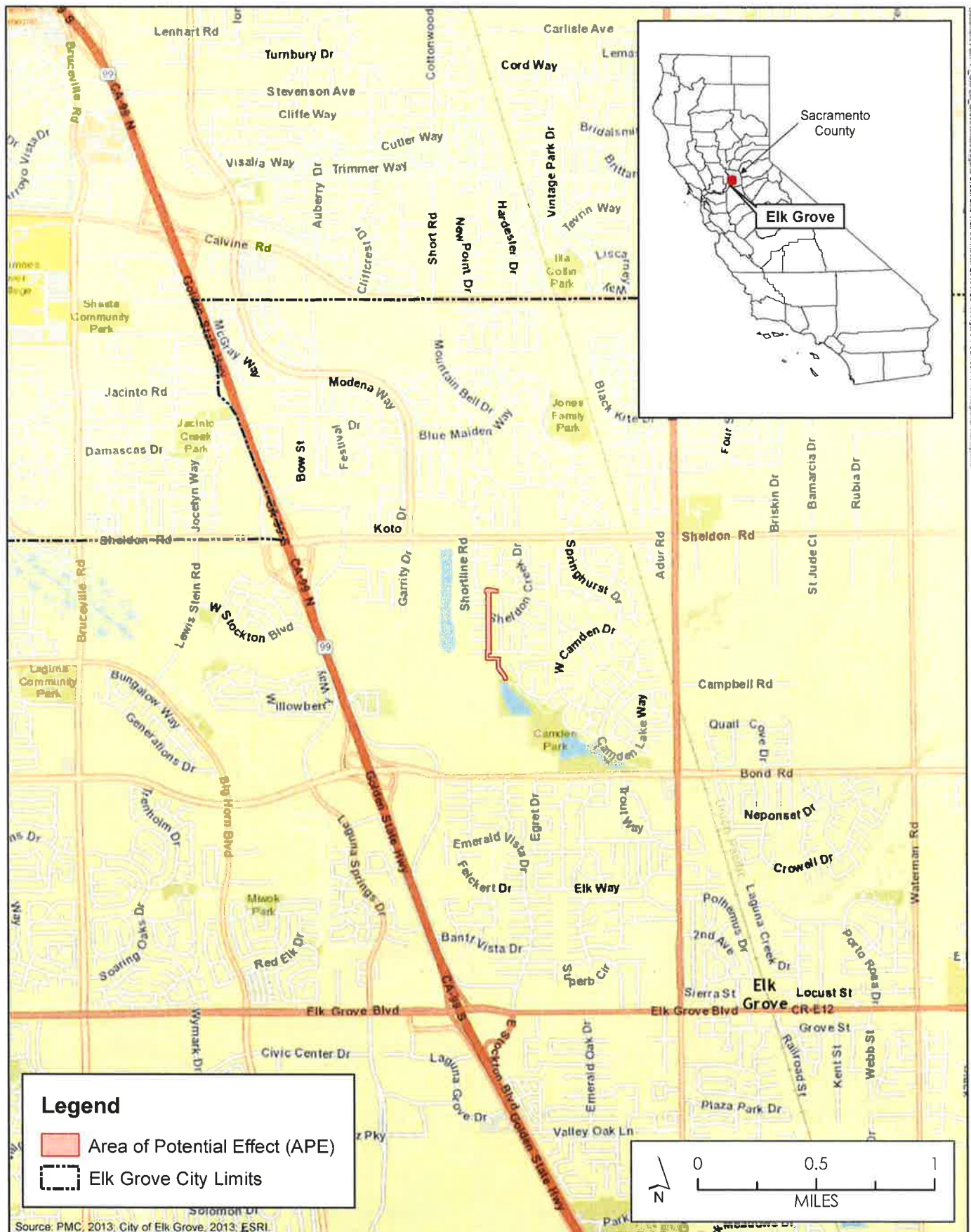


Figure 2.0-1
Regional Vicinity Map



Figure 2.0-2
Project Location



City of Elk Grove
Development Services



Figure 2.0-3
Project Design

2.5 REQUIRED PROJECT APPROVALS

In order for the Project to be implemented, a series of actions and approvals would be required from agencies. Anticipated Project approvals/actions would include but are not limited to the following:

- Elk Grove City Council – Adoption of the MND, Mitigation Monitoring and Reporting Program (MMRP), and other actions associated with Project approval;
- Caltrans – issuance of National Environmental Policy Act (NEPA) Categorical Exclusion (CE); and
- U.S. Fish and Wildlife Service (USFWS) Section 7 Consultation.

Additional permits would be required prior to construction. These include but are not limited to:

- State Water Resources Control Board – 401 Water Quality Certification; and
- US Army Corps of Engineers (USACE) – Section 404 Permit.

2.6 OTHER PROJECT ASSUMPTIONS

This IS/MND assumes compliance with all applicable state, federal, and local codes and regulations including, but not limited to, City of Elk Grove Improvement Standards, the Sacramento County Water Agency Code, the Guidance Manual for On-Site Storm Water Quality Control Measures, the California Health and Safety Code, and the California Public Resources Code.

2.7 TECHNICAL STUDIES

The following technical studies were conducted as part of this IS/MND and are available in Appendix A through H:

- Natural Environment Study, PMC, January 2015 (Appendix A)
- Biological Assessment, PMC, January 2015 (Appendix B)
- Wetland Delineation Report, PMC, February 2014 (Appendix C)
- Species List, PMC, 2015 (Appendix D)
- Biological Opinion, U.S Fish and Wildlife Service, May 2015 (Appendix E)
- Historic Property Survey Report, Pacific Legacy, February 2015 (Appendix F)
- Archaeological Survey Report, Pacific Legacy, February 2015 (Appendix G)
- Summary Floodplain Encroachment Report, City of Elk Grove, January 2015 (Appendix H)

2.0 PROJECT DESCRIPTION

This page is intentionally blank.

3.0 INITIAL STUDY CHECKLIST

3.0 INITIAL STUDY CHECKLIST

The environmental factors checked below would be potentially affected by this project as indicated by the checklist on the following pages.

- | | | |
|--|--|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Population and Housing |
| <input type="checkbox"/> Agricultural Resources | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Air Quality | <input type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Recreation |
| <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Land Use and Planning | <input type="checkbox"/> Transportation/ Traffic |
| <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Utilities & Service Systems |
| <input type="checkbox"/> Geology and Soils | <input checked="" type="checkbox"/> Noise | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION

On behalf of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to the earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Jessica Jordan, Planning Manager

City of Elk Grove Planning Department

Printed Name

For

3.0 INITIAL STUDY CHECKLIST

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.1. AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

The proposed Project is located in an area composed of residential, agricultural residential, and parks/open space land uses. The proposed bike lane on Beckington Drive extends through a low-density residential area, while the smaller portions of the trail north and south of Beckington Drive extend through an area used for parks/open space. The Laguna Creek Trail is split into three segments which extend along Laguna Creek from south of the Bond Road/Waterman Road intersection to the northern end of Camden Park, from Camden Lake to Whitehouse Creek, and from east of Mix Park along Whitehouse Creek to MacDonald Park. The trail is used for scenic recreational purposes including horseback riding, jogging, walking, and bicycling.

DISCUSSION OF IMPACTS

a) *Would the project have a substantial adverse effect on a scenic vista?*

No Impact. There are no identified scenic vistas in the City (City of Elk Grove 2003b). Laguna Creek Trail offers scenic views of Laguna Creek, Whitehouse Creek, and Camden Lake. The proposed Project would construct an extension to the Laguna Creek Trail and would not obstruct any views that may be considered scenic. No impact would occur.

b) *Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

Less than Significant Impact. The proposed Project may require replacement of one tree due to the quality of its health and structure, as recommended in the Tree Survey Memorandum prepared for the Project in June 2013. The nearest State highway is State Route 99 (SR 99), which is located approximately three-quarters of a mile west of the proposed Project. SR 99 does not have a scenic designation in Sacramento County. No rock outcroppings or historic buildings exist within or adjacent to the Project site. Therefore, impacts are considered less than significant.

c) *Would the project substantially degrade the existing visual character or quality of the site and its surroundings?*

Less than Significant Impact. The proposed Project would extend the existing Laguna Creek Trail from the northern end of Camden Park to MacDonald Park via Beckington Drive. Approximately 700 feet of Class I facility would be established from the end of existing Laguna Creek Trail at

Camden Park to White Peacock Court/Beckington Drive; approximately 1,050 feet along Beckington Drive would be striped on existing Class II facility; approximately 115 feet of existing Class II facility would require minor improvements and striping; and approximately 200 feet of Class I facility would be established from Beckington Drive to the existing trail at MacDonald Park. The proposed Project will be consistent with the existing visual character of the surrounding residential and open space/park areas. Impacts are considered to be less than significant.

d) *Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?*

Less than Significant Impact. The proposed Project would extend a multiuse trail from the northern end of Camden Park to MacDonald Park via Beckington Drive and does not include the addition of new sources of light or glare. Construction of the proposed Project may require the use of construction lighting after daylight hours, which may create a new source of light or glare in the Project area. However, this would be temporary and limited to the time of construction. Therefore, impacts are considered less than significant.

3.0 INITIAL STUDY CHECKLIST

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
3.2. AGRICULTURE AND FOREST RESOURCES. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 45260), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forestland or conversion of forestland to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or conversion of forestland to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

Agriculture has historically been an important part of Elk Grove's land use and economy. However, the majority of existing land zoned for agricultural uses within the City limits is considered fallow (vacant or underutilized). Few crops are grown in the City itself and no major intensive agricultural operations (though small family farm activities do exist) occur within the City limits. According to the 2010 Farmland Mapping and Monitoring Program Map for Sacramento County, the Project site is identified as Urban and Built Up (Developed Land) and, adjacent west of the lower portion of the Project, an area is identified as Grazing Land (CDC 2014). There is no designated farmland or land enrolled in a Williamson Act Contract within or adjacent to the Project site (CDC 2013). There are no forestlands, timberlands, or timberlands zoned Timberland Production in the vicinity of the Project location.

DISCUSSION OF IMPACTS

- a) *Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

No Impact. The Project site is identified as Urban and Built Up (Developed Land) on the 2010 Sacramento County Important Farmland Map (CDC 2014). West of the lower portion of the Project site, land is identified as Grazing Land. None of the land within the Project site is designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (CDC 2014). Therefore, the proposed Project would have no impact on Farmland.

- b) *Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?*

No Impact. According to the Elk Grove Zoning Map, west of the Project site, land is zoned for Agricultural-Residential (AR-5) use (City of Elk Grove 2015a). The proposed Project would not conflict with the existing zoning for Agricultural-Residential use west of the Project site. Additionally, the Sacramento County Williamson Act map for the 2011/2012 fiscal year does not identify any parcels in the Project vicinity as enrolled in a Williamson Act contract (CDC 2013). No impact would occur.

- c) *Would the project conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production?*

No Impact. There are no forestlands, timberlands, or timberlands zoned Timberland Production in the vicinity of the proposed Project. Thus, no impact would occur.

- d) *Would the project result in the loss of forest land or conversion of forest land to non-forest use?*

No Impact. No forestlands, timberlands, or timberlands zoned Timberland Production are present within the vicinity of the proposed Project. No impact would occur.

- e) *Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?*

No Impact. The proposed Project involves the extension of the Laguna Creek Trail from the northern end of Camden Park to MacDonald Park via Beckington Drive. The proposed extension of the multiuse trail would not result in land use changes that would convert farmland to non-agricultural use or forest land to non-forest use. No impact would occur.

3.0 INITIAL STUDY CHECKLIST

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.3. AIR QUALITY.				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

Air quality in a region is determined by its topography, meteorology, and existing air pollutant sources. These factors are discussed below, together with the current regulatory structure that applies to the Sacramento Valley Air Basin (SVAB) pursuant to the regulatory authority of the Sacramento Metropolitan Air Quality Management District (SMAQMD).

Climate and Meteorology

Ambient air quality is commonly characterized by climatological conditions, the meteorological influences on air quality, and the quantity and type of pollutants released. The basin is subject to a combination of topographical and climatic factors that reduce the potential for high levels of regional and local air pollutants. The following section describes pertinent characteristics of the air basin and provides an overview of the physical conditions affecting pollutant dispersion in the Project area.

Regional Climate

The Project site is located in the SVAB, which is under the jurisdiction of the SMAQMD. The SVAB is relatively flat, bordered by mountains to the east, west and the north. Air flows into the SVAB through the Carquinez Strait, moving across the Delta, and bringing with it pollutants from the heavily populated San Francisco Bay Area. The climate is characterized by hot, dry summers and cool, rainy winters. Characteristic of SVAB winter weather are periods of dense and persistent low-level fog, which are most prevalent between storms. From May to October, the region's intense heat and sunlight lead to high ozone concentrations. Summer inversions are strong and frequent, but are less troublesome than those that occur in the fall. Autumn inversions, formed by warm air subsiding in a region of high pressure, have accompanying light winds that do not provide adequate dispersion of air pollutants.

Most precipitation in the SVAB results from air masses moving in from the Pacific Ocean during the winter months. These storms usually move through the area from the west or northwest. During the winter rainy season (November through February) over half the total annual

precipitation falls while the average winter temperature is a moderate 49 degrees. During the summer, daytime temperatures can exceed 100 degrees Fahrenheit. Dense fog occurs mostly in mid-winter and never in the summer. Daytime temperatures from April through October average between 70 and 90 degrees with extremely low humidity. The inland location and surrounding mountains shelter the valley from much of the ocean breezes that keep the coastal regions moderate in temperature. The only breach in the mountain barrier is the Carquinez Strait, which exposes the midsection of the valley to the coastal air mass.

Winds across the study area are an important meteorological parameter because they control the dilution of locally generated air pollutant emissions and their regional trajectory. Based on data obtained from the Sacramento Executive Airport, the closest station that measures wind speed and direction, southwest winds are the most predominant (CARB 1992).

Meteorological Influences on Air Quality

Regional flow patterns affect air quality patterns by directing pollutants downwind of sources. Localized meteorological conditions, such as moderate winds, disperse pollutants and reduce pollutant concentrations. However, the mountains surrounding the Sacramento Valley can create a barrier to airflow, which can trap air pollutants in the valley when meteorological conditions are right. The highest frequency of air stagnation occurs in the autumn and early winter when large high-pressure cells lie over the valley. The lack of surface wind during these periods and the reduced vertical flow caused by less surface heating reduces the influx of outside air and allows air pollutants to become concentrated in a stable volume of air. The surface concentrations of pollutants are highest when these conditions are combined with smoke from agricultural burning or when temperature inversions trap cool air, fog and pollutants near the ground (SMAQMD 2004).

The ozone season (May through October) in the Sacramento Valley is characterized by stagnant morning air or light winds with the delta sea breeze arriving in the afternoon out of the southwest. Usually the evening breeze transports the airborne pollutants to the north out of the Sacramento Valley. During about half of the days from July to September, however, a phenomenon called the "Schultz Eddy" prevents this from occurring. Instead of allowing for the prevailing wind patterns to move north and carry the pollutants out of the valley, the Schultz Eddy causes the wind pattern to circle back south. Essentially this phenomenon causes the air pollutants to be blown south toward the Sacramento non-attainment area. This phenomenon's effect exacerbates the pollution levels in the area and increases the likelihood of violating federal or State standards (SMAQMD 2004).

REGULATORY SETTING

Air quality within the SVAB is regulated by several jurisdictions including the United States Environmental Protection Agency (EPA), California Air Resources Board (CARB), and the SMAQMD. Each jurisdiction develops rules, regulations, and policies to attain the goals or directives imposed upon them through legislation. State and local regulations must be as stringent as EPA regulations and may be more stringent.

Pollutants subject to federal ambient standards are referred to as "criteria" pollutants because the EPA publishes criteria documents to justify the choice of standards. One of the most important reasons for air quality standards is the protection of those members of the population who are most sensitive to the adverse health effects of air pollution, known as "sensitive receptors." The term "sensitive receptors" refers to specific population groups, as well as the land uses where they would reside for long periods. Commonly identified sensitive population groups are children, the elderly, the acutely ill, and the chronically ill. Commonly identified sensitive land uses are residences, schools, playgrounds, child care centers, retirement homes or

3.0 INITIAL STUDY CHECKLIST

convalescent homes, hospitals, and clinics. Criteria air pollutants, common sources, and associated effects are summarized in **Table 3.3-1**. The federal and State standards for the criteria pollutants and other State regulated air pollutants are shown in **Table 3.3-2**.

Federal Air Quality Regulations

At the federal level, the EPA has been charged with implementing national air quality programs. The EPA's air quality mandates are drawn primarily from the Federal Clean Air Act (FCAA), which was signed into law in 1970. Congress substantially amended the FCAA in 1977 and again in 1990.

**TABLE 3.3-1
CRITERIA AIR POLLUTANTS
SUMMARY OF COMMON SOURCES AND EFFECTS**

Pollutant	Description	Sources	Health Effects	Welfare Effects
Carbon Monoxide (CO)	Colorless, odorless gas	Motor vehicle exhaust, indoor sources include kerosene wood-burning stoves.	Headaches, reduced mental alertness, heart attack, cardiovascular diseases, impaired fetal development, death.	Contribute to the formation of smog.
Sulfur Dioxide (SO ₂)	Colorless gas that dissolves in water vapor to form acid, and interacts with other gases and particulates in the air	Coal-fired power plants, petroleum refineries, manufacture of sulfuric acid and smelting of ores containing sulfur.	Eye irritation, wheezing, chest tightness, shortness of breath, lung damage.	Contribute to the formation of acid rain, visibility impairment, plant and water damage, aesthetic damage.
Nitrogen Dioxide (NO ₂)	Reddish brown, highly reactive gas	Motor vehicles, electric utilities, and other industrial, commercial, and residential sources that burn fuels.	Susceptibility to respiratory infections, irritation of the lung and respiratory symptoms (e.g., cough, chest pain, difficulty breathing).	Contribute to the formation of smog, acid rain, water quality deterioration, global warming, and visibility impairment.
Ozone (O ₃)	Gaseous pollutant when it is formed in the troposphere	Primarily vehicle exhaust. Formed from the combination of reactive organic gases and oxides of nitrogen in the presences of sunlight.	Eye and throat irritation, coughing, respiratory tract problems, asthma, lung damage.	Plant and ecosystem damage.
Lead	Metallic element	Metal refineries, smelters, battery manufacturers, iron and steel producers, use of leaded fuels by racing and aircraft industries.	Anemia, high blood pressure, brain and kidney damage, neurological disorders, cancer, lowered IQ.	Affects animal and plants, affects aquatic ecosystems.
Particulate Matter (PM)	Very small particles of dust, soot, or other matter, including tiny droplets of liquids	Diesel engines, power plants, industries, windblown dust, wood stoves.	Eye irritation, asthma, bronchitis, lung damage, cancer, heavy metal poisoning, cardiovascular effects.	Visibility impairment, atmospheric deposition, aesthetic damage, impaired plant photosynthesis.

Source: EPA 2014

TABLE 3.3-2
SUMMARY OF AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	State Standard ⁹	Federal Standard ⁹	Principal Health and Atmospheric Effects	Typical Sources
Ozone (O ₃)	1 hour 8 hours 8 hours (conformity process ⁵)	0.09 ppm 0.070 ppm —	— ⁴ 0.075 ppm ⁶ 0.08 ppm (4 th highest in 3 years)	High concentrations irritate lungs. Long-term exposure may cause lung tissue damage and cancer. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include many known toxic air contaminants. Biogenic volatile organic compounds (VOC) may also contribute.	Low-altitude ozone is almost entirely formed from reactive organic gases (ROG)/VOCs and nitrogen oxides (NO _x) in the presence of sunlight and heat. Major sources include motor vehicles and other mobile sources, solvent evaporation, and industrial and other combustion processes.
Carbon monoxide (CO)	1 hour 8 hours 8 hours (Lake Tahoe)	20 ppm 9.0 ppm ¹ 6 ppm	35 ppm 9 ppm —	CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen. CO also is a minor precursor for photochemical ozone.	Combustion sources, especially gasoline-powered engines and motor vehicles. CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.
Respirable particulate matter (PM ₁₀) ²	24 hours Annual	50 µg/m ³ 20 µg/m ³	150 µg/m ³ — ²	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many aerosol and solid compounds are part of PM ₁₀ .	Dust- and fume-producing industrial and agricultural operations; combustion smoke; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources (wind-blown dust, ocean spray).
Fine particulate matter (PM _{2.5}) ²	24 hours Annual 24 hours (conformity process ⁵)	— 12 µg/m ³ —	35 µg/m ³ 15.0 µg/m ³ 65 µg/m ³ (4 th highest in 3 years)	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter—a toxic air contaminant—is in the PM _{2.5} size range. Many aerosol and solid compounds are part of PM _{2.5} .	Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical (including photochemical) reactions involving other pollutants including NO _x , sulfur oxides (SO _x), ammonia, and ROG.

3.0 INITIAL STUDY CHECKLIST

Pollutant	Averaging Time	State Standard ⁹	Federal Standard ⁹	Principal Health and Atmospheric Effects	Typical Sources
Nitrogen dioxide (NO ₂)	1 hour	0.18 ppm	0.100 ppm ⁷ (98 th percentile over 3 years)	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain. Part of the NO _x group of ozone precursors.	Motor vehicles and other mobile sources; refineries; industrial operations.
	Annual	0.030 ppm	0.053 ppm		
Sulfur dioxide (SO ₂)	1 hour	0.25 ppm	0.075 ppm ⁸ (98 th percentile over 3 years)	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.	Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing; some natural sources like active volcanoes. Limited contribution possible from heavy-duty diesel vehicles if ultra-low sulfur fuel not used.
	3 hours	---	0.5 ppm		
	24 hours	0.04 ppm	0.14 ppm		
	Annual	---	0.030 ppm		
Lead (Pb) ³	Monthly	1.5 µg/m ³	---	Disturbs gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Also a toxic air contaminant and water pollutant.	Lead-based industrial processes like battery production and smelters. Lead paint, leaded gasoline. Aerially deposited lead from gasoline may exist in soils along major roads.
	Quarterly	---	1.5 µg/m ³		
	Rolling 3-month average	---	0.15 µg/m ³		
Sulfate	24 hours	25 µg/m ³	---	Premature mortality and respiratory effects. Contributes to acid rain. Some toxic air contaminants attach to sulfate aerosol particles.	Industrial processes, refineries and oil fields, mines, natural sources like volcanic areas, salt-covered dry lakes, and large sulfide rock areas.
Hydrogen sulfide	1 hour	0.03 ppm	---	Colorless, flammable, poisonous. Respiratory irritant. Neurological damage and premature death. Headache, nausea.	Industrial processes such as refineries and oil fields, asphalt plants, livestock operations, sewage treatment plants, and mines. Some natural sources like volcanic areas and hot springs.
Visibility reducing particles	8 hours	Visibility of 10 miles or more at relative humidity less than 70%	---	Reduces visibility. Produces haze. Note: Not related to the Regional Haze program under the FCAA, which is oriented primarily toward visibility issues in national parks and other "Class I" areas.	See particulate matter above.
Vinyl chloride ³	24 hours	0.01 ppm	---	Neurological effects, liver damage, cancer. Also considered a toxic air contaminant.	Industrial processes

Source: CARB 2013; EPA 2015

Notes: ppm = parts per million; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter; ppb = parts per billion (thousand million)

1. Rounding to an integer value is not allowed for the State 8-hour CO standard. Violation occurs at or above 9.05 ppm. Violation of the federal standard occurs at 9.5 ppm due to integer rounding.
2. Annual PM_{10} NAAQS revoked October 2006; was $50 \mu\text{g}/\text{m}^3$. 24-hour $\text{PM}_{2.5}$ NAAQS tightened October 2006; was $65 \mu\text{g}/\text{m}^3$. In September 2009, the EPA began reconsidering the $\text{PM}_{2.5}$ NAAQS; the 2006 action was partially vacated by a court decision.
3. CARB has identified vinyl chloride and the particulate matter fraction of diesel exhaust as toxic air contaminants. Diesel exhaust particulate matter is part of PM_{10} and, in larger proportion, $\text{PM}_{2.5}$. Both CARB and the EPA have identified lead and various organic compounds that are precursors to ozone and $\text{PM}_{2.5}$ as toxic air contaminants. There are no exposure criteria for adverse health effect due to toxic air contaminants, and control requirements may apply at ambient concentrations below any criteria levels specified above for these pollutants or the general categories of pollutants to which they belong. Lead NAAQS are not required to be considered in Transportation Conformity analysis.
4. Prior to June 2005, the 1-hour NAAQS was 0.12 ppm. The 1-hour NAAQS is still used only in 8-hour ozone early action compact areas, of which there are none in California. However, emission budgets for 1-hour ozone may still be in use in some areas where 8-hour ozone emission budgets have not been developed.
5. The $65 \mu\text{g}/\text{m}^3$ $\text{PM}_{2.5}$ (24-hour) NAAQS was not revoked when the $35 \mu\text{g}/\text{m}^3$ NAAQS was promulgated in 2006. Conformity requirements apply for all NAAQS, including revoked NAAQS, until emission budgets for the newer NAAQS are found adequate or State Implementation Plan amendments for the newer NAAQS are completed.
6. As of September 16, 2009, the EPA is reconsidering the 2008 8-hour ozone NAAQS (0.075 ppm). On December 17, 2014, the EPA proposed a revision to the primary and secondary ozone standards to a level within a range of 0.065 to 0.070 ppm.
7. Final 1-hour NO_2 NAAQS published in the Federal Register on February 9, 2010, effective March 9, 2010. Project-level hot-spot analysis requirements, while not yet required for conformity purposes, are expected.
8. The EPA finalized a 1-hour SO_2 standard of 75 ppb in June 2010.
9. State standards are "not to exceed" unless stated otherwise. Federal standards are "not to exceed more than once a year" or as noted above.

The federal and State ambient standards were developed independently with differing purposes and methods, although both processes attempted to avoid health-related effects. As a result, the federal and State standards differ in some cases. In general, the California State standards are more stringent. This is particularly true for ozone, $\text{PM}_{2.5}$, and PM_{10} .

The FCAA required the EPA to establish National Ambient Air Quality Standards (NAAQS), and also set deadlines for their attainment. Two types of NAAQS have been established: primary standards, which protect public health, and secondary standards, which protect public welfare from non-health-related adverse effects, such as visibility restrictions.

California Air Quality Regulations

The California Clean Air Act (CCAA), 1988, requires that all air districts in the State endeavor to achieve and maintain California Ambient Air Quality Standards (CAAQS) for O_3 , CO, SO_2 , and NO_2 by the earliest practical date. Plans for attaining CAAQS were to be submitted to CARB by June 30, 1991. The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources. Each district plan is required to either (1) achieve a 5 percent annual reduction, averaged over consecutive three-year periods, in district-wide emissions of each non-attainment pollutant or its precursors, or (2) provide for implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both State and federal planning requirements.

CARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California and for implementing the CCAA of 1988. Each district plan is to achieve a 5 percent annual reduction, averaged over consecutive three-year periods, in district-wide emissions of each non-attainment pollutant or its precursors. Any additional development within the region obviously would impede the reduction goals of the CCAA.

Other CARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control districts and air quality management districts), establishing

3.0 INITIAL STUDY CHECKLIST

CAAQS (which in many cases are more stringent than NAAQS), and setting emissions standards for new motor vehicles. The emission standards established for motor vehicles differ depending on various factors including the model year, and the type of vehicle, fuel and engine used.

Sacramento Metropolitan Air Quality Management District

The SMAQMD, in coordination with the air quality management districts and air pollution control districts of El Dorado, Placer, Solano, Sutter, and Yolo counties, prepared and submitted the 1991 Air Quality Attainment Plan (AQAP) in compliance with the requirements set forth in the CCAA, which specifically addressed the non-attainment status for ozone and, to a lesser extent, CO and PM₁₀. The CCAA also requires a triennial assessment of the extent of air quality improvements and emission reductions achieved through the use of control measures. As part of the assessment, the attainment plan must be reviewed and, if necessary, revised to correct for deficiencies in progress and to incorporate new data or projections. The requirement of the CCAA for a first triennial progress report and revision of the 1991 AQAP was fulfilled with the preparation and adoption of the 1994 Ozone Attainment Plan (OAP).

The OAP stresses attainment of ozone standards and focuses on strategies for reducing ozone precursor emissions of reactive organic compounds (ROG) and NO_x. It promotes active public involvement, enforcement of compliance with SMAQMD rules and regulations, public education in both the public and private sectors, development and promotion of transportation and land use programs designed to reduce vehicle miles traveled (VMT) within the region, and implementation of stationary and mobile-source control measures. The OAP became part of the State Implementation Plan in accordance with the requirements of the CCAA and amended the 1991 AQAP. However, at that time the region could not show that the national ozone (1-hour) standard would be met by 1999. In exchange for moving the deadline to 2005, the region accepted a designation of "severe non-attainment" coupled with additional emission requirements on stationary sources. Additional triennial reports were also prepared in 1997, 2000, and 2003 in compliance with the CCAA, acting as incremental updates.

As a non-attainment area, the region is also required to submit rate-of-progress milestone evaluations in accordance with the CCAA. Milestone reports were prepared for 1996, 1999, and 2002. These milestone reports include compliance demonstrations that the requirements have been met for the Sacramento non-attainment area. The air quality attainment plans and reports present comprehensive strategies to reduce ROG, NO_x, and PM₁₀ emissions from stationary, area, mobile, and indirect sources. Such strategies include the adoption of rules and regulations; enhancement of CEQA participation; implementation of a new and modified indirect source review program; adoption of local air quality plans; and stationary, mobile, and indirect source control measures.

In July 1997, the EPA promulgated a new 8-hour ozone standard. This change lowered the standard for ambient ozone from 0.12 ppm (parts per million) averaged over one hour to 0.08 ppm averaged over eight hours. In general, the 8-hour standard is more protective of public health and more stringent than the 1-hour standard. The promulgation of this standard prompted new designations and non-attainment classifications in June 2004, and resulted in the revocation of the 1-hour standard in June 2005. The region was designated as a non-attainment (serious) area for the national (8-hour) ozone standard with an extended attainment deadline of June 2019 (SMAQMD 2013).

The SMAQMD has also adopted various rules and regulations pertaining to the control of emissions from area and stationary sources. Some of the more pertinent regulatory requirements applicable to the proposed Project are identified as follows:

Rule 402. Nuisance. The purpose of this rule is to limit emissions which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause or have natural tendency to cause injury or damage to business or property.

Rule 403. Fugitive Dust. The purpose of this rule is to require that reasonable precautions be taken so as not to cause or allow the emissions of fugitive dust from non-combustion sources from being airborne beyond the property line from which the emission originates.

Rule 442. Architectural Coatings. The developer or contractor is required to use coatings that comply with the volatile organic compound (VOC) content limits specified in the rule.

Ambient Air Quality

Attainment Status for Criteria Air Pollutants

The attainment status of Sacramento County is summarized in **Table 3.3-3**. An attainment designation for an area signifies that pollutant concentrations did not violate the standard for that pollutant in that area. A non-attainment designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation(s) was caused by an exceptional event, as defined in the criteria.

As depicted in **Table 3.3-3**, Sacramento County is currently designated non-attainment for the federal 8-hour ozone and 24-hour PM_{2.5} standard, as well as the State ozone, PM₁₀, and PM_{2.5} standards. Sacramento County is designated either attainment or unclassified for the remaining federal and State ambient air quality standards.

3.0 INITIAL STUDY CHECKLIST

**TABLE 3.3-3
ATTAINMENT STATUS DESIGNATIONS**

Pollutant	California Standard	Federal Standard
Ozone	1-hour – Nonattainment (serious) 8-hour – Nonattainment	1-hour – Attainment 8-hour – Nonattainment (severe-15)
PM ₁₀	24-hour – Nonattainment Annual – Nonattainment	24-hour – Attainment*
PM _{2.5}	Annual – Nonattainment (No State Standard for 24-hour)	24-hour – Nonattainment Annual – Unclassified/Attainment
Carbon Monoxide	1-hour – Attainment 8-hour – Attainment	1-hour – Attainment 8-hour – Attainment
Nitrogen Dioxide	1-hour – Attainment Annual – Attainment	1-hour – Unclassified/Attainment Annual – Unclassified/Attainment
Sulfur Dioxide	1-hour – Attainment 24-hour – Attainment	1-hour (Attainment Pending)
Lead	30-day average – Attainment	3-month rolling average – Unclassified/Attainment
Visibility Reducing Particles	8-hour – Unclassified	No Federal Standard
Sulfates	24-hour – Attainment	No Federal Standard
Hydrogen Sulfide	1-hour – Unclassified	No Federal Standard

Source: SMAQMD 2013

*Air quality meets federal PM₁₀ standards. The SMAQMD must request redesignation to attainment and submit a maintenance plan to be formally designated attainment.

Odors

Typically odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from the psychological (i.e. irritation, anger, or anxiety) to the physiological, including circulatory and respiratory effects, nausea, vomiting, and headache.

The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell very minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor and in fact an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). It is important to also note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word strong to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is

progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Neither the State nor the federal government has adopted any rules or regulations for the control of odor sources. The SMAQMD does not have an individual rule or regulation that specifically addresses odors; however, odors would be applicable to SMAQMD's Rule 402, Nuisance. Any actions related to odors would be based on citizen complaints to local governments and the SMAQMD. No major stationary sources of odors have been identified in the vicinity of the Project site.

Toxic Air Contaminants

Toxic air contaminants (TACs) are not considered criteria pollutants in that the FCAA and CCAA do not address them specifically through the setting of NAAQS or CAAQS. Instead, the EPA and CARB regulate hazardous air pollutants (HAPs) and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology to limit emissions. In conjunction with SMAQMD rules, they establish the regulatory framework for TACs. At the national level, the EPA has established National Emission Standards for HAPs, as required by the FCAA Amendments. These are technology-based source-specific regulations that limit allowable emissions of HAPs.

At the State level, CARB has authority for the regulation of emissions, including TACs, from motor vehicles, fuels, and consumer products. In California, TACs are regulated primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). AB 1807 sets forth a formal procedure for CARB to designate substances as TACs through research, public participation, and scientific peer review. When looking at all controlled TACs, emissions of diesel-exhaust PM are estimated to be responsible for about 70 percent of the total ambient TAC risk. As a result, CARB has made the reduction of the public's exposure to diesel-exhaust PM one of its highest priorities, with an aggressive plan to require cleaner diesel fuel and cleaner diesel engines and vehicles (CARB 2005).

At the local level, air districts have authority over stationary or industrial sources. All projects that require air quality permits from the SMAQMD are evaluated for TAC emissions. The SMAQMD limits emissions and public exposure to TACs through a number of programs. The SMAQMD prioritizes TAC-emitting stationary sources, based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors. The SMAQMD requires a comprehensive health risk assessment for facilities that are classified in the significant-risk category, pursuant to AB 2588.

DISCUSSION OF IMPACTS

Thresholds of Significance

For the purpose of this analysis, the following thresholds of significance, as identified by the SMAQMD or the State CEQA Guidelines (Appendix G), have been used to determine whether implementation of the proposed Project would result in significant air quality impacts. Implementation of the proposed Project would result in significant air quality impacts if the following apply:

- Short-term Emissions of Criteria Air Pollutants. Construction-generated criteria air pollutant or precursor emissions exceed the SMAQMD-recommended threshold of 85 pounds per day (lbs/day) for NO_x, or substantially contribute to emissions concentrations (e.g., PM₁₀)

3.0 INITIAL STUDY CHECKLIST

that exceed NAAQS or CAAQS. When emissions of NO_x can be reduced to below 85 lbs/day with implementation of all feasible mitigation measures and offsets, other construction-generated mobile-source pollutants can be considered to be less than significant (SMAQMD 2004).

The SMAQMD provides screening criteria that can also be used for the evaluation of construction-generated PM₁₀, based on the overall maximum daily area of disturbance associated with proposed projects (refer to **Table 3.3-4**). In accordance with these criteria, areas of disturbance in excess of SMAQMD's screening criteria would be considered potentially significant. These screening levels are based on the maximum actively disturbed area of the project site. For example, assuming a maximum daily disturbance of less than 15 acres, implementation of recommended "Level Three Mitigation" would typically be considered sufficient to reduce fugitive dust-related impacts to a less than significant level. If the maximum daily area of disturbance would exceed the screening criteria or if the project cannot undertake the mitigation measures that would be required, a more detailed analysis, involving dispersion modeling, may be required (SMAQMD 2004).

**TABLE 3.3-4
SMAQMD PARTICULATE MATTER SCREENING LEVELS FOR CONSTRUCTION PROJECTS**

Maximum Daily Area of Disturbance	Recommended Mitigation
5 Acres and Below	No Mitigation Required
5.1 – 8 Acres	Level One Mitigation Required: Water exposed soil twice daily. Maintain two feet of freeboard space on haul trucks.
8.1 – 12 Acres	Level Two Mitigation Required: Water exposed soil three times daily. Water soil piles three times daily. Maintain two feet of freeboard space on haul trucks.
12.1 – 15 Acres	Level Three Mitigation Required: Keep soil moist at all times. Maintain two feet of freeboard space on haul trucks. Use emulsified diesel or diesel catalysts on applicable heavy-duty diesel construction equipment.

Source: SMAQMD 2004

- Long-term Emissions of Criteria Air Pollutants. Long-term regional criteria air pollutant or precursor emissions exceed the SMAQMD-recommended threshold of 65 lbs/day for ROG and NO_x, or substantially contribute to emissions concentrations (e.g., PM₁₀) that exceed NAAQS or CAAQS.
- Local Carbon Monoxide Concentrations. Local mobile-source emissions exceed or substantially contribute to CO concentrations that violate the 1-hour ambient air quality standard of 20 ppm or the 8-hour standard of 9 ppm.
- Local Toxic Air Contaminant Concentrations. Exposure of sensitive receptors to TAC emissions exceeds 10 in one million for the Maximally Exposed Individual to contract cancer and/or a Hazard Index of one for the Maximally Exposed Individual.
- Local Odor Concentrations. Frequent exposure of a substantial number of individuals to odorous emissions would be considered significant.

- a) *Would the project conflict with or obstruct implementation of the applicable air quality plan?*

No Impact. A project is considered to conflict with or obstruct implementation of regional air quality plans if it would be inconsistent with the emissions inventories contained in the regional air quality plans. Emission inventories are developed based on projected increases in population growth and vehicle miles traveled (VMT) within the region. The proposed Project would involve minor improvements and striping to existing Class I and Class II facilities on Beckington Drive and would extend the Laguna Creek Trail from Camden Park to White Peacock Court/Beckington Drive and from Beckington Drive to MacDonald Park. The Project would not result in an increase in population or VMT. In addition, implementation of the proposed Project would increase the connectivity of the City's off-street trail network and encourage the use of alternative modes of transportation, potentially reducing the use of personal motor vehicles. Long-term operation of the proposed Project is anticipated to result in overall beneficial air quality impacts and would not be anticipated to conflict with existing or future air quality planning efforts. Therefore, no impact would occur.

- b) *Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

Less than Significant Impact. The proposed Project does not involve construction of a new roadway or physical alteration of an existing roadway, nor would it affect local motorized vehicle traffic patterns. The Project does not include the operation of any major stationary sources of emissions. Implementation of the proposed Project would increase the connectivity of the City's off-street trail network and encourage the use of alternative modes of transportation, potentially reducing the use of personal motor vehicles. Long-term operation of the proposed Project is anticipated to result in overall beneficial air quality impacts.

Short-term increases in emissions would occur during construction. The construction period would be limited and temporary. The Project footprint is approximately 1.84 acres and would disturb less than 35 acres, and therefore does not surpass the SMAQMD screening threshold for construction-generated NO_x emissions. Furthermore, the proposed Project would not surpass the SMAQMD particulate matter screening levels for construction projects, as the area of disturbance is less than 5 acres. Therefore, construction-generated air pollutants associated with the proposed Project would be less than significant and no emissions quantification is required. Additionally, in terms of potential operational air quality impacts, once the segment of sidewalk has been constructed and is in operation, the proposed Project would not contribute to any stationary, mobile, area, or indirect sources of air pollution. Based on the small scale and limited duration of construction, and the fact that no operational emissions would be generated, the Project would not violate an air quality standard or contribute to an existing or projected air quality violation. Therefore, impacts would be less than significant.

- c) *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?*

Less than Significant Impact. The SMAQMD considers projects that are both consistent with the air quality plan (the *Federal 8-hour Ozone Reasonable Further Progress Plan for the Sacramento Federal Ozone Nonattainment Area in 2008*) and below SMAQMD significance thresholds of the ozone precursor pollutants (i.e., ROG and NO_x) to have less than significant cumulative impacts. As discussed in issue a), the proposed Project would not conflict with the air quality plan since it would not result in an increase in population or VMT. As discussed in issue b), predicted

3.0 INITIAL STUDY CHECKLIST

construction emissions attributable to the proposed Project would not exceed SMAQMD screening thresholds and by the very nature of the Project, cumulative impacts would be less than significant per the SMAQMD significance threshold since the Project would be consistent with the applicable air quality plan and would not exceed SMAQMD significance thresholds. Impacts are considered less than significant.

d) *Would the project expose sensitive receptors to substantial pollutant concentrations?*

Less than Significant Impact. Long-term operation of the proposed Project is anticipated to result in overall beneficial air quality impacts as it would increase the connectivity of the City's off-street trail network and encourage the use of alternative modes of transportation, potentially reducing the use of personal motor vehicles.

Particulate exhaust emissions from diesel-fueled engines (diesel-exhaust PM) were identified as TACs by CARB in 1998. Construction of the proposed Project would result in diesel PM emissions from the use of off-road diesel equipment for site grading and excavation, paving, and other construction activities. The closest sensitive receptors to the Project site are the residences in the residential neighborhood in which the Class I and Class II facilities portion of the Project are located. Health risks associated with diesel exhaust emissions are primarily associated with long-term exposure and associated risk with contracting cancer. Since construction activities for the proposed Project would be limited and temporary, and the use of diesel-powered construction equipment would be temporary and episodic, diesel-exhaust PM generated by construction of the Project would not be expected to create conditions where there would be a greater probability of risks to the health of nearby sensitive receptors.

In accordance with the SMAQMD-recommended guidance for the analysis of air quality impacts, if emissions of NO_x associated with on-site construction equipment are determined to be less than significant, then other pollutants from on-site mobile sources can also be assumed to be less than significant. As discussed in issue b) and in comparison to SMAQMD recommendations, predicted construction-generated emissions of NO_x, as well as other mobile source emissions, would be considered less than significant. For these reasons, impacts would be less than significant.

e) *Would the project create objectionable odors affecting a substantial number of people?*

Less than Significant Impact. The occurrence and severity of odor impacts depends on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies. Projects with the potential to frequently expose members of the public to objectionable odors would be deemed to have a significant impact.

Construction of the proposed Project would involve the use of a variety of gasoline- or diesel-powered equipment that would emit exhaust fumes. Exhaust fumes, particularly diesel-exhaust, may be considered objectionable by some people. In addition, pavement coatings and architectural coatings used during Project construction would also emit temporary odors. However, construction-generated emissions would occur intermittently throughout the workday and would dissipate rapidly with increasing distance from the source. Additionally, SMAQMD Rule 402 addresses the exposure of emissions that may cause nuisance to any substantial number of people. The proposed Project would be subject to Rule 402 and any objectionable odors resulting from the proposed Project would be short term and limited to the construction period. Furthermore, idling times of construction equipment would be minimized as required by

the State airborne toxics control measure (Title 13, Section 2485 of the California Code of Regulations). As a result, short-term construction activities would not expose a substantial number of people to frequent odorous emissions. In addition, the proposed Project would not result in the installation of any equipment that would be considered major odor-emission sources. Therefore, impacts would be considered less than significant.

3.0 INITIAL STUDY CHECKLIST

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.4 BIOLOGICAL RESOURCES. Would the project:				
a) 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 California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.), through direct removal, filling, hydrological interruption or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

This section describes the natural resources present within and immediately surrounding the Project site and includes a discussion of the special-status species and sensitive habitats potentially occurring in the area. Also included is an analysis of impacts that could occur to biological resources due to implementation of the proposed Project and appropriate mitigation measures to reduce or avoid those impacts. The analysis of biological resources presented in this section is based on a review of the current project description, the Natural Environment Study, Biological Assessment, and Wetland Delineation prepared for the Project (included in **Appendices A through C**), and available literature, as well as site visits and surveys conducted by Michael Baker International biologists in October 2010, March 2011, May 2011, and December 2013.

ENVIRONMENTAL SETTING

A Michael Baker International biologist conducted an evaluation of the Project to characterize the environmental setting on and adjacent to the proposed Project site. The evaluation involved

a thorough query of available data and literature from local, State, federal, and nongovernmental agencies, and site surveys to collect site-specific data regarding habitat suitability for special-status species and identify any potentially jurisdictional waters.

Database searches were performed on the following websites:

- USFWS Sacramento Office Species List (2014a)
- USFWS Critical Habitat Portal (2014b)
- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) (2014a)
- California Native Plant Society (CNPS) Inventory of Rare, Threatened, and Endangered Plants of California (2014)
- A search of the USFWS Sacramento office's Species Lists database was performed for the Elk Grove, Florin, Bruceville, Galt, Courtland, Clarksville, Sacramento East, Carmichael, and Sacramento West, California, US Geological Survey (USGS) 7.5 minute quadrangles (quads) to identify federally listed species under USFWS jurisdiction that may be affected by the proposed Project. In addition, a query of the USFWS's Critical Habitat Portal was conducted to identify any designated critical habitat on or in the vicinity of the Project area. The CNDDDB provided a list of processed and unprocessed occurrences of special-status species identified within the aforementioned USGS quads. The CNPS database was also queried to identify special-status plant species with the potential to occur in the aforementioned USGS quads. The raw data returned from the database queries is provided in **Appendix D**.
- The Biological Study Area (BSA) for the proposed Project was defined using a 250-foot buffer of the Project footprint (**Figure 3.4-1**). The BSA is characterized by urban land uses, annual grassland, man-made drainage ditches, freshwater emergent wetlands, open water, and valley foothill riparian habitat. The BSA is relatively flat through the neighborhood between Camden Park and MacDonald Park and the topography slopes from the edge of the residential neighborhood south toward Laguna Creek. The elevation of the BSA is between approximately 37 and 47 feet above mean sea level. Hydrologic features in the BSA include Laguna Creek, Whitehouse Creek, Camden Lake, and man-made ditches. Specifically, 0.015 acre of man-made ditch, 0.387 acre of Laguna Creek, and 2.24 acres of Whitehouse Creek occur within the BSA and are considered waters of the United States.

REGULATORY SETTING

Federal

Endangered Species Act

The Endangered Species Act of 1973 (ESA), as amended, provides protective measures for federally listed threatened and endangered species, including their habitats, from unlawful take (16 United States Code (USC) Sections 1531–1544). The ESA defines "take" to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Title 50, Part 222, of the Code of Federal Regulations (50 CFR Section 222) further defines "harm" to include "an act which actually kills or injures fish or wildlife. Such an act may

3.0 INITIAL STUDY CHECKLIST

include significant habitat modification or degradation where it actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns including feeding, spawning, rearing, migrating, feeding, or sheltering."

ESA Section 7(a)(1) requires federal agencies to utilize their authority to further the conservation of listed species. ESA Section 7(a)(2) requires consultation with the USFWS or the National Marine Fisheries Service (NMFS) if a federal agency undertakes, funds, permits, or authorizes (termed the federal nexus) any action that may affect endangered or threatened species or designated critical habitat. For projects that may result in the incidental take of threatened or endangered species, or critical habitat, and that lack a federal nexus, a Section 10(a)(1)(b) incidental take permit can be obtained from the USFWS and/or the NMFS.

Clean Water Act

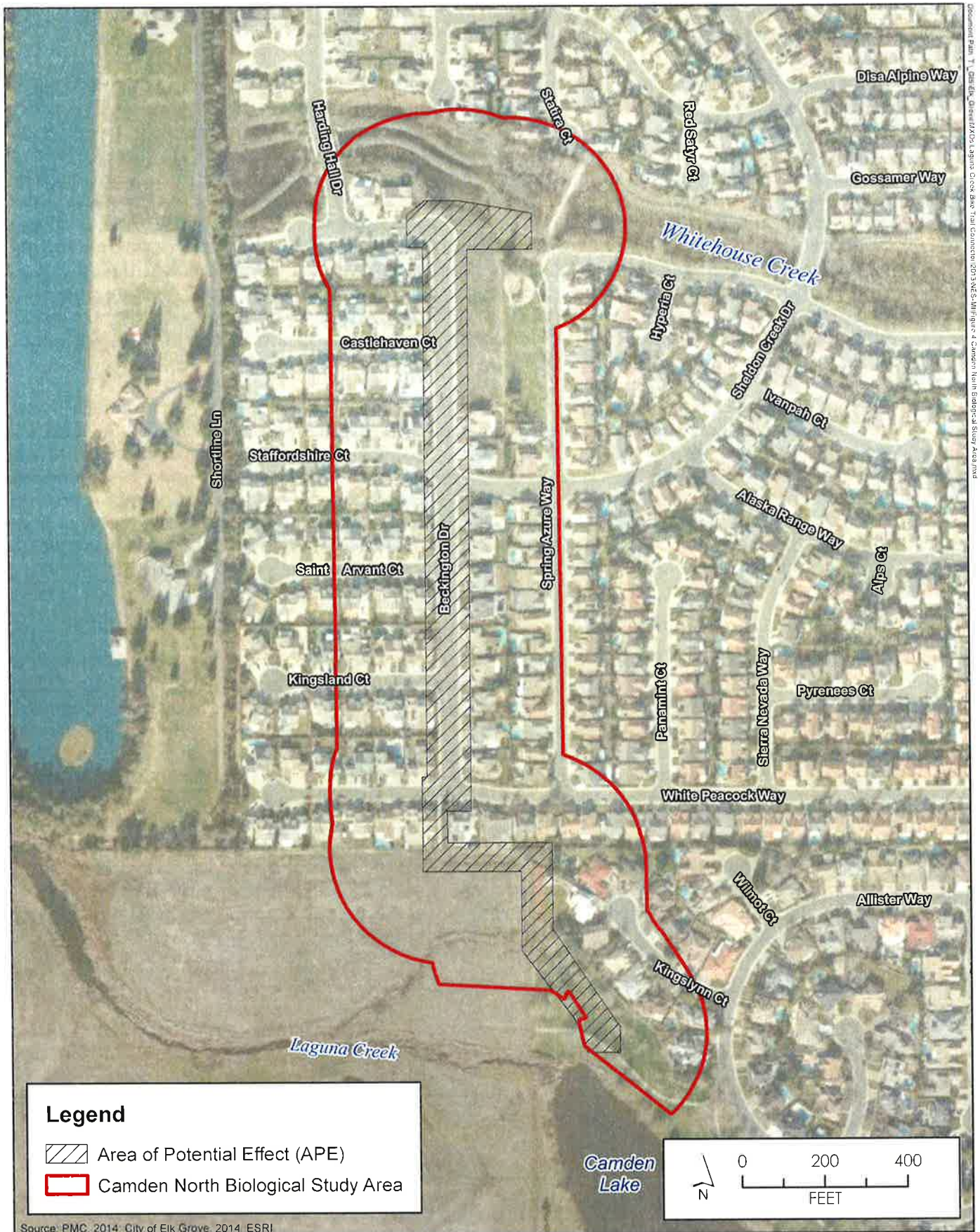
The basis of the Clean Water Act (CWA) was established in 1948; however, it was referred to as the Federal Water Pollution Control Act. The act was reorganized and expanded in 1972 (33 USC Section 1251), and at that time the CWA became the act's commonly used name. The basis of the CWA is the regulation of pollutant discharges into waters of the United States, as well as the establishment of surface water quality standards.

Section 404

CWA Section 404 (33 USC Section 1344) established a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Under this regulation, certain activities proposed within waters of the United States require that a permit be obtained prior to initiation. These activities include, but are not limited to, placement of fill for the purposes of development, water resource projects (e.g., dams and levees), infrastructure development (e.g., highways and bridges), and mining operations.

The primary objective of this program is to ensure that the discharge of dredged or fill material is not permitted if a practicable alternative to the proposed activities exists that results in less impact to waters of the United States, or the proposed activity would result in significant adverse impacts to these waters. To comply with these objectives, a permittee must document the measures taken to avoid and minimize impacts to waters of the United States and provide compensatory mitigation for any unavoidable impacts.

The EPA and the USFWS are assigned roles and responsibilities in the administration of this program; however, the USACE is the lead agency in the administration of day-to-day activities, including issuance of permits. The agencies will typically assert jurisdiction over the following waters: (1) traditional navigable waters (TNW); (2) wetlands adjacent to TNWs; (3) relatively permanent waters (RPW) that are non-navigable tributaries to TNWs and have relatively permanent flow or seasonally continuous flow (typically three months); and (4) wetlands that directly abut RPWs. Case-by-case investigations are usually conducted by the agencies to ascertain their jurisdiction over waters that are non-navigable tributaries and do not contain relatively permanent or seasonal flow, wetlands adjacent to the aforementioned features, and wetlands adjacent to but not directly abutting RPWs (USACE 2007). Jurisdiction is not generally asserted over swales or erosional features (e.g., gullies or small washes characterized by low volume/short duration flow events) or ditches constructed wholly within and draining only uplands that do not have relatively permanent flows.



Copyright 2014, Esri. All rights reserved. ArcGIS, ArcView, ArcMap, ArcCatalog, ArcSDE, ArcGIS Online, ArcGIS for Desktop, ArcGIS for Server, ArcGIS for Mobile, ArcGIS for Enterprise, ArcGIS for Government, ArcGIS for Education, ArcGIS for Industry, ArcGIS for Utilities, ArcGIS for Energy, ArcGIS for Environment, ArcGIS for Agriculture, ArcGIS for Construction, ArcGIS for Transportation, ArcGIS for Water, ArcGIS for Smart City, ArcGIS for Smart Grid, ArcGIS for Smart Buildings, ArcGIS for Smart Infrastructure, ArcGIS for Smart Communities, ArcGIS for Smart Regions, ArcGIS for Smart Nations, ArcGIS for Smart Planet.

Figure 3.4-1
Biological Study Area

The extent of jurisdiction within waters of the United States that lack adjacent wetlands is determined by the ordinary high water mark, which is defined in 33 CFR Section 328.3(e) as the "line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas." Wetlands are further defined under 33 CFR Section 328.3 and 40 CFR Section 230.3 as "those areas that are inundated or saturated by surface water 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" and typically include "swamps, marshes, bogs, and similar areas." The 1987 Corps of Engineers Wetland Delineation Manual (1987 Manual) sets forth a standardized methodology for delineating the extent of wetlands under federal jurisdiction (Environmental Laboratory 1987).

The 1987 Manual outlines three parameters that all wetlands, under normal circumstances, must contain positive indicators for to be considered jurisdictional. These parameters include (1) wetland hydrology, (2) hydrophytic vegetation, and (3) hydric soils (Environmental Laboratory 1987). In 2006, the USACE issued a series of regional supplements to address regional differences that are important to the functioning and identification of wetlands. The supplements present "wetland indicators, delineation guidance, and other information" that is specific to the region. The USACE requires that wetland delineations submitted after June 5, 2007, be conducted in accordance with both the 1987 Manual and the applicable supplement.

Section 401

Under CWA Section 401 (33 USC Section 1341), federal agencies are not authorized to issue a permit and/or license for any activity that may result in discharges to waters of the United States, unless a state or tribe where the discharge originates either grants or waives CWA Section 401 certification. CWA Section 401 provides states or tribes with the ability to grant, grant with conditions, deny, or waive certification. Granting certification, with or without conditions, allows the federal permit/license to be issued and remain consistent with any conditions set forth in the CWA Section 401 certification. Denial of the certification prohibits the issuance of the federal license or permit, and waiver allows the permit/license to be issued without state or tribal comment. Decisions made by states or tribes are based on the proposed Project's compliance with EPA water quality standards as well as applicable effluent limitations guidelines, new source performance standards, toxic pollutant restrictions, and any other appropriate requirements of state or tribal law. In California, the State Water Resources Control Board is the primary regulatory authority for CWA Section 401 requirements (additional details below).

Migratory Bird Treaty Act

Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) of 1918 (16 USC Sections 703–711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Section 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR Section 21). The majority of birds found in the Project vicinity would be protected under the MBTA.

Executive Order 11990 Protection of Wetlands (42 FR 26961, 25 May 1977)

Executive Order 11990 requires federal agencies to provide leadership and take action to minimize destruction, loss, or degradation of wetlands and to preserve and enhance the natural qualities of these lands. Federal agencies are required to avoid undertaking or providing support

3.0 INITIAL STUDY CHECKLIST

for new construction located in wetlands unless (1) no practicable alternative exists, and (2) all practical measures have been taken to minimize harm to wetlands.

Fish and Wildlife Coordination Act of 1958 (16 USC 661 et seq.)

The Fish and Wildlife Coordination Act requires that whenever any body of water is proposed or authorized to be impounded, diverted, or otherwise controlled or modified, the lead federal agency must consult with the USFWS, the State agency responsible for fish and wildlife management, and the NMFS. Section 662(b) of the act requires the lead federal agency to consider the recommendations of the USFWS and other agencies. The recommendations may include proposed measures to mitigate or compensate for potential damages to wildlife and fisheries associated with a modification of a waterway.

Executive Order 13112 – Invasive Species

This executive order directs all federal agencies to refrain from authorizing, funding, or carrying out actions or projects that may spread invasive species. The order further directs federal agencies to prevent the introduction of invasive species, control and monitor existing invasive species populations, restore native species to invaded ecosystems, research and develop prevention and control methods for invasive species, and promote public education on invasive species. As part of the proposed action, the USFWS and USACE would issue permits and therefore would be responsible for ensuring that the proposed action complies with Executive Order 13112 and does not contribute to the spread of invasive species.

State

California Endangered Species Act

Under the California Endangered Species Act (CESA), the CDFW has the responsibility for maintaining a list of endangered and threatened species (Fish and Game Code [FGC] Section 2070). The CDFW also maintains a list of "candidate species," which are species formally noticed as being under review for potential addition to the list of endangered or threatened species, and a list of "species of special concern," which serve as species "watch lists."

Pursuant to the requirements of the CESA, an agency reviewing a proposed Project within its jurisdiction must determine whether any State-listed endangered or threatened species may be present and determine whether the proposed Project will have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any proposed Project that may impact a candidate species.

Project-related impacts to species on the CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of the CESA. Take of protected species incidental to otherwise lawful management activities may be authorized under FGC Section 206.591. Authorization from the CDFW would be in the form of an incidental take permit.

California Fish and Game Code

Streambed Alteration Agreement (FGC Sections 1600–1607)

State and local public agencies are subject to FGC Section 1602, which governs construction activities that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated as waters of the State by the CDFW. Under FGC Section 1602, a discretionary Streambed Alteration Agreement must be issued by the CDFW to the project proponent prior to the initiation of construction activities within lands under CDFW jurisdiction. As a general rule, this requirement applies to any work undertaken within the 100-year floodplain of a stream or river containing fish or wildlife resources.

Native Plant Protection Act

The Native Plant Protection Act (FGC Sections 1900–1913) prohibits the taking, possessing, or sale within the state of any plants with a state designation of rare, threatened, or endangered (as defined by the CDFW). An exception in the act allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify the CDFW, and give that state agency at least 10 days to retrieve the plants before they are plowed under or otherwise destroyed (FGC Section 1913). Project impacts to these species are not considered significant unless the species are known to have a high potential to occur within the area of disturbance associated with construction of the proposed Project.

Birds of Prey

Under FGC Section 3503.5, it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey) 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.

Fully Protected Species

California statutes also afford "fully protected" status to a number of specifically identified birds, mammals, reptiles, and amphibians. These species cannot be taken, even with an incidental take permit. FGC Section 3505 makes it unlawful to take "any egret or egret, osprey, bird of paradise, goura, numidi, or any part of such a bird." FGC Section 3511 protects from take the following fully protected birds: (a) American peregrine falcon (*Falco peregrinus anatum*); (b) brown pelican (*Pelecanus occidentalis*); (c) California black rail (*Laterallus jamaicensis coturniculus*); (d) California clapper rail (*Rallus longirostris obsoletus*); (e) California condor (*Gymnogyps californianus*); (f) California least tern (*Sterna albifrons browni*); (g) golden eagle (*Aquila chrysaetos*); (h) greater sandhill crane (*Grus canadensis tabida*); (i) light-footed clapper rail (*Rallus longirostris levipes*); (j) southern bald eagle (*Haliaeetus leucocephalus leucocephalus*); (k) trumpeter swan (*Cygnus buccinator*); (l) white-tailed kite (*Elanus leucurus*); and (m) Yuma clapper rail (*Rallus longirostris yumanensis*).

FGC Section 4700 identifies the following fully protected mammals that cannot be taken: (a) Morro Bay kangaroo rat (*Dipodomys heermanni morroensis*); (b) bighorn sheep (*Ovis canadensis*), except Nelson bighorn sheep (subspecies *Ovis canadensis nelsoni*); (c) Guadalupe fur seal (*Arctocephalus townsendi*); (d) ring-tailed cat (genus *Bassariscus*); (e) Pacific right whale (*Eubalaena sieboldi*); (f) salt-marsh harvest mouse (*Reithrodontomys raviventris*); (g) southern sea otter (*Enhydra lutris nereis*); and (h) wolverine (*Gulo gulo*).

FGC Section 5050 protects from take the following fully protected reptiles and amphibians: (a) blunt-nosed leopard lizard (*Crotaphytus wislizenii silus*); (b) San Francisco garter snake

3.0 INITIAL STUDY CHECKLIST

(*Thamnophis sirtalis tetrataenia*); (c) Santa Cruz long-toed salamander (*Ambystoma macrodactylum croceum*); (d) limestone salamander (*Hydromantes brunus*); and (e) black toad (*Bufo boreas exsul*).

FGC Section 5515 identifies certain fully protected fish that cannot lawfully be taken, even with an incidental take permit. The following species are protected in this fashion: (a) Colorado River squawfish (*Ptychocheilus lucius*); (b) thicktail chub (*Gila crassicauda*); (c) Mohave chub (*Gila mohavensis*); (d) Lost River sucker (*Catostomus luxatus*); (e) Modoc sucker (*Catostomus microps*); (f) shortnose sucker (*Chasmistes brevirostris*); (g) humpback sucker (*Xyrauchen texanus*); (h) Owens River pupfish (*Cyprinodon radiosus*); (i) unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*); and (j) rough sculpin (*Cottus asperimus*).

California Wetlands and Other Waters Policies

The California Resources Agency and its various departments do not authorize or approve projects that fill or otherwise harm or destroy coastal, estuarine, or inland wetlands. Exceptions may be granted if all of the following conditions are met:

- The project is water-dependent.
- No other feasible alternative is available.
- The public trust is not adversely affected.
- Adequate compensation is proposed as part of the project.

Porter-Cologne Water Quality Control Act (Porter-Cologne)

The Porter-Cologne Water Quality Control Act of 1966 (California Water Code Section 13000 et seq.; CCR Title 23, Chapter 3, Subchapter 15) is the primary State regulation that addresses water quality. The requirements of the act are implemented by the State Water Resources Control Board at the State level and at the local level by the Regional Water Quality Control Board (RWQCB). The RWQCB carries out planning, permitting, and enforcement activities related to water quality in California. The act provides for waste discharge requirements and a permitting system for discharges to land or water. Certification is required by the RWQCB for activities that can affect water quality.

Clean Water Act, Section 401 Water Quality Certification

CWA Section 401 (33 USC Section 1341) requires that any applicant for a federal license or permit that may result in a pollutant discharge to waters of the United States obtain a certification that the discharge will comply with EPA water quality standards. The State or tribal agency responsible for issuance of the Section 401 certification may also require compliance with additional effluent limitations and water quality standards set forth in State/tribal laws. In California, the RWQCB is the primary regulatory authority for CWA Section 401 requirements.

The Central Valley RWQCB is responsible for enforcing water quality criteria and protecting water resources in the Project area. In addition, the RWQCB is responsible for controlling discharges to surface waters of the State by issuing waste discharge requirements (WDR) or commonly by issuing conditional waivers to WDRs. The RWQCB requires that a project proponent obtain a CWA Section 401 water quality certification for CWA Section 404 permits issued by the USACE.

Delegated Permit Authority

California has been delegated permit authority for the NPDES permit program including stormwater permits for all areas except tribal lands. Issuance of CWA Section 404 dredge and fill permits remains the responsibility of the USACE; however, the State actively uses its CWA Section 401 certification authority to ensure CWA Section 404 permits are in compliance with State water quality standards.

State Definition of Covered Waters

Under California State law, "waters of the State" means "any surface water or groundwater, including saline waters, within the boundaries of the state." Therefore, water quality laws apply to both surface water and groundwater. After the US Supreme Court decision in *Solid Waste Agency of Northern Cook County v. US Army Corps of Engineers*, the Office of Chief Counsel of the State Water Resources Control Board released a legal memorandum confirming the State's jurisdiction over isolated wetlands. The memorandum stated that under Porter-Cologne, discharges to wetlands and other waters of the State are subject to State regulation, and this includes isolated wetlands. In general, the State Water Resources Control Board regulates discharges to isolated waters in much the same way as it does for waters of the US, using Porter-Cologne rather than CWA authority.

Local

City of Elk Grove Tree Preservation and Protection Code (Elk Grove Municipal Code Chapter 19.12)

Chapter 19.12 of the Elk Grove Municipal Code, Tree Preservation and Protection, strives to protect and preserve trees of local importance, including coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), blue oak (*Quercus douglasii*), interior live oak (*Quercus wislizeni*), oracle oak (*Quercus x moreha*), California sycamore (*Platanus racemosa*), and black walnut (*Juglans hindsii*) with a single trunk 6 inches diameter at breast height or greater, or a multi-trunk with a combined diameter at breast height of 6 inches or greater. Chapter 19.12 of the Elk Grove Municipal Code requires mitigation for the removal of trees of local importance with dimensions described above; trees that have been selected for preservation; all portions of adjacent off-site native trees that have driplines that extend onto the project site; and all off-site native trees that may be impacted by utility installation and/or improvements associated with the project. Current policies require that every inch lost will be mitigated by an inch planted or equivalent credit obtained from a tree mitigation bank.

City of Elk Grove Swainson's Hawk Impact Mitigation Fees

Chapter 16.130 of the City Municipal Code, Swainson's Hawk Impact Mitigation Fees, requires mitigation for the loss of Swainson's hawk habitat at a 1:1 ratio. Mitigation can be achieved through the payment of a fee, which is used to fund the City's Swainson's hawk habitat restoration program. Other options for achieving mitigation through the code include the direct transfer to the City of a Swainson's hawk habitat conservation easement along with an easement monitoring endowment or the purchase of credits at a CDFW-approved conservation bank. The site must be surveyed to determine whether it is suitable Swainson's hawk foraging habitat.

3.0 INITIAL STUDY CHECKLIST

City of Elk Grove General Plan

The City's General Plan identifies specific goals, objectives, and policies regarding natural resources (City of Elk Grove 2009). The General Plan serves as the overall guiding policy document for land use, development, and environmental quality for the City. The Conservation and Air Quality Element and the Parks, Trails, and Open Space Element of the General Plan include goals and policies to preserve, protect, enhance, and promote the City's valuable natural resources. The General Plan identifies specific goals and policies regarding biological and natural resources. The following policies are applicable to the proposed project.

"Policy CAQ-8: Large trees (both native and non-native are an important aesthetic (and in some cases, biological) resource. Trees which function as an important part of the City's or a neighborhood's aesthetic character or as natural habitat should be retained to the extent possible during the development of new structures, roadways (public and private, including roadway widening), parks, drainage channels, and other uses and structures."

"Policy CAQ-9: Wetlands, vernal pools, marshland and riparian (streamside) areas are considered to be important resources. Impacts to these resources shall be avoided unless shown to be technically infeasible. The City shall seek to ensure that no net loss of wetland areas occurs, which may be accomplished by avoidance, re-vegetation and restoration onsite or creation of riparian habitat corridors."

"Policy PTO-15: The City views open space lands of all types as an important resource which should be preserved in the region, and supports the establishment of multi-purpose open space areas to address a variety of needs, including, but not limited to:

- Maintenance of agricultural uses
- Wildlife habitat
- Recreational open space
- Aesthetic benefits
- Flood control
- To the extent possible, lands protected in accordance with this policy should be in proximity to Elk Grove, to facilitate use of these areas by Elk Grove residents, assist in mitigation of habitat loss within the City, and provide an open space resource close to the urbanized areas of Elk Grove."

Nongovernmental Agency

California Native Plant Society

The CNPS is a nongovernmental agency that classifies native plant species according to current population distribution and threat level in regard to extinction. The CNPS utilizes the data to create and maintain a list of native California plants that have low numbers or limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2014). 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 believed to be extinct
- List 1B: Plants that are rare, threatened, or endangered in California and elsewhere
- List 2B: Plants that are rare, threatened, or endangered in California, but are more numerous elsewhere

All of the plant species on List 1 and 2 meet the requirements of the Native Plant Protection Act, Section 1901, Chapter 10, or FGC Sections 2062 and 2067, and are eligible for State listing. Plants appearing on List 1 or 2 are considered to meet the criteria of CEQA Section 15380, and effects on these species are considered "significant." Classifications for plants on List 3 (plants about which more information is needed) and/or List 4 (plants of limited distribution), as defined by the CNPS, are not currently protected under State or federal law. Therefore, no detailed descriptions are provided or impact analysis was performed on species with these classifications.

DISCUSSION OF IMPACTS

- a) *Would the project 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 California Department of Fish and Game or U.S. Fish and Wildlife Service?*

Less than Significant with Mitigation Incorporated. Candidate, sensitive, or special-status species are commonly characterized as species that are at potential risk to their persistence in a given area or across their range. These species have been identified and assigned a status ranking by governmental agencies such as the CDFW and the USFWS, and nongovernmental organizations such as the CNPS. The degree to which a species is at risk of extinction is the determining factor in the assignment of a status ranking. Some common threats to a species' or population's persistence include habitat loss, degradation, and fragmentation, as well as human conflict and intrusion. For the purposes of this biological review, special-status species are defined by the following codes:

- 1) Listed, proposed, or candidates for listing under the federal Endangered Species Act (50 CFR 17.11 – listed; 61 Federal Register [FR] 7591, February 28, 1996, candidates)
- 2) Listed or proposed for listing under the California Endangered Species Act (FGC 1992 Section 2050 et seq.; 14 CCR Section 670.1 et seq.)
- 3) Designated as Species of Special Concern by the CDFW
- 4) Designated as Fully Protected by the CDFW (FGC Sections 3511, 4700, 5050, 5515)
- 5) Species that meet the definition of rare or endangered under CEQA (14 CCR Section 15380) including CNPS List Rank 1B and 2

The query of the USFWS, CNPS, and CNDDDB databases, combined with the site visits and surveys, identified habitat for several special-status species with the potential to occur in the Project area. Refer to **Figure 3.4-2** for the project impact map and **Figure 3.4-3** for a depiction of CNDDDB occurrences within 1 mile of the BSA. The Natural Environment Study prepared for the Project and included in **Appendix A** provides a summary of all special-status species identified in the

3.0 INITIAL STUDY CHECKLIST

search results, a description of the habitat requirements for each species, and conclusions regarding the potential for each species to be impacted by the proposed Project.

Special-Status Plant Species

Eleven special-status plant species were identified as having the potential to occur within the BSA: bristly sedge (*Carex comosa*), Bolander's water-hemlock (*Cicuta maculate var. bolanderi*), Peruvian dodder (*Cuscuta obtusiflora var. glandulosa*), dwarf downingia (*Downingia pusilla*), woolly rose mallow (*Hibiscus lasiocarpus var. occidentalis*), legenere (*Legenere limosa*), Mason's lillaeopsis (*Lillaeopsis masonii*), Sanford's arrowhead (*Sagittaria sanfordii*), marsh skullcap (*Scutellaria galericulata*), side-flowering skullcap (*Scutellaria lateriflora*), and saline clover (*Trifolium hydrophilum*).

A rare plant survey was conducted by a Michael Baker International biologist for the proposed Project on May 6, 2011, to evaluate the presence and absence of rare plants within the BSA. Two individuals were identified in Laguna Creek that were indiscernible between the more common water plantain and Sanford's arrowhead due to a lack of inflorescences. The plants were found adjacent to the water's edge with common cattail and bulrush. If these plants are Sanford's arrowhead, based on engineering provided, the proposed Project would avoid the low-water channel where these plants occur and no impact would occur to these plants. No other special-status plant species were identified during this survey effort; however, suitable habitat exists within the BSA for all 11 special-status plant species.

If any special-status plants are present within the Project footprint and/or the temporary construction zone, individuals may be directly impacted by trampling, compaction, or removal. These species are generally associated with fresh emergent wetland or annual grassland habitats. The proposed Project would result in approximately 0.032 acre of permanent and 0.060 acre of temporary impact to fresh emergent wetland associated with Laguna Creek, and approximately 0.023 acre of temporary impact to open water associated with Whitehouse Creek. In addition, approximately 0.194 acre of temporary impact and 0.081 acre of permanent impact to annual grassland habitats that may support special-status plants are anticipated due to Project construction. However, implementation of mitigation measures **MM 3.4.1** through **MM 3.4.6** and **MM 3.4.9** through **MM 3.4.12** will reduce impacts to less than significant by minimizing the area of disturbance during construction, prohibiting work during rain events, requiring water flows in creeks/ditches to be diverted around work areas, requiring implementation of best management practices (BMPs) to prevent degradation to waters of the US, minimizing sediment-tracking, requiring revegetation of disturbed areas, requiring preconstruction surveys for special-status plants and implementation of avoidance measures, implementing a Worker Environmental Awareness Program about sensitive biological resources and proper avoidance measures, and requiring consultation with appropriate agencies if any species are present and cannot be avoided to determine appropriate mitigation.

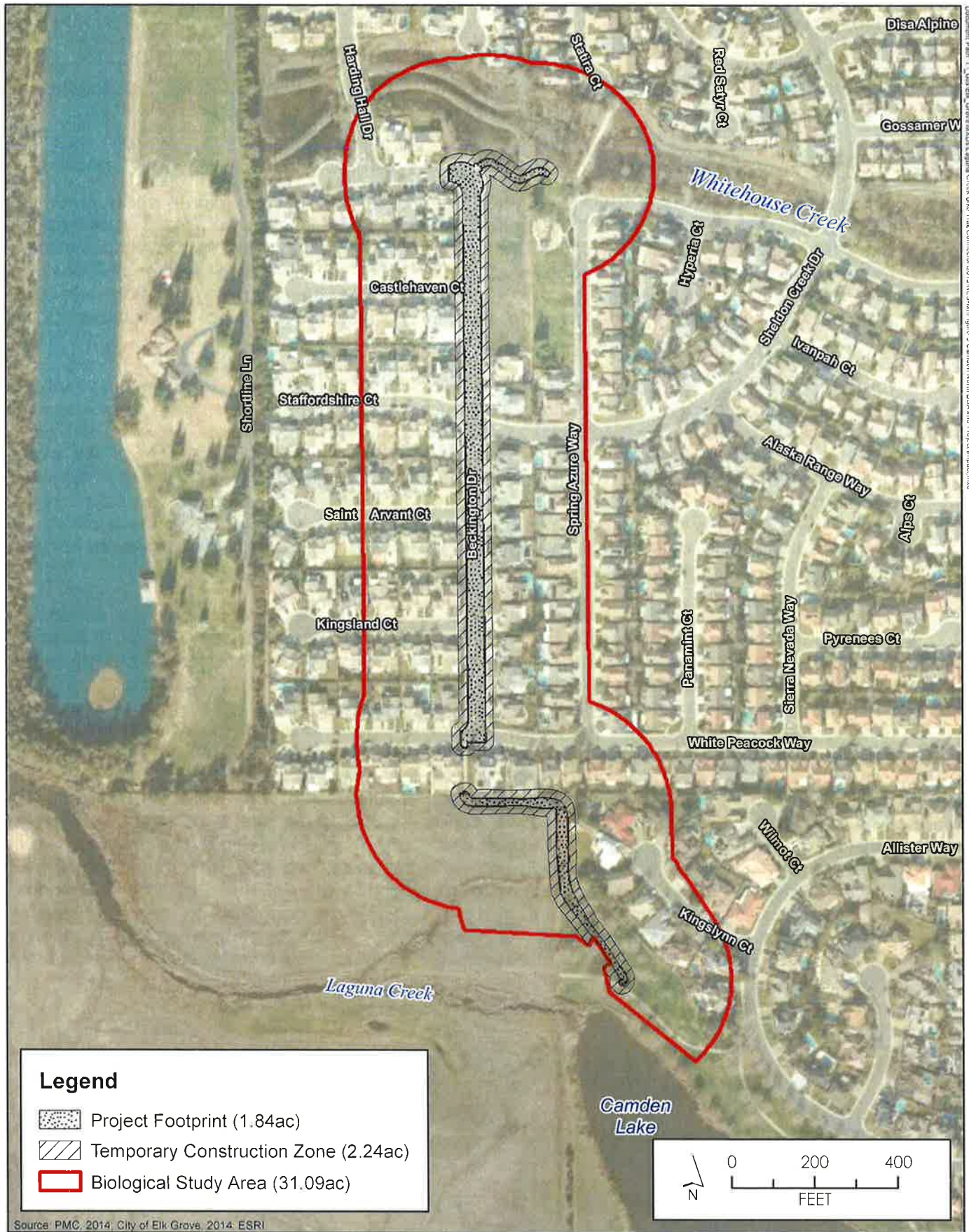


Figure 3.4-2

Biological Study Area and Project Impact Map

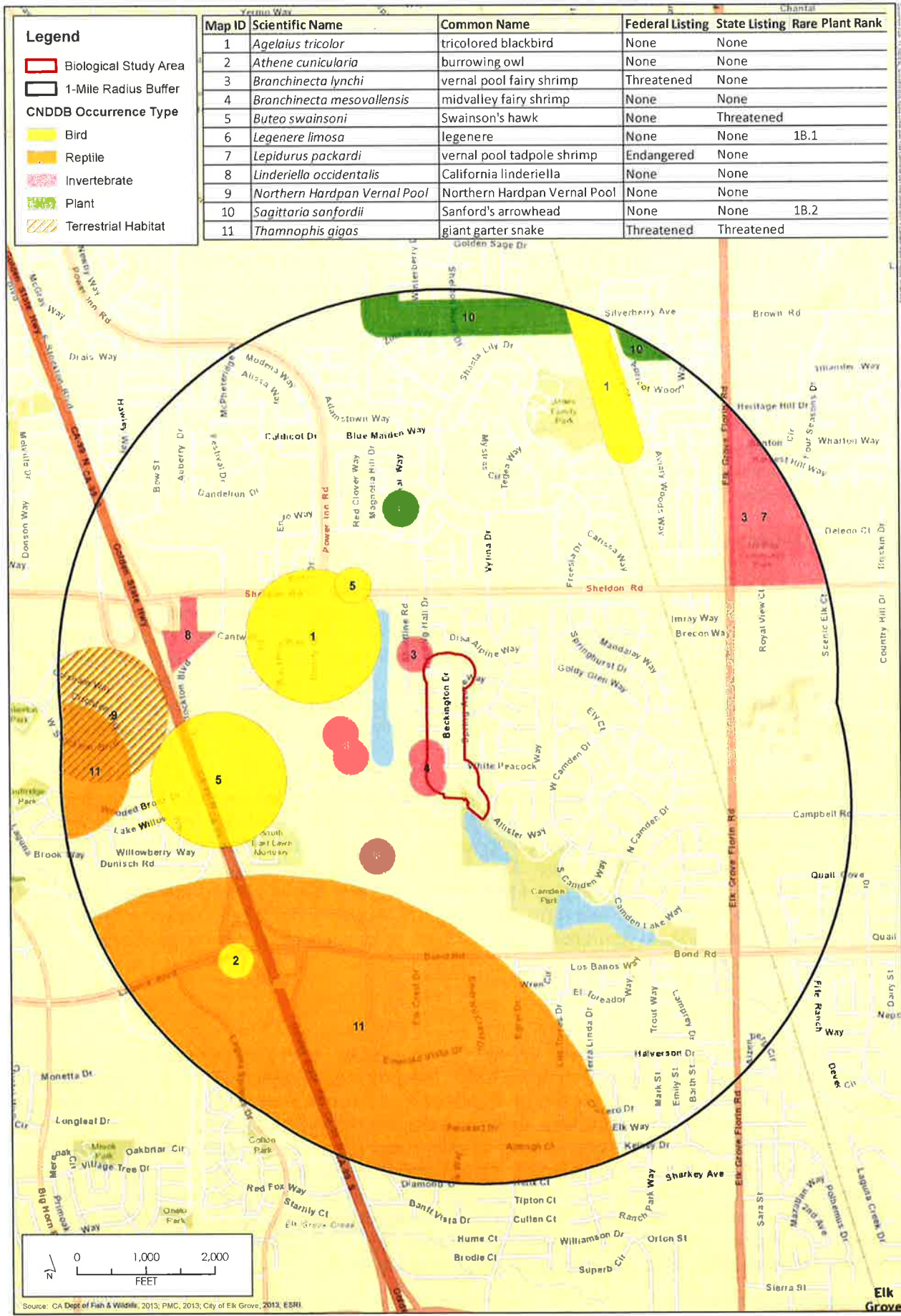


Figure 3.4-3

CNDDDB Occurrences within One Mile of the Biological Study Area

Special-Status Animal Species

Based on the results of the literature review and habitat assessment, 13 special-status wildlife species have the potential to occur in the vicinity of the BSA: valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), western pond turtle (*Emys marmorata*), giant garter snake (*Thamnophis gigas*), tricolored blackbird (*Agelaius tricolor*), grasshopper sparrow (*Ammodramus savannarum*), western burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), northern harrier (*Circus cyaneus*), whitetailed kite (*Elanus leucurus*), least bittern (*Ixobrychus exilis*), song sparrow (*Melospiza melodia*), yellow-headed blackbird (*Xanthocephalus xanthocephalus*), and western red bat (*Lasiurus blossevillii*). Individual discussions of these species or guilds are presented below.

A Biological Opinion (BO) from the USFWS was received on May 8, 2015 (**Appendix E**). The BO addresses potential impacts to federally listed species for both the North (this Project) and South portions of the Laguna Creek Trail – Camden Spur Project and includes effect determinations for vernal pool invertebrates, valley elderberry longhorn beetle, and giant garter snake. There is no potential for vernal pool invertebrates to occur in the North portion of the Project; thus, they will not be discussed further in this document. The effect determinations for valley elderberry longhorn beetle and giant garter snake are discussed in their respective sections below.

Valley Elderberry Longhorn Beetle

Protocol-level surveys for valley elderberry longhorn beetle were completed within a 100-foot buffer of the Project footprint in April and May of 2010 by Michael Baker International biologists. The surveys identified one elderberry shrub in the BSA. The Project will result in direct impacts to one elderberry shrub. The one shrub contained one stem, measuring 1 inch in diameter at ground level. No exit holes were observed, and the shrub is associated with the Whitehouse Creek riparian corridor. The one elderberry shrub identified will be removed during Project construction. No elderberry shrubs will be indirectly affected (i.e., remain during Project construction).

The USFWS determined that the proposed Project will directly affect valley elderberry longhorn beetle, but is not likely to jeopardize the continued existence of the beetle. All mitigation measures in this document addressing impacts to valley elderberry longhorn beetle are taken from the Reasonable and Prudent Measures of Incidental Take Statement in the BO. Implementation of mitigation measures **MM 3.4.13** and **MM 3.4.14** will reduce impacts to valley elderberry longhorn beetle to less than significant by requiring the City to replace the loss of the one elderberry shrub/stem identified in the BSA at a 2:1 ratio and offsetting associated native species plantings at a 1:1 ratio.

Western Pond Turtle

The aquatic habitats of Whitehouse Creek, Camden Lake, and Laguna Creek within the BSA provide suitable habitat for western pond turtle. The proposed Project will result in approximately 0.032 acre of permanent impact and 0.060 acre of temporary impact to fresh emergent wetland habitat within Laguna Creek, as well as approximately 0.023 acre of temporary impact to open water habitat within Whitehouse Creek. In addition, the proposed Project will result in approximately 0.081 acre of permanent impact and 0.194 acre of temporary impact to annual grasslands adjacent to Laguna Creek and Camden Lake that may provide suitable overwintering and nesting habitat for the species. Indirect impacts occur for a number of reasons, though primarily through increased human/wildlife interactions, habitat fragmentation, encroachment by exotic weeds, and area-wide changes in surface water flows due to

3.0 INITIAL STUDY CHECKLIST

development of previously undeveloped areas. The proposed Project will be traveled with pedestrians, increasing the amount and severity of indirect impacts to this species and its habitat in the BSA. However, implementation of mitigation measures **MM 3.4.1**, **MM 3.4.6**, **MM 3.4.11**, and **MM 3.4.15** will reduce impacts to western pond turtle to less than significant by minimizing the area of disturbance during construction, requiring revegetation of disturbed areas, implementing a Worker Environmental Awareness Program about sensitive biological resources and proper avoidance measures, and requiring a preconstruction survey for western pond turtle and, if necessary, removal of individuals identified and avoidance of nests.

Giant Garter Snake

Giant garter snake is federally and State-listed as threatened. The giant garter snake inhabits marshes, sloughs, ponds, small lakes, low gradient streams, other waterways, agricultural wetlands, such as irrigation and drainage canals and rice fields, and the adjacent uplands (USFWS 1999). Potentially suitable aquatic habitat for giant garter snake is present in Laguna Creek and Whitehouse Creek. All undeveloped communities within 200 feet of aquatic habitat are considered potentially suitable upland habitat (USFWS 1999). The closest occurrence of giant garter snake is ±3.4 miles southeast of the BSA (CDFW 2014a) and east of SR 99. This occurrence is located near Elk Grove Creek, which is separated from the Laguna Creek/Whitehouse Creek by extensive development. No aquatic features containing the essential habitat components connect Laguna Creek and Elk Grove Creek, east of SR 99. The closest extant occurrence on Laguna Creek is located approximately 5.4 river miles west of the BSA, near the Sacramento County Wastewater Treatment Plant. Refer to **Figure 3.4-4** for a depiction of CNDDDB giant garter snake occurrences in the vicinity of the BSA. There are two possibly extirpated occurrences (#14 and #84) on Laguna Creek just west of the BSA and SR 99. Due to the distance between the extant occurrence on Laguna Creek to the west and the presence of potential dispersal barriers (e.g., roads) between this occurrence and the BSA, as well as the lack of suitable dispersal habitat between the BSA and the extant occurrence near Elk Grove Creek, the presence of this species within the BSA is considered unlikely.

The USFWS determined that the proposed Project may affect, but is not likely to adversely affect giant garter snake. All mitigation measures in this document addressing impacts to giant garter snake are taken from the measures outlined in the BO. Implementation of mitigation measures **MM 3.4.2**, **MM 3.4.11**, and **MM 3.4.24** through **MM 3.4.26**, will reduce impacts to giant garter snake to less than significant by requiring work to occur during dry conditions when possible, implementing a Worker Environmental Awareness Program about sensitive biological resources and proper avoidance measures, requiring construction work to cease if a giant garter snake is encountered until it moves out of the area, requiring the use of tightly woven erosion control matting to keep snakes out of the construction area while avoiding trapping or entangling any snakes, and requiring a preconstruction survey for giant garter snakes.

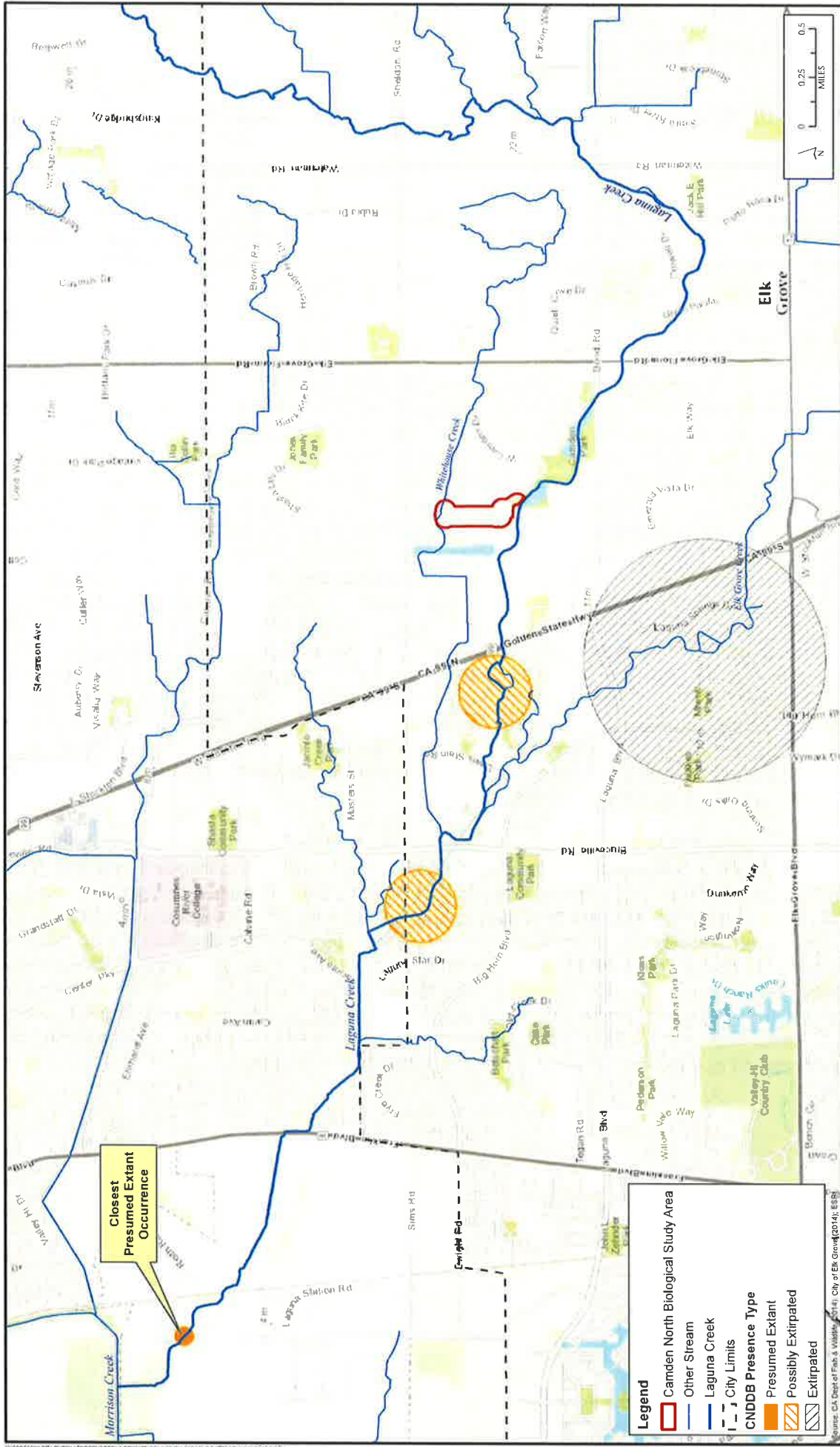


Figure 3.4-4
 CNDDB Giant Garter Snake Occurrences
 in the Vicinity of the Biological Study Area

Legend

- Camden North Biological Study Area
- Other Stream
- Laguna Creek
- City Limits

CNDDB Presence Type

- Presumed Extant
- Possibly Extirpated
- Extirpated

Source: CA Dept of Fish & Wildlife (2014); City of Elk Grove (2014); ESJ

Raptors and Migratory Birds

Various migratory birds and raptor species have the potential to inhabit the Project vicinity. Tricolored blackbird, grasshopper sparrow, western burrowing owl, Swainson's hawk, northern harrier, white-tailed kite, least bittern, song sparrow, and yellow-headed blackbird are afforded additional protection from State laws. Swainson's hawk is listed in California as a threatened species under the CESA. The tricolored blackbird, grasshopper sparrow, western burrowing owl, northern harrier, least bittern, song sparrow, and yellow-headed blackbird are California species of special concern. The white-tailed kite is a California fully protected species. Some raptor and migratory bird species, such as red-tailed hawk, American kestrel, and oak titmouse, are not considered special-status species because they are not rare or protected under the ESA or CESA; however, the nests of all raptor species are protected under the MBTA and Section 3503.5 of the FGC. The nests of all migratory birds are protected under the MBTA, which makes it illegal to destroy any active migratory bird nest. The trees, shrubs, and grasslands found in the BSA and within the vicinity provide potential nesting habitat for raptors and migratory birds that occur in the region. In addition, the annual grasslands located within and adjacent to the BSA represent suitable foraging habitat for the Swainson's hawk and other raptor species, as well as suitable nesting habitat for western burrowing owl.

If nesting migratory birds and/or raptors are present during Project construction, the proposed Project may cause direct mortality through impacts to habitats that contain active nests. Excessive noise, disturbance, and vibrations can cause nesting raptors and birds to abandon their nests. The loss of active nests or direct mortality is prohibited by the MBTA and FGC Section 3503.5. The proposed Project could result in indirect impacts to migratory birds and raptors through habitat degradation and removal of trees/shrubs suitable for nesting, as well as from increased human presence.

In addition, the annual grassland habitats located in the southern portion of the BSA and adjacent lands could provide suitable foraging habitat for Swainson's hawk (shown on **Figure 3.4-5**), as well as suitable nesting habitat for western burrowing owl. The proposed Project would result in approximately 0.194 acre of temporary impact and 0.081 acre of permanent impact to annual grassland habitats suitable for Swainson's hawk foraging. Although potential foraging habitat could be directly impacted, annual grassland (foraging habitat) will be replaced to ensure no net loss. Therefore, it is not anticipated that construction of the proposed Project will substantially contribute to cumulative impacts to migratory birds and raptors. Implementation of mitigation measures **MM 3.4.1**, **MM 3.4.2**, **MM 3.4.11**, and **MM 3.4.16** through **MM 3.4.20** will reduce impacts to raptors and migratory birds to less than significant by minimizing the area of disturbance during construction, prohibiting work during rain events, implementing a Worker Environmental Awareness Program about sensitive biological resources and proper avoidance measures, requiring preconstruction surveys for raptors if work will occur during the nesting season, requiring avoidance of active raptor nests, limiting removal of trees containing active migratory bird and/or raptor nests to the non-breeding season, requiring implementation of CDFW's avoidance, minimization, and mitigation methodologies if burrowing owl nests are identified, and requiring the City to mitigate for the loss of identified Swainson's hawk foraging habitat at a 1:1 ratio.

Special-Status Bat Species

Bats, including western red bat, are known to occur in the vicinity of the BSA. These species are California species of special concern due to recent population declines. Habitat for bat species consists of foraging habitat, night-roosting cover, maternity roost sites, and winter hibernacula. These bat species may forage in a variety of habitats. In general, the CDFW is most concerned

3.0 INITIAL STUDY CHECKLIST

about the loss of maternity roosting sites. Suitable roosting sites with these habitats include caves, rock crevices, cliffs, buildings, tree bark, and snags. Potential maternity and night-roosting sites occur in snags, under bark, and in human structures (i.e., bridges) within the BSA. Precautions must be taken to avoid the deliberate killing or injury of bats. The most common and effective method of avoiding these offenses is to carry out the work at an appropriate time of the year. The great majority of roosts are used only seasonally, so there is usually some period when bats are not present. Although there are differences between species, maternity sites are generally occupied between May and September and hibernation sites between October and March, depending on the weather. An adequate survey and good understanding of the seasonal activity patterns of the particular species involved will help in determining the optimum time to carry out the proposed work. The recommended times shown in **Table 3.4-1** should be modified in light of site-specific species information.

**TABLE 3.4-1
ANNUAL BAT ACTIVITY**

Bat Usage of Site	Optimum Period for Carrying Out Work (Some Variation Between Species)
Maternity	October 1 – May 1
Summer (not a proven maternity site)	September 1 – May 1
Hibernation	May 1 – October 1
Mating/swarming	November 1 – August 1

If maternity roost sites are located within the BSA during construction activities, the proposed Project has the potential to directly and indirectly impact special-status bat species. Bats are at their most vulnerable in buildings or other roost sites during the summer, when large numbers may be gathered together and young bats, unable to fly, may be present. Removal of maternity roost sites may cause direct mortality of numerous bats. Noise and dust from construction could indirectly impact bat species during construction. However, implementation of mitigation measures **MM 3.4.1**, **MM 3.4.11**, and **MM 3.4.21** through **MM 3.4.23** will reduce impacts to special-status bat species to less than significant by minimizing the area of disturbance during construction, implementing a Worker Environmental Awareness Program about sensitive biological resources and proper avoidance measures, requiring a bat survey prior to removal of any oak trees and proper removal of identified bats, and requiring buffer zones around identified female or maternity bat colonies.

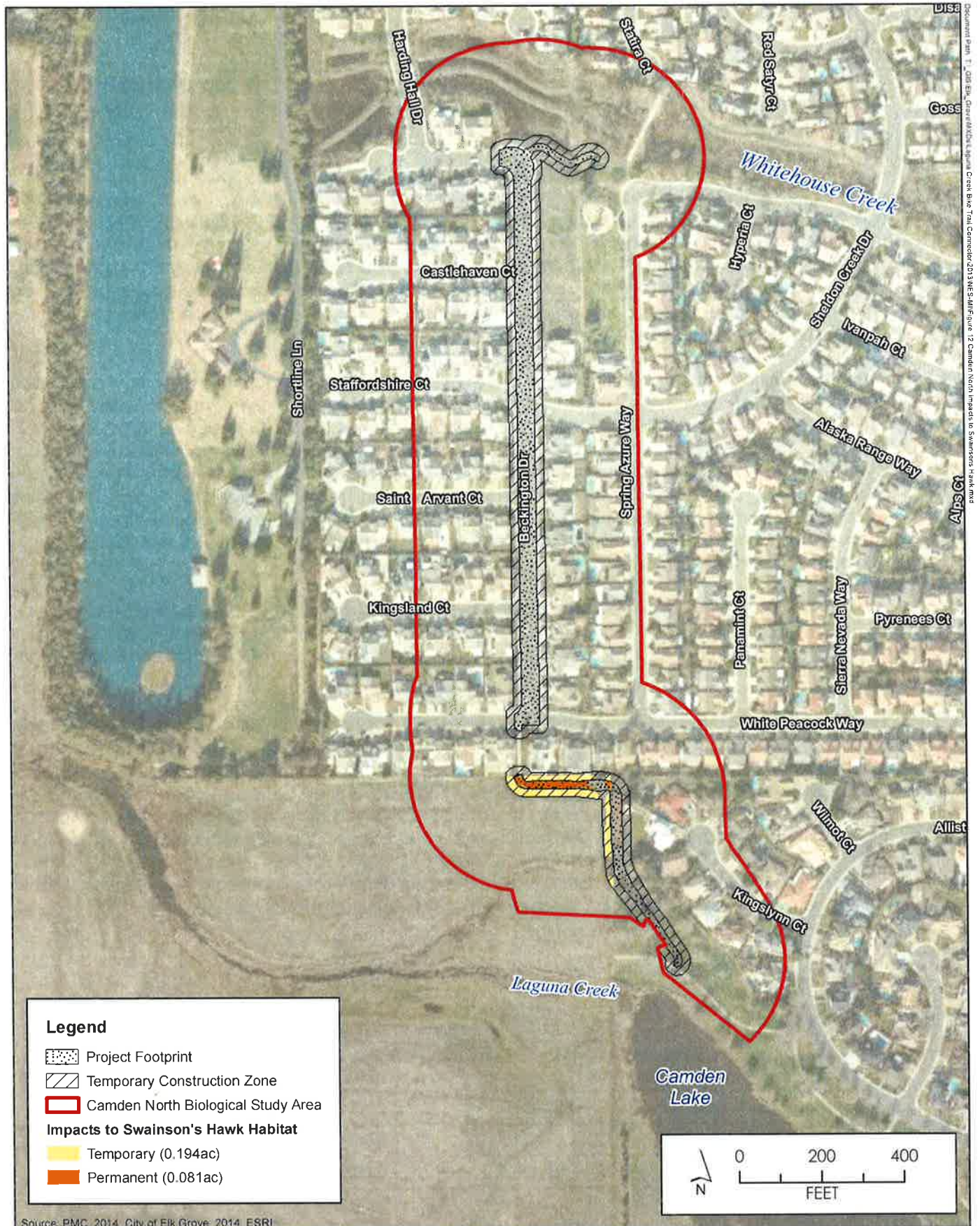


Figure 3.4-5

Impacts to Swainson's Hawk Habitat

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less than Significant with Mitigation Incorporated. Sensitive habitats include (a) areas of special concern to resource agencies; (b) areas protected under CEQA; (c) areas designated as sensitive natural communities by the CDFW; (d) areas outlined in FGC Section 1600; (e) areas regulated under CWA Section 404; and (f) areas protected under local regulations and policies. Annual grassland and urban habitats are not considered to be natural communities of special concern; however, annual grassland may provide potential habitat for special-status species, which is discussed in issue a) of this subsection. The BSA contains jurisdictional features characterized by freshwater emergent wetland and valley foothill riparian habitat.

The proposed Project will result in permanent and temporary impacts to the man-made ditch and fresh water emergent wetland habitat within Laguna Creek, as well as temporary impacts to open water habitat within Whitehouse Creek. These impacts are summarized in **Table 3.4-2** in the discussion of issue c) of this subsection and are depicted on **Figure 3.4-6**. Implementation of mitigation measures **MM 3.4.1** through **MM 3.4.6** will reduce impacts to less than significant by minimizing the area of disturbance during construction, requiring work to occur during dry conditions when possible, requiring water flows in creeks/ditches to be diverted around work areas, requiring implementation of BMPs to prevent degradation to waters of the US, minimizing sediment-tracking, and requiring revegetation of disturbed areas.

c) Would the project have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.), through direct removal, filling, hydrological interruption or other means?

Less than Significant with Mitigation Incorporated. Approximately 0.015 acre of man-made ditches, 0.387 acre of fresh emergent wetland associated with Laguna Creek, and 2.24 acres of open water associated with Whitehouse Creek occur within the BSA. All features are considered waters of the US and are, therefore, subject to CWA regulations. Impacts to these features will require a CWA 404 nationwide permit from the USACE, and CWA 401 water quality certification from the RWQCB. In addition, Whitehouse Creek and Laguna Creek will be subject to, and the man-made ditch may be subject to, FGC Sections 1600-1607. As a result, impacts to these features will also require authorization from CDFW via a streambed alteration agreement. **Table 3.4-2** displays the permanent and temporary impacts to jurisdictional features in the BSA.

**TABLE 3.4-2
IMPACT TO JURISDICTIONAL FEATURES**

Feature Type	Total Acres in the BSA	Acres Permanently Impacted	Acres Temporarily Impacted
Laguna Creek (fresh emergent wetland)	0.387	0.032	0.060
Whitehouse Creek (open water)	2.240	0	0.023
Man-Made Ditch	0.015	0.005	0.010
Total	2.642	0.037	0.093

3.0 INITIAL STUDY CHECKLIST

As shown in **Table 3.4-2**, a total of approximately 0.005 acre of man-made ditch is anticipated to be permanently impacted and a total of approximately 0.010 acre of man-made ditch is anticipated to be temporarily impacted by Project activities; a total of approximately 0.032 acre of fresh emergent wetland is anticipated to be permanently impacted and a total of approximately 0.060 acre of fresh emergent wetland is anticipated to be temporarily impacted by Project activities; and a total of approximately 0.023 acre of open water is anticipated to be temporarily impacted by Project activities. Implementation of mitigation measures **MM 3.4.7** and **MM 3.4.8** will reduce impacts to jurisdictional features to less than significant by requiring the City to replace the man-made ditches and the area of Laguna Creek permanently affected by the proposed Project at a 1:1 ratio.

d) *Would the project 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?*

No Impact. A review of the CDFW Biogeographic Information & Observation System (BIOS) (2014b) was performed for the Project to determine if the BSA is located within an Essential Connectivity Area. The review of the CDFW BIOS viewer indicated that the BSA does not occur within an Essential Connectivity Area. Furthermore, the Project site is surrounded by urban land uses, which further impair any corridor function. As such, no impact is anticipated, and no additional avoidance and minimization measures are proposed.

e) *Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

No Impact. The proposed Project is consistent with the Elk Grove General Plan and the Elk Grove Bicycle, Pedestrian, and Trails Master Plan and would not conflict with any local policies or ordinances protecting biological resources. No protected trees are proposed for removal as a result of the proposed Project; thus, there will be no conflict with the Elk Grove Tree Preservation and Protection Codes found in Chapter 19.12 of the Elk Grove Municipal Code. Therefore, no impact is anticipated and no additional avoidance and minimization measures are proposed.

f) *Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?*

No Impact. The proposed Project would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan. The BSA is located within the SSHCP planning area; however, this plan has not been adopted to date. As a result, the proposed Project would not conflict with the plan, and no impact is anticipated. No avoidance and minimization measures are proposed.

Mitigation Measures

MM 3.4.1 During Project development, the work area shall be reduced to the smallest footprint feasible in sensitive habitat areas.

Timing/Implementation: During Project development

Enforcement/Monitoring: City of Elk Grove Planning Department

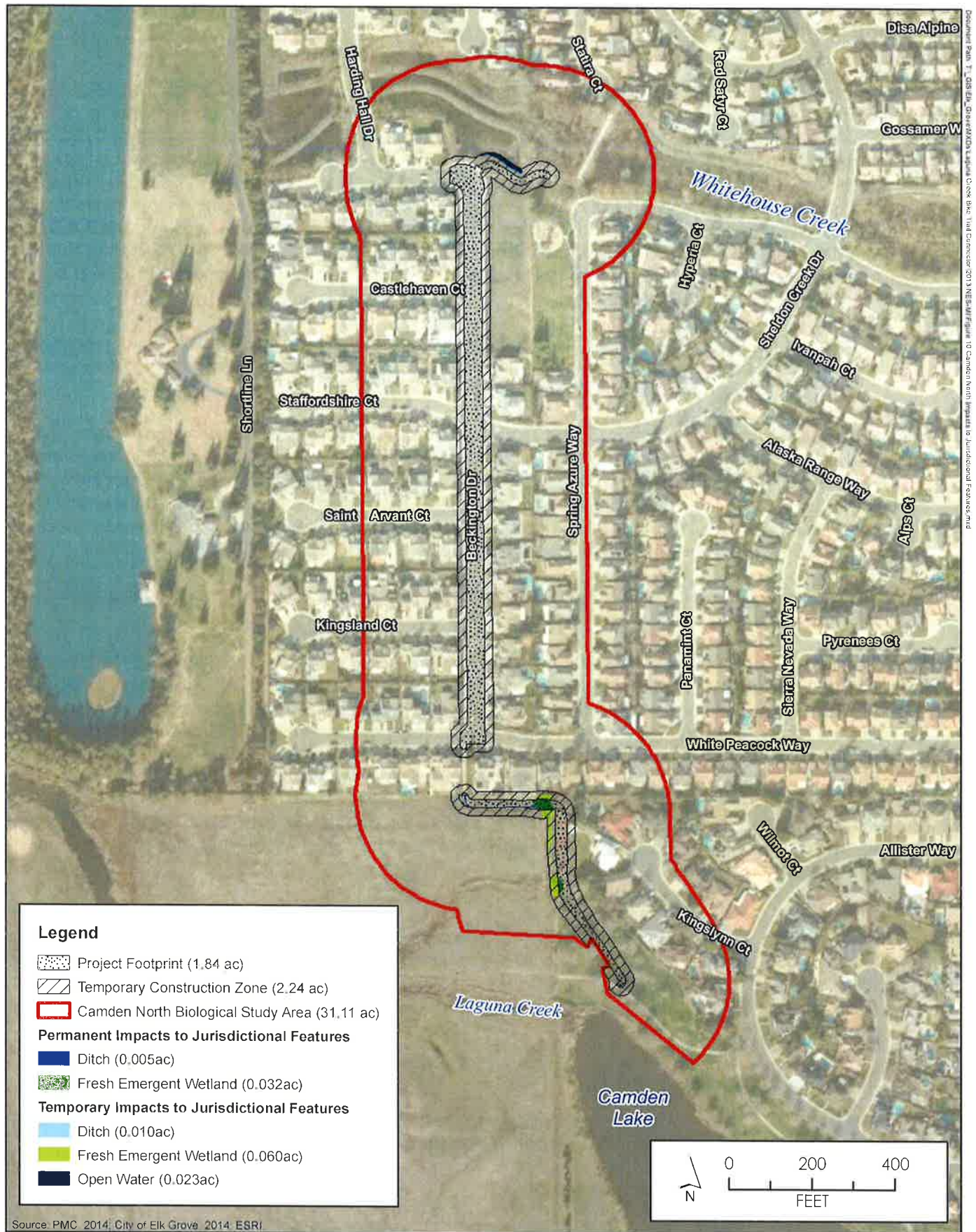


Figure 3.4-6
Impacts to Jurisdictional Features

MM 3.4.2 Work shall coincide with the driest time. If water is present at the time of construction, water shall be diverted around the work area and work shall resume after the site is dry. Work within the dewatered areas shall be timed with awareness of precipitation forecasts and likely increases in water flows and flood stages. Construction activities within jurisdictional features shall cease prior to storm events until all reasonable erosion control measures have been implemented. Construction equipment and material shall be removed from the floodplain if inundation is likely. Revegetation, restoration, and erosion control work shall not be confined to this time period.

Timing/Implementation: *During Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

MM 3.4.3 If work in the flowing portion of the creek/ditch is unavoidable, the entire flow shall be diverted around or through the work area during excavation and/or construction operations. Flows shall be diverted using gravity flow through temporary culverts/pipes or pumped around the work site with the use of hoses. When a temporary dam or other artificial obstruction is being constructed, maintained, or placed in operation, sufficient water shall at all times be allowed to pass downstream to maintain aquatic life below the dam pursuant to FGC Section 5937. Any temporary dam or other artificial obstruction constructed shall only be built from clean materials such as sandbags, gravel bags, water dams, or clean/washed gravel that will cause little or no siltation.

Timing/Implementation: *During Project excavation and construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

MM 3.4.4 Prior to initiation of construction activities within jurisdictional features, construction best management practices (BMPs) shall be employed on-site to prevent degradation to on-site and off-site waters of the US. Methods shall include the use of appropriate measures to intercept and capture sediment prior to entering jurisdictional features, as well as erosion control measures along the perimeter of all work areas to prevent the displacement of fill material. All BMPs shall be in place prior to initiation of any construction activities and shall remain until construction activities are completed. All erosion control methods shall be maintained until all on-site soils are stabilized.

Timing/Implementation: *Prior to start of construction within jurisdictional features*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

MM 3.4.5 Standard staging area practices for sediment-tracking reduction shall be implemented where necessary and may include vehicle washing and street sweeping.

Timing/Implementation: *During Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

3.0 INITIAL STUDY CHECKLIST

MM 3.4.6 All exposed/disturbed areas and access points left barren of vegetation as a result of construction activities shall be restored using locally native grass seeds, locally native grass plugs, and/or a mix of quick-growing sterile nonnative grass with locally native grass seeds. Seeded areas shall be covered with broadcast straw and/or jute netted (monofilament erosion blankets are not permitted).

Timing/Implementation: *During Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

MM 3.4.7 For the approximate 0.032 acre of Laguna Creek permanently affected by the proposed Project, the City shall replace the affected acreage at a 1:1 ratio (i.e., 1 acre for every 1 acre of impact), or another approved ratio as determined by the USACE. Impacts shall be offset through the dedication of approximately 0.032 shaded riverine aquatic mitigation credit(s) within a USACE-approved mitigation bank or through the payment of in-lieu fees to an approved conservation bank.

Timing/Implementation: *Prior to and during Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

MM 3.4.8 For the approximate 0.005 acre of man-made ditch permanently affected by the proposed Project, the City shall replace the affected acreage at a 1:1 ratio, or another approved ratio as determined by the USACE. Impacts may be offset through the restoration and relocation of the ditch within the Project area, through the dedication of mitigation credit(s) within a USACE-approved mitigation bank, or through the payment of in-lieu fees to an approved conservation bank.

Timing/Implementation: *Prior to and during Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

MM 3.4.9 Prior to any vegetation removal or ground-disturbing activities, focused surveys shall be conducted to determine if special-status plants occur within the Project footprint and/or temporary construction zone. If no special-status plant species are found, then the Project will not have any impacts to the species and no additional mitigation measures are necessary.

Timing/Implementation: *Prior to vegetation removal or ground-disturbing activities*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

MM 3.4.10 If special-status species are located within the Biological Study Area (BSA) but outside the Project footprint, then the plants shall be avoided by installing protective fencing and by warning construction personnel of their presence.

Timing/Implementation: *During Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

MM 3.4.11 A Worker Environmental Awareness Program (WEAP) shall be implemented to educate construction workers about the presence of special-status species and/or sensitive biological resources in and/or near the Project work area and to instruct them on proper avoidance.

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

MM 3.4.12 If any of the species are found on-site and cannot be avoided, the City shall consult with the USFWS and/or CDFW, as applicable, to determine appropriate mitigation for special-status plants, which may include but is not limited to the following measures:

- Salvage portions of the habitat or plant populations that will be lost as a result of implementation of the proposed Project.
- Transplant the plants that would be adversely affected by the proposed Project for either reestablishment after construction is complete or for planting in a new area, in appropriate habitat.
- Develop a propagation program for the salvage and transfer of rare, threatened, or endangered plant populations from the Project site before the initiation of construction activities.
- Involve qualified biologists in the propagation and transport of rare, threatened, or endangered plant species. (Note: Propagation methods for the salvaged plant population must be developed on a case-by-case basis and must include the involvement of local conservation easements, preserves, and/or open space, where applicable). The propagation and transfer of individual plant species must be performed at the correct time of year and successfully be completed before the Project's construction activities eliminate or disturb the plants and habitats of concern.

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

MM 3.4.13 The City shall replace the loss of one elderberry shrub/stem at a 2:1 ratio through the dedication of mitigation credit(s) within a USFWS-approved mitigation bank, or through the payment of in-lieu fees to an approved valley elderberry longhorn beetle conservation bank that results in two conservation plantings of elderberry seedlings.

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

MM 3.4.14 The City shall offset associated native species plantings at a 1:1 ratio through the dedication of mitigation credit(s) within a USFWS-approved mitigation bank, or through the payment of in-lieu fees to an approved valley elderberry longhorn

3.0 INITIAL STUDY CHECKLIST

beetle conservation bank that results in two conservation plantings of native associates.

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

MM 3.4.15 A preconstruction survey for western pond turtle shall be conducted within 24 hours of the onset of construction activities adjacent to Laguna Creek, Camden Lake, and/or Whitehouse Creek. The survey area shall include a 100-foot buffer of the area to be affected. If juvenile or adult turtles are found within the survey area, the individuals shall be moved at least 500 feet downstream in suitable habitat. If a turtle nest is found within the survey area, construction activities shall not take place within 100 feet of the nest until the turtles have hatched, or the eggs have been moved to an appropriate location.

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

MM 3.4.16 If clearing and/or construction activities would occur during the raptor nesting season (January 15–August 15), preconstruction surveys to identify active nests shall be conducted by a qualified biologist within 14 days of construction initiation. Surveys must be performed by a qualified biologist for the purposes of determining presence/absence of active nest sites within the proposed impact area, including construction access routes and a 250-foot buffer (if feasible). If no active nests are found, no further mitigation is required. Surveys shall be repeated if construction activities are delayed or postponed for more than 30 days.

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

MM 3.4.17 If an active nest (excluding western burrowing owl) is located during preconstruction surveys, construction activities shall be restricted as necessary to avoid disturbance of the nest until it is abandoned or a qualified biologist deems disturbance potential to be minimal. Restrictions may include establishment of exclusion zones (no ingress of personnel or equipment at a minimum radius of 30 meters (100 feet) around an active raptor nest and a 15-meter (50-foot) radius around an active migratory bird nest) or alteration of the construction schedule. Activities permitted within exclusion zones and the size may be adjusted through consultation with the CDFW and/or the City.

Timing/Implementation: *Prior to and during Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

MM 3.4.18 Trees containing active migratory bird and/or raptor (excluding Swainson's hawk) nests that must be removed as a result of Project implementation shall be removed during the non-breeding season (September 1–January 1). Swainson's hawks are State and federally listed as threatened species; therefore, impacts to

Swainson's hawk nest trees require regulatory authorization from the CDFW prior to removal.

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

MM 3.4.19 If no burrowing owls are detected, no further mitigation is required. If active burrowing owls are detected, the City shall implement the avoidance, minimization, and mitigation methodologies outlined in CDFW's (2012) Staff Report on Burrowing Owl Mitigation prior to initiating Project-related activities that may impact burrowing owls.

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

MM 3.4.20 The City shall mitigate for the loss of 0.081 acre of Swainson's hawk foraging habitat at a 1:1 ratio. Mitigation will be accomplished through the City of Elk Grove Swainson's Hawk Impact Mitigation Fee (Chapter 16.130 of the City Municipal Code).

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

MM 3.4.21 Prior to the removal of any buildings or oak trees, a bat survey shall be performed by a qualified biologist between March 1 and July 31. If bat roosts are identified, the City shall require that the bats be safely flushed from the sites where roosting habitat is planned to be removed prior to roosting season (typically May to August) and prior to the onset of construction activities. If maternity roosts are identified during the maternity roosting season (typically May to September) they must remain undisturbed until a qualified biologist has determined the young bats are no longer roosting. If roosting is found to occur on-site, replacement roost habitat (e.g., bat boxes) shall be provided to offset roosting sites removed. If no bat roosts are detected, then no further action is required if the trees and buildings are removed prior to the next breeding season. If removal is delayed, an additional survey shall be conducted 30 days prior to removal to ensure that a new colony has not established itself.

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

MM 3.4.22 If a female or maternity colony of bats are found on the Project site, and the Project can be constructed without the elimination or disturbance of the roosting colony (e.g., if the colony roosts in a large oak tree not planned for removal), a qualified biologist shall determine what buffer zones shall be employed to ensure the continued success of the colony. Such buffer zones may include a construction-free barrier of 200 feet from the roost and/or the timing of the construction activities outside of the maternity roost season (after July 31 and before March 1).

3.0 INITIAL STUDY CHECKLIST

Timing/Implementation: *Prior to and during Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

- MM 3.4.23** If an active nursery roost is documented on-site and the Project cannot be conducted outside of the maternity roosting season, bats shall be excluded from the site after July 31 and before March 1 to prevent the formation of maternity colonies. Non-breeding bats shall be safely evicted under the direction of a bat specialist.

Timing/Implementation: *Prior to and during Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

- MM 3.4.24** If a giant garter snake is encountered in the project work area, construction will cease until the snake has been allowed to move away under its own volition.

Timing/Implementation: *Throughout Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

- MM 3.4.25** Tightly woven erosion control matting (mesh size less than 0.25 inch) or similar material shall be used for erosion control and other purposes at the Project site to ensure that snakes are not trapped or entangled by the erosion control material. The edge of the material shall be buried in the ground to prevent snakes from crawling underneath the material. The use of plastic, monofilament, jute, or similar erosion control netting with mesh sizes larger than 0.25 inch that could entangle snakes will be prohibited.

Timing/Implementation: *Throughout Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

- MM 3.4.26** A survey shall be conducted for giant garter snakes within the project work area 24 hours prior to the onset of construction and any time activities are halted for more than two weeks thereafter.

Timing/Implementation: *Within 24 hours prior to Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.5. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

A Historic Property Survey Report (HPSR) and an Archaeological Survey Report (ASR) were prepared for the proposed Project in February 2015 (included in **Appendices F** and **G**, respectively). The City of Elk Grove General Plan EIR (2003b) Cultural Resources Sensitivity Map identifies areas surrounding Laguna Creek as a sensitive area for cultural resources. Areas along rivers and creeks in the Sacramento Valley are known to contain cultural resources because of the villages built by Native Americans over periods of hundreds of years. Approximately eight Plains Miwok tribelets existed along the Cosumnes River drainage and Sacramento River within the Elk Grove Planning Area; the majority of the prehistoric and historic Native American and archaeological sites in Elk Grove are village mounds (City of Elk Grove 2003b).

The Area of Potential Effect (APE) for a project encompasses the geographic area in which a project may result in impacts to cultural resources. The APE for the proposed Project includes approximately 3 acres within boundaries determined by the California Department of Transportation (Caltrans) and the City of Elk Grove. The APE includes portions of the existing public right of ways and streets, as well as proposed minor acquisition and construction easements. The Project's horizontal APE consists of a linear, irregularly shaped corridor that extends from a point south of Whitehouse Creek and east of the northern corner of Beckington Drive, along Beckington Drive, south of White Peacock Court for approximately 700 feet to the east and south through the open space behind the residential neighborhood to a point just north of Laguna Creek. Refer to **Figure 3.5-1** for the APE map for the proposed Project.

BACKGROUND

A record and information search was conducted at the North Central Information Center of the California Historical Resources Information System on December 8, 2010. This included a review of:

- the National Register of Historic Places (*Directory of Determinations of Eligibility*, National Park Service, 2010);
- the National Register of Historic Places and California Register of Historic Resources listings (2008 and updates) (National Park Service 2008; State of California 2008);

3.0 INITIAL STUDY CHECKLIST

- the California Inventory of Historic Resources (State of California 1976);
- the California Historical Landmarks (State of California 1996);
- the California Points of Historical Interest listing (State of California 1992);
- the OHP Historic Property Data File (State of California 2010);
- the Caltrans State and Local Bridge Survey (State of California 1989);
- Historic Maps including: 1855 GLO PLAT, 1909 USGS Florin Quadrangle, 1953 US Army Corps of Engineers Florin Sheet; and
- the California Cemeteries Inventory.

The record and information search revealed that seven cultural resource studies have been conducted within a one-quarter mile radius of the APE. Among these, only two studies (S-00088 and S-03070) included portions of the APE; they investigated less than 25 percent of the total APE and were concentrated in the southern portion of the APE. All of the studies yielded negative results within the APE and within one-quarter mile of the APE. No cultural resources have been previously recorded within the APE or within one-quarter mile of the APE. In addition, a pedestrian survey conducted of the APE did not identify prehistoric or historic period resources. Native American consultation was conducted for the proposed Project for which a letter was sent to the Native American Heritage Commission (NAHC) on October 21, 2014, requesting a search of its Sacred Lands Inventory for information regarding cultural resources within the APE. The NAHC responded, stating that the search of the Sacred Lands Inventory failed to indicate the presence of cultural resources in the immediate Project area.

DISCUSSION OF IMPACTS

- a) *Would the project cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?*

No Impact. The HPSR prepared for the proposed Project determined that no historic resources are present within the APE or within one-quarter mile of the APE. Therefore, no impact would occur.

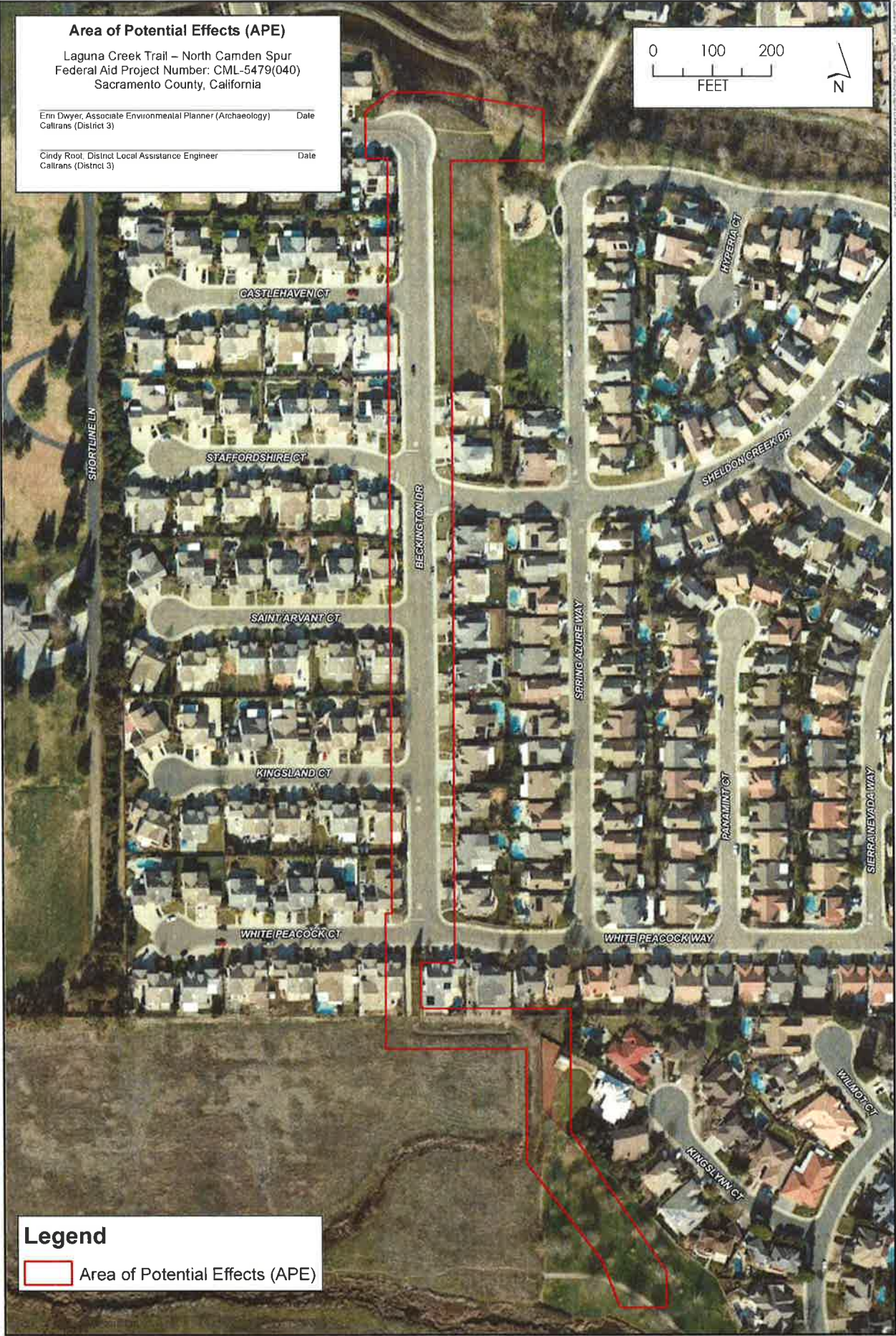
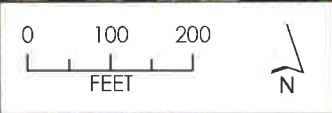
- b) *Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?*


Less than Significant Impact. According to the HPSR and ASR prepared for the proposed Project, there are no known archaeological resources within one-quarter mile of the APE, and the high degree of disturbance and low potential for buried sites indicates there is a low potential for unknown archaeological resources to be encountered during ground-disturbing activities. Therefore, the proposed Project would not be expected to impact any archaeological resources. However, pursuant to Policy HR-6-Action 2 of the City's General Plan, requirements would be included in the construction contract requiring immediate notification of the Planning Department if any archaeological resource is uncovered during construction. In the event of this type of discovery, construction would stop and an archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology would be retained to evaluate the finds and recommend appropriate action. Adherence to the City policy will further reduce impacts to less than significant.

Area of Potential Effects (APE)
 Laguna Creek Trail – North Camden Spur
 Federal Aid Project Number: CML-5479(040)
 Sacramento County, California

Erin Dwyer, Associate Environmental Planner (Archaeology) Date
 Callrans (District 3)

Cindy Root, District Local Assistance Engineer Date
 Callrans (District 3)



Legend
 Area of Potential Effects (APE)

- c) *Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?*

Less than Significant Impact. Project construction would involve grading activities requiring minimal soil excavation for the extension of a multiuse trail between Camden Park and Beckington Drive and between Beckington Drive and MacDonald Park. According to the HPSR and ASR prepared for the proposed Project, there are no identified paleontological resources within one-quarter mile of the APE and discovery of this type of resources is not anticipated. However, pursuant to Policy HR-6-Action 2 of the City's General Plan, requirements would be included in the construction contract that the Planning Division shall be notified immediately if any paleontological artifact is uncovered during construction. The City's implementation of this policy, according to the State CEQA Guidelines, would result in less than significant impacts to paleontological resources.

- d) *Would the project disturb any human remains, including those interred outside of formal cemeteries?*

Less than Significant Impact with Mitigation Incorporated. According to the HPSR and ASR prepared for the proposed Project, the Project site and APE are located on a dissected alluvial fan belonging to the lower member of the Riverbank Formation, which dates to the middle Pleistocene and predates human occupation of the area. This indicates a low potential for buried archaeological deposits. No cultural resources or human remains were observed within the APE during the intensive pedestrian survey conducted in November 2014 as part of the archaeological investigations. However, the potential to discover or disturb human remains exists during any ground-disturbing activity. Implementation of mitigation measure **MM 3.5.1** will further reduce impacts to less than significant by ensuring that any buried archaeological and/or paleontological resources encountered during construction of the proposed project are handled properly and in accordance with California Health and Safety Code Section 7050.5(b).

Mitigation Measures

MM 3.5.1 In order to mitigate for the potential discovery or disturbance of any human remains, the protocol of California Health and Safety Code Section 7050.5(b) will be adhered to as follows:

In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Section 27460 et. seq. of the Government Code, that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner, and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.

If the remains are determined to be Native American, City policy would dictate that the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed.

Timing/Implementation: Throughout Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

3.0 INITIAL STUDY CHECKLIST

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.6. GEOLOGY AND SOILS. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death, involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

Regional Geology

The City is located within the Great Valley geomorphic province, which is primarily described as a relatively flat alluvial plain, about 50 miles wide and 400 miles long, with thick sequences of sedimentary deposits of Jurassic through Holocene age. The Great Valley geomorphic province is bounded on the north by the Klamath and Cascade mountain ranges, on the east by the Sierra Nevada, and on the west by the California Coast Mountain Range.

Topography

The Project is located in the Sacramento Valley, which is primarily flat land with no hills or valleys. The Project site is located in an area of relatively level terrain at approximately 37 to 47 feet above mean sea level. Laguna Creek is located south of the Project site. The creek channel creates a naturally formed depression in the landscape where it flows.

Faults and Seismicity

No known active faults or Alquist-Priolo earthquake hazard zones occur in the City, although several inactive subsurface faults are identified in the Delta. According to the *Fault Activity Map of California*, the nearest faults to the City with activity within the last 200 years are the Concord, Hayward, and Cleveland Hill faults (CGS 2010). The closest known fault to the City is the Willows fault zone, located approximately 10 miles north of the City. The *Safety Element of the County of Sacramento General Plan* (2011) identified two major subsurface fault zones on the eastern and western sides of the City. The Midland Fault Zone is located approximately 20 miles west, while the Bear Mountain Fault Zone is located approximately 20 miles east. The closest known active subsurface fault is the Dunnigan Hills Fault, located approximately 25 miles northwest of the City.

Ground Shaking

In populated areas, the greatest potential for loss of life and property damage is a result of ground shaking from a nearby earthquake. Because the Project site is not located in an area near any active faults or fault zones, the potential for ground shaking in the immediate area is diminished. However, major seismic events occurring in adjacent areas, especially the San Francisco Bay Area, could cause the Project site to experience ground-shaking activity.

Liquefaction

Liquefaction is the loss of soil strength due to seismic forces generating various types of ground failure. The potential for liquefaction must account for soil types and density, the groundwater table, and the duration and intensity of ground shaking.

Soils

The Natural Resources Conservation Service (NRCS) has mapped soils from the San Joaquin and Bruella soils groups within the project area: specifically, San Joaquin silt loam and Bruella sandy loam (NRCS 2006). The San Joaquin soils group consists of moderately deep, moderately well-drained soils and very deep, moderately well-drained soils. Permeability is slow due to claypan and hardpan sublayers, causing water to perch above the claypan for short periods of time after heavy rainfall in winter and early spring. Soils of the Bruella series are very deep and well drained.

DISCUSSION OF IMPACTS

- a) *Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death, involving:*
 - i) *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?*

No Impact. No known active faults or Alquist-Priolo earthquake hazard zones occur in the vicinity of the proposed Project. Therefore, the Project would have no impact concerning fault rupture hazards.

- ii) *Strong seismic ground shaking?*

Less than Significant Impact. The Project site is not located within an Alquist-Priolo earthquake hazard zone; however, major seismic events occurring in adjacent areas, especially the San Francisco Bay Area, could cause the Project area to experience ground-shaking activity. The proposed Project would involve minor improvements and striping on existing Class I and Class II

3.0 INITIAL STUDY CHECKLIST

facilities on Beckington Drive and the extension of the Laguna Creek Trail from Camden Park to MacDonald Park via Beckington Drive. The proposed Project will not result in the development of habitable structures or other development that would typically cause an increase in population that could be adversely affected by seismic ground shaking. The Project would be constructed in accordance with the standards and guidelines set forth in the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan (2014). Therefore, impacts are considered to be less than significant.

iii) *Seismic-related ground failure, including liquefaction?*

No Impact. Liquefaction is most likely to occur in deposits of water-saturated alluvium or similar deposits of artificial fill. The Project site is located on soils included in the San Joaquin and Bruella soils groups (NRCS 2006). These soil types are known to be well drained and moderately well drained. Additionally, the City is not within an area of Sacramento County known to be susceptible to liquefaction. Additionally, the depth to the groundwater table at the Project site is approximately 75 to 90 feet below the ground surface (SCWA 2011). No impact would occur.

iv) *Landslides?*

No Impact. The Project site and the surrounding vicinity are relatively flat. The possibility of a landslide is unlikely as there are no topographical features in the Project vicinity that would create a risk of exposure to landslide. Therefore, no impact would occur.

b) *Would the project result in substantial soil erosion or the loss of topsoil?*

Less than Significant Impact. Construction of the proposed Project would involve minimal grading from Camden Park to White Peacock Court/Beckington Drive and from Beckington Drive to MacDonald Park for the extension of the Laguna Creek Trail. This activity may result in short-term wind-driven erosion of soils. The City's Land Grading and Erosion Control Chapter 16.44 of the Municipal Code establishes procedures to minimize erosion and sedimentation during construction activities. The RWQCB requires an NPDES construction activity permit and watershed protection measures for all development projects, including erosion control. Compliance with Municipal Code, Chapter 16.44 would reduce impacts associated with soil erosion to a less than significant level.

c) *Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?*

Less than Significant Impact. The Project area is relatively flat and, therefore, landslides are not anticipated. The depth to groundwater at the Project site is approximately 75 to 90 feet below the ground surface and the City is not within an area of Sacramento County known to be susceptible to liquefaction, lateral spreading, subsidence, or collapse. The Project site is underlain by San Joaquin silt loam and Bruella sandy loam soils, which are well drained to moderately well drained. This base geological condition does not lend to structure failures such as subsidence or lateral spreading. Therefore, impacts would be less than significant.

d) *Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?*

Less than Significant Impact. Soils with high clay content are usually expansive. Minerals in certain clays swell with increased moisture and then contract during dry periods. According to soil data for the City provided by the NRCS, the Project site is underlain by San Joaquin silt loam and Bruella sandy loam soils. Typically, silt loam soils have less than 30 percent clay content and sandy loam soils have less than 20 percent clay content. The San Joaquin soils group contains

approximately 5 inches of claypan in the subsoil, which causes a high shrink-swell potential. Properly designed foundations, buildings, roads, and paved surfaces can help to prevent potential damage caused by an expansive soil. The proposed Project would be designed with grades constructed to help prevent water from collecting on or adjacent to pavements, thereby discouraging soil saturation adjacent to the trail. Therefore, impacts would be less than significant.

- e) *Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

No Impact. The Project does not propose the use or construction of septic tanks or alternative wastewater disposal systems; therefore, there would be no impact.

3.0 INITIAL STUDY CHECKLIST

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.7. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The earth's climate has been warming for the past century. It is believed that this warming trend is related to the release of certain gases into the atmosphere. The greenhouse gases (GHGs) include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and hydrofluorocarbons. GHGs absorb infrared energy that would otherwise escape from the earth. As the infrared energy is absorbed, the air surrounding the earth is heated. An overall warming trend has been recorded since the late 19th century, with the most rapid warming occurring over the past two decades.

Human activities have been attributed to an increase in the atmospheric abundance of GHGs. There are uncertainties as to exactly what the climate changes will be in various local areas of the earth, and what the effects of clouds will have in determining the rate at which the mean temperature will increase. There are also uncertainties associated with the magnitude and timing of other consequences of a warmer planet: sea level rise, spread of certain diseases out of their usual geographic range, the effect on agricultural production, water supply, sustainability of ecosystems, increased strength and frequency of storms, extreme heat events, air pollution episodes, and the consequence of these effects on the economy (CARB 2004).

REGULATORY SETTING

The State of California has been studying the impacts of climate change since 1988, when AB 4420 was approved. This legislation directed the California Energy Commission (CEC), in consultation with CARB and other agencies, to study the implications of global warming on California's environment, economy, and water supply. The CEC was also directed to prepare and maintain the State's inventory of GHG emissions. That bill directed the CARB to adopt regulations to achieve the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles. CARB staff's proposal implementing these regulations was approved by CARB in September 2004. With implementation, the average reduction of GHGs from new California cars and light trucks will be about 30 percent by 2016 (CARB 2013).

In 2006, California adopted AB 32, the Global Warming Solutions Act. AB 32 codifies the State's goal by requiring that the State's global warming emissions be reduced to 1990 levels by 2020. This reduction will be accomplished through an enforceable Statewide cap on global warming emissions that was phased in starting in 2012. In order to effectively implement the cap, AB 32 directs CARB to develop appropriate regulations and establish a mandatory reporting system to track and monitor global warming emissions levels.

The SMAQMD adopted significance thresholds for GHG emissions on October 23, 2014. The SMAQMD GHG significance thresholds are 1,100 metric tons of carbon dioxide equivalent per year for the construction and operational phases of projects and 10,000 direct metric tons of carbon dioxide equivalent per year for stationary source projects. The Sacramento County Climate Action Plan, adopted November 9, 2011, and the City of Elk Grove Climate Action Plan, adopted March 27, 2013, do not identify thresholds of significance for GHG emissions.

DISCUSSION OF IMPACTS

- a) *Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Less than Significant Impact. The proposed Project does not involve construction of a new roadway or physical alteration of an existing roadway, nor would it affect local motorized vehicle traffic patterns. The proposed Project does not include the operation of any major stationary sources of emissions. Furthermore, the proposed Project consists of the extension of an existing multiuse trail from Camden Park to MacDonald Park via Beckington Drive. Extension of this off-street multiuse trail has the potential to result in overall beneficial air quality impacts and reduction of GHG emissions as it improves bicycle and pedestrian access and increases the connectivity of the off-street trail system in the City, which could reduce the use of motor vehicles. Increases in GHG emissions would occur during the construction period due to the use of construction equipment and worker trips to the Project site. Once the Project is implemented, there will be no resultant increases in automobile trips to the area because the multiuse trail and Class I and Class II facilities will not require daily visits and will be used only by bicycles and pedestrians. Construction-generated emissions are temporary, intermittent, and limited to the construction period. Therefore, impacts would be less than significant.

- b) *Would the project conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?*

No Impact. The proposed Project involves minor improvements and striping to existing Class I and Class II facilities on Beckington Drive and the extension of the Laguna Creek Trail from Camden Park to MacDonald Park via Beckington Drive. The proposed Project would increase the connectivity of the City's off-street trail network and encourage the use of alternative modes of transportation, potentially reducing the use of personal motor vehicles, which is often the largest single source of GHG emissions pollution. Therefore the proposed Project, by its nature, is consistent with applicable plans, policies, and regulations adopted for the purpose of reducing GHG emissions. No impact would occur.

3.0 INITIAL STUDY CHECKLIST

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.8. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

The Project site is located in the City in Sacramento County. No known hazardous material or hazardous waste sites exist within the Project vicinity (City of Elk Grove 2003b). According to the California Department of Toxic Substances Control (DTSC) EnviroStor database search results, no hazardous material or hazardous waste sites exist in the Project vicinity (DTSC 2015b). Sunset Sky ranch Airport, a privately owned, publicly used airport, is located approximately 3.5 miles southeast of the Project site; however, this facility is no longer in operation. Borges-Clarksburg Airport is a private-use airport located approximately 6.75 miles northwest of the proposed Project.

REGULATORY SETTING

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, State, or local agency, or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined in CCR Title 22 as follows:

A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed (California Code of Regulations, Title 22, Section 66260.10).

Chemical and physical properties that cause a substance to be considered hazardous, including the properties of toxicity, ignitability, corrosivity, and reactivity, are defined in the CCR, Title 22, Sections 66261.20–66261.24. Factors that influence the health effects of exposure to hazardous material include the dose to which the person is exposed, the frequency of exposure, the exposure pathway, and individual susceptibility. In addition, the release of hazardous materials into the environment could potentially contaminate soils, surface water, and groundwater supplies.

Under Government Code Section 65962.5, the DTSC maintains a list of hazardous substance sites. This list, referred to as the "Cortese List," includes CALSITE hazardous material sites, sites with leaking underground storage tanks, and landfills with evidence of groundwater contamination (DTSC 2015a). In addition, the Sacramento County Environmental Management Department (SCEMD) maintains records of toxic or hazardous material incidents, and the RWQCB keeps files on hazardous material sites.

Most hazardous materials regulation and enforcement in Sacramento County is managed by the SCEMD. Most hazardous materials regulation and enforcement in Elk Grove is overseen by the SCEMD which refers large cases of hazardous materials contamination or violations to the Central Valley RWQCB and the DTSC. It is not at all uncommon for other agencies such as the SMAQMD and both the federal and California Occupational Safety and Health Administrations (OSHA) to become involved when issues related to hazardous materials arise.

DISCUSSION OF IMPACTS

- a) *Would the project create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?*

Less than Significant Impact. The proposed Project would not include the routine transport, use, or disposal of hazardous materials that would create a significant hazard to the public. Small amounts of hazardous materials would be used during construction (e.g., equipment maintenance, fuel, solvents). Any use of hazardous materials would be in compliance with the applicable local, State, and federal standards associated with the handling of hazardous materials. Therefore, impacts would be less than significant.

- b) *Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

Less than Significant Impact. Once construction is finished, the proposed Project would not create a significant hazard to the public or the environment. No refueling or major maintenance

3.0 INITIAL STUDY CHECKLIST

of construction equipment will be performed on the Project site, and no heavy equipment or hazardous materials will be staged on-site. The use and handling of hazardous materials during construction activities would occur in accordance with applicable federal, State, and local laws, including Cal/OSHA requirements. These actions would minimize the potential and extent of any minor spill, and impacts would be less than significant.

- c) *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?*

No Impact. The nearest school to the proposed Project is Ellen Feickert Elementary School, located approximately 0.8 mile south of the Project site. There are no existing or proposed preschools, elementary, middle, or high schools within one-quarter mile of the proposed Project; therefore, there would be no impacts related to hazardous emissions, materials, substances, or waste near schools.

- d) *Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

No Impact. The provisions in Government Code §65962.5 are commonly referred to as the "Cortese List." An online search of the Cortese List conducted on February 20, 2015, found no records within or adjacent to the Project site. No impact would occur.

- e) *For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the project area?*

No Impact. The nearest operating airport/airstrip to the proposed Project is Borges-Clarksburg Airport, located approximately 6.75 miles northwest of Project site. The Project site is located approximately 3.5 miles northwest of Sunset Sky Ranch Airport; however, this airport is closed. The Project is not located within an airport land use plan area or within 2 miles of a public airport or public use airport. Furthermore, the proposed Project would not result in a safety hazard associated with airports for people residing or working in the Project area since it is not located within 2 miles of a public airport or public use airport or within an airport land use plan. The proposed Project does not include any structures or equipment that would obstruct navigable airspace. No impact would occur.

- f) *For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?*

No Impact. The Project site is not located within the vicinity of any private airstrips. Therefore, the Project would not result in any safety hazards for people residing or working in the Project area and no impact would occur.

- g) *Would the project impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?*

No Impact. Upon incorporation, the City adopted the Sacramento County Multi-Hazard Disaster Plan, which was established to address planned response to extraordinary emergency situations associated with natural disasters and technological incidents. The proposed Project consists of minor improvements and striping on existing Class I and Class II facilities on Beckington Drive and extension of the Laguna Creek Trail from Camden Park to MacDonald Park via Beckington Drive. The proposed Project would not impede or conflict with the objectives or policies of the Sacramento County Multi-Hazard Disaster Plan. No road closures or traffic detours would be

required during Project construction. During operation, the extended multiuse trail will provide an additional route for emergency vehicles, if necessary. No impact would occur.

- h) *Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

Less than Significant Impact. The proposed Project consists of the extension of a multiuse trail and improvements and striping to existing Class I and Class II facilities, and is surrounded by park, residential, and agricultural land uses. The proposed Project would not result in new development that would induce population growth in the area. Emergency access would be maintained throughout construction. In the event of a fire, the Elk Grove Community Services District Fire Department would provide fire and emergency services to the Project area (refer to Section 3.14, Public Services). Impacts would be less than significant.

3.0 INITIAL STUDY CHECKLIST

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.9. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of a failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

A Summary Floodplain Encroachment Report was prepared for the proposed Project in January 2014 and is included in this document as **Appendix H**.

Surface Water

The City is part of the Sacramento River watershed—a 27,000-square-mile watershed, which includes portions of the Sacramento River and Cosumnes River (City of Elk Grove 2003b). The proposed Project extends from the northern end of Camden Park, north of Laguna Creek, to MacDonald Park via Beckington Drive. Laguna Creek is part of the Morrison Creek Stream Group and is one of the main hydrologic features within the City's Planning Area and is the main creek that flows through the City. Portions of the creek have been previously altered by development.

Groundwater

The depth to groundwater at the Project site is approximately 75 to 90 feet below the ground surface (SCWA 2011). General groundwater depth may be influenced by local pumping, rainfall, and irrigation patterns. The proposed Project is within the Sacramento Valley Groundwater Basin, and more specifically, the South American Subbasin. The South American Subbasin is defined by the American River to the north, the Cosumnes River and Mokelumne River to the south, the Sierra Nevada to the east, and the Sacramento River to the west.

Floodplain

The proposed Project is located within a 100-year floodplain (City of Elk Grove 2003b). A Summary Floodplain Encroachment Report was prepared for the Project in January 2014.

REGULATORY SETTING

The State Water Resources Control Board and the RWQCB enforce State of California statutes, which are equivalent to or more stringent than the federal statutes. The RWQCBs are responsible for establishing water quality standards and objectives that protect the beneficial uses of various waters. In the Project area, the Central Valley RWQCB is responsible for protecting surface waters and groundwater from both point sources of pollution (i.e., discharge from a pipe, ditch, or other well-defined source), and non-point sources (i.e., diffuse sources with no discernible distinct point of source, often referred to as runoff or polluted runoff from agriculture, urban areas, mining, construction sites, and other sites). The City has a current NPDES General Permit, which was reissued by the Central Valley RWQCB in 2008, which regulates stormwater discharges associated with construction activities.

DISCUSSION OF IMPACTS

- a) *Would the project violate any water quality standards or waste discharge requirements?*

Less than Significant Impact.

Construction Water Quality Impacts

The proposed Project involves construction of an extension of the Laguna Creek Trail from the northern end of Camden Park to White Peacock Court/Beckington Drive and from Beckington

3.0 INITIAL STUDY CHECKLIST

Drive to MacDonald Park, and improvements and minor striping to Class I and Class II facilities on Beckington Drive. The State Water Resources Control Board requires dischargers whose projects disturb 1 or more acres of soil, or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres, to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit 99-08-DWQ). Effective July 1, 2010, all dischargers are required to obtain coverage under the Construction General Permit Order 2009-0009-DWQ adopted September 2, 2009. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation.

BMPs will be included in the grading plans to minimize erosion potential and water quality degradation of the Project area in accordance with Elk Grove Municipal Code Title 16, Chapter 16.44, Land Grading and Erosion Control. Chapter 16.44 establishes administrative procedures, minimum standards for review, and implementation and enforcement procedures for controlling erosion, sedimentation, disruption of existing drainage, and related environmental damage caused by land clearing activities, grading, filling, and land excavation. Additionally, the State has published a set of BMPs for both pre- and post-construction periods, which would be applied to the Project. The City would identify the appropriate BMPs for the proposed Project. Compliance with the provisions of the BMPs and with Municipal Code Chapter 16.44 would reduce impacts associated with water quality standards and discharge requirements to a less than significant level.

Operational Water Quality Impacts

The proposed Project consists of minor improvements and striping to existing Class I and Class II facilities on Beckington Drive and the extension of the Laguna Creek Trail from Camden Park to MacDonald Park via Beckington Drive within a Project impact footprint of approximately 0.5 acres. Impervious surfaces would be increased within the Project footprint; however, the addition of impervious surfaces would not occur within the entire Project footprint and would be limited to the Project footprint between Camden Park and Beckington Drive and Beckington Drive and MacDonald Park.

- b) *Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?*

Less than Significant Impact. The proposed Project consists of improvements and striping to existing Class I and Class II facilities on Beckington Drive and extension of the Laguna Creek Trail from Camden Park to MacDonald Park via Beckington Drive within a project impact footprint of approximately 0.5 acres. The Project will result in an increase in impervious surfaces between Camden Park and Beckington Drive and between Beckington Drive and MacDonald Park (totaling approximately .21 acres), which will alter the rate of infiltration at the Project site. However, impacts to groundwater resources would be minimal, as the proposed Project does not contain elements that would add to or draw from groundwater supplies. Additionally, the proposed Project would not be constructed immediately above a preexisting well, nor would areas known to contain wells be disturbed by construction of the proposed Project. Therefore, impacts to groundwater supplies would be less than significant.

- c) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?*

Less than Significant Impact. The proposed Project would not result in the alteration of the course of a stream or river. The proposed Project consists of improvements and striping to existing Class I and Class II facilities and extension of the Laguna Creek Trail from the northern end of Camden Park to MacDonald Park via Beckington Drive. Minor loss of vegetation and general disturbance to the soil for construction of the proposed Project would occur between Camden Park and Beckington Drive and between Beckington Drive and MacDonald Park. Removal of vegetation and soil can accelerate erosion processes within the Project area and increase the potential for sediment to enter into Laguna Creek. The Project would also be subject to Chapter 16.44 of the Elk Grove Municipal Code, which establishes administrative procedures, minimum standards for review, and implementation and enforcement procedures for controlling erosion, sedimentation, disruption of existing drainage and related environmental damage caused by land clearing activities, grading, filling, and land excavation. Compliance with Chapter 16.44 of the Municipal Code would reduce impacts associated with erosion and siltation to less than significant.

- d) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?*

Less than Significant Impact. The proposed Project consists of improvements to existing Class I and Class II facilities and extension of a multiuse trail. The Project is located north of Laguna Creek, but would not alter the course of the creek or any other stream or river. The proposed Project would result in an increase in impervious surfaces between Camden Park and Beckington Drive and between Beckington Drive and MacDonald Park due to the addition of pavement for the multiuse trail. Any additional stormwater runoff due to a localized increase in impervious surfaces will flow onto adjacent natural or landscaped areas for absorption by vegetation and/or percolation into the ground and will not result in flooding on- or off-site. The existing drainage patterns are not being altered. Therefore, impacts would be less than significant.

- e) *Would the project create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*

Less than Significant Impact. The proposed Project would result in an increase in impervious surfaces between Camden Park and Beckington Drive and between Beckington Drive and MacDonald Park, which will result in an increase in the quantity of runoff generated in a storm event. The quantity of additional runoff generated from the proposed Project would not be substantial and is not expected to contribute to runoff water that would exceed the capacity of existing or planned stormwater drainage systems in the Project vicinity. Compliance with Chapter 16.44 of the Elk Grove Municipal Code would reduce impacts associated with runoff to less than significant.

- f) *Would the project otherwise substantially degrade water quality?*

Less than Significant Impact. Refer to discussion of issue a) of this subsection. The proposed Project consists of improvements and striping to Class I and Class II facilities and extension of a

3.0 INITIAL STUDY CHECKLIST

multiuse trail with a total increase of impervious surfaces area of .21 acres. The Project site is located north of Laguna Creek, but is not anticipated to substantially degrade water quality within the creek, and is not anticipated to substantially degrade water quality of groundwater beneath the site. Compliance with Chapter 16.44 of the Elk Grove Municipal Code would reduce impacts associated with water quality to less than significant.

- g) *Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?*

No Impact. Portions of the Project site are located in 100-year and 500-year flood hazard areas; however, the Project does not include a housing component. Therefore, no impact would occur.

- h) *Would the project place structures within a 100-year flood hazard area that would impede or redirect flood flows?*

No Impact. Portions of the Project site are located in 100-year and 500-year flood hazard areas. However, the proposed Project consists of improvements to existing Class I and Class II facilities on Beckington Drive and extension of the Laguna Creek Trail, and does not include construction of any structures that would impede or redirect flood flows. Therefore, no impact would occur.

- i) *Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of a failure of a levee or dam?*

No Impact. The proposed Project consists of minor improvements and striping to existing Class I and Class II facilities on Beckington Drive and the extension of the Laguna Creek Trail from Camden Park to MacDonald Park via Beckington Drive. The proposed Project does not include any housing or structures and therefore would not expose people or structures to the risk of flooding as a result of a failure of a levee or dam. No impact would occur.

- j) *Would the project be subject to inundation by seiche, tsunami or mudflow?*

No Impact. The Project area is not located near any ocean coast or seiche hazard areas and would not involve the development of residential or other sensitive land uses in or near these areas. Therefore, the proposed Project would not expose people to potential impacts involving seiche or tsunami. No potential for mudflows is anticipated. No impact would occur.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.10 LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The City of Elk Grove General Plan Land Use Map (2009) designates Low Density Residential (LDR) and Public Parks (PP) land uses in the Project vicinity. Zoning in the Project vicinity includes Recreation (O), Residential (RD-4 and RD-5), and Agricultural-Residential (AR-5) zones (City of Elk Grove 2011). The Project site is located adjacent to Camden Park, MacDonald Park, and in a residential neighborhood. The longest stretch of the Laguna Creek Trail (approximately 2.25 miles in length) extends along Laguna Creek from south of the Bond Road/Waterman Road intersection to the northern end of Camden Park. Camden Park consists of a portion of the Laguna Creek Trail, Camden Lake, and a greenbelt. The second longest stretch of the Laguna Creek Trail (approximately 1 mile in length) extends along Whitehouse Creek from MacDonald Park to Mix Park. MacDonald Park consists of a soccer field, open play area, and playground equipment.

REGULATORY SETTING

City of Elk Grove General Plan

The City of Elk Grove General Plan (adopted November 2003 and reflecting amendments through March 2015) is a broad framework for planning the future of the City. It is the official policy statement of the City Council to guide the private and public development of the City in a manner to gain the maximum social and economic benefit to the citizens. All other City codes and standards, including specific plans and development code, must be consistent with the General Plan. The General Plan includes policies that relate to the proposed Project. **Table 3.10-1**, below, summarizes these policies.

3.0 INITIAL STUDY CHECKLIST

**TABLE 3.10-1
ELK GROVE GENERAL PLAN LAND USE CONSISTENCY WITH LAGUNA CREEK TRAIL NORTH CAMDEN SPUR PROJECT**

General Plan Policy (as adopted)	Consistency with Project	Analysis
<p>PTO-1: The City of Elk Grove supports the development, maintenance, and enhancement of parks and trails serving a variety of needs at the neighborhood, area, and citywide level. The City may seek to accomplish the provision of parks and trails in cooperation with the Elk Grove Community Services District.</p>	Yes	The proposed Project would extend the existing trail from Camden Park to MacDonald Park via Beckington Drive.
<p>PTO-7: The trails system in Elk Grove should provide for connectivity, so that all trails are linked to the extent possible for greater use as recreational and travel routes. The following features should be included in the trails system in Elk Grove:</p> <ul style="list-style-type: none"> • Trails should link residential areas with parks, commercial and office areas, and other destinations. • Trails along major roadways should avoid meanders or other design features which make bicycle use less convenient or safe. • Trails should be located off-street to the extent possible. • Easements such as access roads should be placed in joint use as trails. 	Yes	The proposed Project would provide a safe, off-street travel route between Camden Park and MacDonald Park, via Beckington Drive. It also increases connectivity for bicyclists and pedestrians within the City.
<p>PTO-8: The City's desired trails system is shown in Figure PTO-2. Flexibility shall be considered when making decisions on specific trail locations within projects, so long as the trails shown in Figure PTO-2 are implemented and other policies (such as connectivity) are incorporated in the trails system.</p>	Yes	The proposed multiuse trail from Figure PTO-2 would be implemented from Camden Park to MacDonald Park via Beckington Drive.
<p>PTO-11: Trails which parallel streams should be primarily located beyond the riparian corridor and wetlands to minimize wildlife impacts and shall be restricted to non-motorized traffic.</p>	Yes	The proposed multiuse trail would be situated north of Laguna Creek, outside the riparian corridor and wetland area.
<p>PTO-12: Trails should be designed with the safety of users and adjacent property owners in mind. To the extent possible, the bicycle trails system should provide safe, off-street options suitable for use by children and less-experienced riders.</p>	Yes	The proposed Project would consider the safety of users and adjacent property owners in its design and would be designed in accordance with the multiuse trail standards and guidelines set forth in the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan.

DISCUSSION OF IMPACTS

a) *Would the project physically divide an established community?*

No Impact. The Project site extends from the northern end of Camden Park to MacDonald Park via Beckington Drive. The proposed Project consists of minor improvements and striping to existing Class I and Class II facilities on Beckington Drive and the extension of the Laguna Creek

Trail from Camden Park to White Peacock Court/Beckington Drive and from Beckington Drive to MacDonald Park. No barriers to movement through communities would be installed. Furthermore, the proposed Project would improve the off-street multiuse trail connectivity in the area. Therefore, no impact would occur.

- b) *Would the project conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?*

No Impact. The proposed Project would extend the existing Laguna Creek Trail from Camden Park to MacDonald Park via Beckington Drive and is consistent with the City of Elk Grove General Plan and the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan. Furthermore, the proposed Project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project. No impact would occur.

- c) *Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?*

No Impact. Currently, no habitat conservation plans or natural community conservation plans are in place in the Project region. The South Sacramento Habitat Conservation Plan is a planned conservation plan that will cover the City of Elk Grove, including the Project location. However, no habitat conservation plans or natural community plans applicable to the Project area have been adopted. Therefore, no impact would occur.

3.0 INITIAL STUDY CHECKLIST

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.11. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The Surface Mining and Reclamation Act of 1975 requires the State Geologist to inventory and classify selected mineral resources in California. The proposed Project is located in an area of the City of Elk Grove, which is covered by the MRZ-3 classification for mineral resources. The MRZ-3 classification covers areas "containing aggregate deposits, the significance of which cannot be evaluated from available data" (City of Elk Grove 2003b). No mineral extraction activities occur in the vicinity of the Project site. None of the roadways in the vicinity of the proposed Project serve as routes for traffic involved in mineral extraction activities.

DISCUSSION OF IMPACTS

- a) *Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*

No Impact. The proposed Project would not result in the use or extraction of any mineral or energy resources and would not restrict access to known mineral resource areas. Furthermore, the proposed Project would not result in the loss of availability of a known mineral resource. Therefore, no impact would occur.

- b) *Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*

No Impact. Refer to discussion a), above. The proposed Project would have no impact on mineral resources. No impact would occur.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.12. NOISE. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or of applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

Noise-sensitive land uses generally include those uses where exposure to noise would result in adverse effects, as well as uses where quiet is an essential element of their intended purpose. The City's General Plan does not define noise-sensitive land uses, but typical noise-sensitive land uses include receptors such as residences, parks, schools, and/or hospitals. The Project site is located adjacent to Camden Park, MacDonald Park, and residences along Beckington Drive. Motor vehicles traveling on Beckington Drive and surrounding neighborhood roads are the primary contributor to the existing noise environment at the Project site. Noise-sensitive land uses near the Project site include Camden Park, MacDonald Park, and residences along Beckington Drive and in the surrounding residential neighborhood.

Acoustic Fundamentals

Sound is mechanical energy transmitted through a medium (air) in the form of a wave from a disturbance or vibration. Noise, however, is generally defined as sound that is loud, unpleasant, unexpected, or disagreeable.

Amplitude

Amplitude is the difference between ambient air pressure and the peak pressure of the sound wave. Amplitude is measured in decibels (dB) on a logarithmic scale. For example, a 10 dB sound is 10 times the pressure difference of a 0 dB sound; a 20 dB sound is 100 times the pressure difference of a 0 dB sound. Another feature of the decibel scale is the way in which sound amplitudes from multiple sources are added together. A 65 dB source of sound, such as a truck,

3.0 INITIAL STUDY CHECKLIST

when joined by another 65 dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). Amplitude is interpreted by the ear as corresponding to different degrees of loudness. Laboratory measurements correlate a 10 dB increase in amplitude with a perceived doubling of loudness and establish a 3 dB change in amplitude as the minimum audible difference perceptible to the average person.

Frequency

Frequency is the number of fluctuations of the pressure wave per second. The unit of frequency is the hertz (Hz). One Hz equals one cycle per second. The human ear is not equally sensitive to sound of different frequencies. Sound waves below 16 Hz or above 20,000 Hz cannot be heard at all, and the ear is more sensitive to sound in the higher portion of this range than in the lower. To approximate this sensitivity, environmental sound is usually measured in A-weighted decibels (dBA). On this scale, the normal range of human hearing extends from about 10 dBA to about 140 dBA.

Sound and the Human Ear

Because of the ability of the human ear to detect a wide range of sound pressure fluctuations, sound pressure levels are expressed in dB. The sound pressure level in dB is calculated by taking the log of the ratio between the actual sound pressure and the reference sound pressure squared. The reference sound pressure is considered the absolute hearing threshold.

In addition, because the human ear is not equally sensitive to all sound frequencies, a specific frequency-dependent rating scale was devised to relate noise to human sensitivity. A dBA scale performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear. The basis for compensation is the faintest sound audible to the average ear at the frequency of maximum sensitivity. This dBA scale has been chosen by most authorities for purposes of environmental noise regulation. **Table 3.12-1** includes examples of A-weighted noise levels from common indoor and outdoor activities.

Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise, or of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance, and habituation to noise over differing individual experiences with noise.

Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment, referred to as the "ambient" environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by the hearers. With regard to increases in A-weighted noise level, knowledge of the following relationships will be helpful in understanding this report (EPA 1971):

- Except in carefully controlled laboratory experiments, a change of one dB cannot be perceived by humans.
- Outside of the laboratory, a three dB change is considered a just-perceivable difference.
- A change in level of at least five dB is required before any noticeable change in community response would be expected.
- A 10 dB change is subjectively heard as approximately a doubling in loudness.

**TABLE 3.12-1
NOISE ENVIRONMENT**

Indoors	A-weighted decibels		Perceived loudness relative to 60 dba	Outdoors
	140	Threshold of Pain	x256	
	130	Deafening	x128	Military Jet Takeoff with Afterburner (at 50 feet)
	120		x64	Jet Takeoff at 200 Feet
Rock Band	110	Uncomfortably Loud	x32	
Inside Subway Train, New York	100		x16	747-100 Takeoff (4 Miles From Start of Roll)
Noisy Cocktail Bar	90	Very Loud	x8	Power Lawnmower (at 50 Feet) Ambulance Siren (at 100 Feet)
Jet Aircraft Cabin, at Cruise Shouting (at 3 Feet)	80		x4	727-200 Takeoff (4 Miles From Start of Roll) Diesel Truck, 40 mph (at 50 Feet)
Noisy Restaurant	70	Moderately Loud	x2	Automobile, 65 mph (at 50 Feet) Busy Street (at 50 Feet)
Vacuum Cleaner at 3 Feet	60		x1	757-200 Takeoff (4 Miles From Start of Roll) Automobile, 30 mph (at 50 Feet)
Large Business Office	50	Moderately Quiet	x1/2	Cessna 172 Landing (3,300 Feet From Rwy End)
Quiet Office	40		x1/4	
Quiet Library	30	Very Quiet	x1/8	Quiet Urban Area, Nighttime Quiet Suburban Area, Nighttime
Concert Hall, Background	20		x1/16	Quiet Rural Area, Nighttime
Recording Studio	10	Barely Audible	x1/32	Leaves Rustling
	0	Threshold of Hearing	x1/64	

Sources: California Department of Transportation, January 2002, California Airport Land Use Planning Handbook; M. David Egan, McGraw Hill, 1972, Concepts in Architectural Acoustics; and U.S. Department of Housing and Urban Development, Office of Community Planning and Development, The Noise Guidebook.

3.0 INITIAL STUDY CHECKLIST

Negative Effects of Noise on Humans

Negative effects of noise exposure include physical damage to the human auditory system, interference, and disease. Exposure to noise may result in physical damage to the auditory system, which may lead to gradual or traumatic hearing loss. Gradual hearing loss is caused by sustained exposure to moderately high noise levels over a period of time, while traumatic hearing loss is caused by sudden exposure to extremely high noise levels over a short period of time. However, gradual and traumatic hearing loss both may result in permanent hearing damage. In addition, noise may interfere with or interrupt sleep, relaxation, recreation, and communication. Although most interference may be classified as annoying, the inability to hear a warning signal may be considered dangerous. Noise may also be a contributor to diseases associated with stress, such as hypertension, anxiety, and heart disease. The degree to which noise contributes to such diseases is dependent upon the noise frequency, bandwidth, level, and exposure time.

Characteristics of Sound Propagation and Attenuation

Noise can be generated by a number of sources, including mobile sources such as automobiles, trucks, and airplanes, and stationary sources such as construction sites, machinery, and industrial operations. Noise generated by mobile sources is typically reduced at a rate between 3.0 and 4.5 dBA per doubling of distance. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. Hard and flat surfaces, such as concrete or asphalt, have an attenuation rate of 3.0 dBA per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, have an attenuation rate of about 4.5 dBA per doubling of distance. Noise generated by stationary sources typically attenuates at a rate between 6.0 and about 7.5 dBA per doubling of distance.

Sound levels can be reduced by placing barriers between the noise source and the receiver. In general, barriers contribute to decreasing noise levels only when the structure breaks the "line of sight" between the source and the receiver. Buildings, concrete walls, and berms can all act as effective noise barriers. Wooden fences or broad areas of dense foliage can also reduce noise, but are less effective than solid barriers.

Noise Descriptors

The selection of a proper noise descriptor for a specific source is dependent upon the spatial and temporal distribution, duration, and fluctuation of the noise. The noise descriptors most often encountered when dealing with traffic, community, and environmental noise are defined below (Caltrans 1998, Lipscomb and Taylor 1978).

- L_{max} (Maximum Noise Level): The maximum instantaneous noise level during a specific period of time.
- L_{min} (Minimum Noise Level): The minimum instantaneous noise level during a specific period of time.
- L_{eq} (Equivalent Noise Level): The energy mean noise level. The instantaneous noise levels during a specific period of time in dBA are converted to relative energy values. From the sum of the relative energy values, an average energy value is calculated, which is then converted back to dBA to determine the L_{eq} .

- L_{dn} (Day-Night Noise Level): The 24-hour L_{eq} with a 10 dBA "penalty" for the noise-sensitive hours between 10 p.m. and 6 a.m. The L_{dn} attempts to account for the fact that noise during this specific period of time is a potential source of disturbance with respect to normal sleeping hours.
- CNEL (Community Noise Equivalent Level): The CNEL is similar to the L_{dn} described above, but with an additional 5 dBA "penalty" for the noise-sensitive hours between 7 p.m. to 10 p.m., which are typically reserved for relaxation, conversation, reading, and television. If using the same 24-hour noise data, the CNEL is typically approximately 0.5 dBA higher than the L_{dn} .

REGULATORY SETTING

Local Plans, Policies, Regulations, and Ordinances

Since operation of the proposed Project does not include any motor vehicle transportation uses, this section focuses on the regulatory setting as it relates to construction-related noise.

City of Elk Grove General Plan

The Noise Element of the City's General Plan contains policies designed to protect the community from the harmful and annoying effects of exposure to excessive noise. General Plan policies applicable to the proposed Project are summarized below.

"NO-3 Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table NO-A [see below] as measured immediately within the property line of lands designated for noise-sensitive uses."

"NO-3-Action 1 Limit construction activity to the hours of 7 a.m. to 7 p.m. whenever such activity is adjacent to residential uses."

"NO-3-Action 3 The City shall require that stationary construction equipment and construction staging areas be set back from existing noise-sensitive land uses."

The City's General Plan also includes maximum allowable noise standards for projects affected by non-transportation noise sources. Noise compatibility of proposed development is determined in comparison to these standards. The City's noise standards for projects affected by stationary (i.e., non-transportation) noise sources are as follows:

3.0 INITIAL STUDY CHECKLIST

**TABLE 3.12-2
PERFORMANCE STANDARDS FOR STATIONARY (NON-TRANSPORTATION) NOISE SOURCES**

Source	Noise Level (Hourly L_{eq} , dBA)	
	Daytime (7a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Part 1: Typical Sources ¹	55	45
Part 2: Sources Which Are Tonal, Impulsive, Repetitive, or Consist Primarily of Speech or Music ²	50	40

1. The standards above will apply generally to noise sources that are not tonal, impulsive, or repetitive in nature. Typical noise sources in this category would include HVAC systems, cooling towers, fans, blowers, etc.

2. The standards in Part 2 apply to noises which are tonal in nature, impulsive or repetitive, or which consist primarily of speech or music (e.g., humming sounds, outdoor speaker systems). Typical noise sources in this category include pile drivers, drive-through speaker boxes, punch presses, steam valves, and transformer stations.

These noise level standards in Parts 1 and 2 above do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

The City may impose noise level standards which are more or less restrictive than those specified above based upon determination of existing low or high ambient noise levels.

Source: Elk Grove General Plan, Noise Element, Table NO-A (Amended January 5, 2005)

As depicted in **Table 3.12-2**, the City's maximum acceptable exterior noise standard for residential land uses affected by non-transportation noise sources is 55 dBA L_{eq} during the daytime hours (i.e., 7 a.m. to 10 p.m.) and 45 dBA during the nighttime hours (i.e., 10 p.m. to 7 a.m.). To account for increased annoyance potential, non-transportation sources with tonal, impulsive, or repetitive noise characteristics (i.e., pile driver) are reduced by 5 dBA.

City of Elk Grove Noise Ordinance (Municipal Code Chapter 6.32)

Elk Grove Municipal Code Title 6, Chapter 6.32, Noise Control, regulates noise generated by non-transportation sources. Section 6.32.100, Exemptions, of the Code restricts construction activities to occur between the hours of 6 a.m. and 8 p.m., Monday through Friday, and between the hours of 7 a.m. and 8 p.m. on Saturday and Sunday.

DISCUSSION OF IMPACTS

The Project components include recreational facilities that would not produce substantial noise during operation and would not contribute substantially to the ambient noise environment. Implementation of the proposed Project would not result in the construction or operation of any transportation uses or stationary noise sources; therefore, this section focuses on construction-related noise impacts.

- a) Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or of applicable standards of other agencies?

Less than Significant With Mitigation Incorporated. Construction noise typically occurs intermittently and varies depending upon the nature or phase (e.g., demolition/land clearing, grading and excavation) of construction. Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Typical noise levels for individual pieces of construction equipment are summarized in **Table 3.12-3**.

TABLE 3.12-3
TYPICAL CONSTRUCTION EQUIPMENT NOISE LEVELS

Type of Equipment	Typical Noise Level (dBA) 50 feet from Source
Dozer	85
Excavator	88
Concrete Mixer	85
Compactor	82
Loader	85
Backhoe	80
Grader	85
Crane	83
Generator	81
Truck	88

Sources: EPA 1971

During construction, noise from equipment would cause short-term localized increases in ambient noise levels. The actual noise levels at any particular location would depend on a variety of factors, including the type of construction equipment or activity involved, distance to the source of the noise, obstacles to noise that exist between the receptor and the source, time of day, and similar factors. Construction of the proposed Project would result in a temporary, periodic increase in ambient noise levels that would exceed the City noise standards. However, this increase would be temporary, intermittent, and limited to daytime hours. Further, mitigation is available that would require limits to the hours of construction, appropriate locations for staging areas, noise-reduction intake and exhaust mufflers and engine shrouds for construction equipment, and minimization of construction equipment idling, which would reduce impacts to less than significant. Implementation of mitigation measures **MM 3.12.1** through **MM 3.12.4** will reduce impacts to less than significant by limiting the hours of noise-generating construction operations to daytime hours, locating construction equipment and staging areas away from sensitive land uses, requiring construction equipment to be equipped with noise-reduction intake and exhaust mufflers and engineer shrouds, and prohibiting the idling of motorized construction equipment when not in use.

- b) *Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?*

Less than Significant with Mitigation Incorporated. Construction activities associated with the proposed Project will include minor improvements to existing Class I and Class II facilities on Beckington Drive and the extension of Laguna Creek Trail from Camden Park to White Peacock Court/Beckington Drive and from Beckington Drive to MacDonald Park. Construction would be temporary and would occur between the hours of 6 a.m. and 8 p.m. on weekdays in accordance with Chapter 6.32, Noise Control, of the Elk Grove Municipal Code, or between the hours of 7 a.m. and 7 p.m. on weekdays where adjacent to residential uses in accordance with Elk Grove General Plan Policy NO-3-Action-1 and as specified in **MM 3.12.1**. No pile driving or other activities commonly associated with vibration would occur. Therefore, impacts would be less than significant with incorporation of mitigation measures **MM 3.12.1** through **MM 3.12.4** by

3.0 INITIAL STUDY CHECKLIST

limiting the hours of noise-generating construction operations to daytime hours, locating construction equipment and staging areas away from sensitive land uses, requiring construction equipment to be equipped with noise-reduction intake and exhaust mufflers and engineer shrouds, and prohibiting the idling of motorized construction equipment when not in use.

- c) *Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?*

No Impact. Due to the nature of the proposed Project (minor improvements and striping to existing Class I and Class II facilities and extension of an existing off-street multiuse trail), implementation of the Project would not result in a substantial permanent increase in ambient noise levels once in operation.

- d) *Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?*

Less than Significant with Mitigation Incorporated. The proposed Project would result in a temporary increase in ambient noise levels in the Project vicinity during construction due to construction equipment and activities at the Project site; however, these increases would be temporary, intermittent, and limited to daytime hours. Because sensitive land uses are located adjacent to the Project site, temporary construction noise is considered potentially significant unless mitigation is incorporated. With implementation of mitigation measures **MM 3.12.1** through **MM 3.12.4**, short-term construction-related noise impacts would be reduced to a less than significant level by limiting the hours of noise-generating construction operations to daytime hours, locating construction equipment and staging areas away from sensitive land uses, requiring construction equipment to be equipped with noise-reduction intake and exhaust mufflers and engineer shrouds, and prohibiting the idling of motorized construction equipment when not in use.

- e) *For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

No Impact. The proposed Project is not located within an airport land use plan or within 2 miles of a public airport. No impact would occur.

- f) *For a project located within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?*

No Impact. The proposed Project is not located within the vicinity of a private airstrip. No impact would occur.

Mitigation Measures

MM 3.12.1 Noise-generating construction operations shall be limited to between the hours of 7 a.m. and 7 p.m. in accordance with the Elk Grove General Plan Noise Policy NO-3-Action-1.

Timing/Implementation: During Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

MM 3.12.2 Construction equipment and equipment staging areas shall be located at the farthest distance possible from adjacent sensitive land uses.

Timing/Implementation: *During Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

MM 3.12.3 Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturer recommendations. Equipment engine shrouds shall be closed during equipment operation.

Timing/Implementation: *During Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

MM 3.12.4 When not in use, motorized construction equipment shall not be left idling.

Timing/Implementation: *During Project construction*

Enforcement/Monitoring: *City of Elk Grove Planning Department*

3.0 INITIAL STUDY CHECKLIST

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.13. POPULATION AND HOUSING. Would the project:				
a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

In the ten years prior to the incorporation of the City in July 2000, the population increased by 70.5 percent, in part due to annexations. The City began to rapidly develop as a result of an increase in jobs to the Sacramento County region and the availability of land outside the downtown Sacramento area. According to the California Department of Finance, the population of the City was approximately 160,688 in 2014, which is a 1.2 percent increase from the previous year (DOF 2014). Several housing developments are planned in the City. West of the Project site, an area of land is planned for low-density residential use (City of Elk Grove 2003a). The proposed Project does not involve the addition of new housing or the displacement of existing housing.

DISCUSSION OF IMPACTS

a) *Would the project induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?*

No Impact. The proposed Project does not include the construction of new homes or businesses, nor does it include extension or construction of new roadways which could potentially induce growth. Given that the proposed Project would involve the extension of the existing Laguna Creek Trail and minor improvements and striping on Class I and Class II facilities, the Project is not anticipated to induce growth. Therefore, no impact would occur.

b) *Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*

No Impact. No residential structures would be displaced as a result of the proposed Project. No impact would occur.

c) *Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

No Impact. As discussed in b) above, the proposed Project would not involve the removal or relocation of any housing. The proposed Project would not displace any people or necessitate the construction of any replacement housing. Therefore, no impact would occur.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.14 PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:				
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The proposed Project is located in the City from the northern end of Camden Park to MacDonald Park via Beckington Drive. The City receives general public safety and law enforcement services from the City of Elk Grove Police Department. The Elk Grove Community Services District Fire Department provides fire protection and emergency services to the City. The Elk Grove Unified School District provides educational services to the area in the Project vicinity. Additionally, the City provides maintenance of public facilities, including those intended for bicycle and pedestrian use.

DISCUSSION OF IMPACTS

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

a-e) Fire protection, police protection, schools, parks, other public facilities?

No Impact. The proposed Project involves the extension of the Laguna Creek Trail from the northern end of Camden Park to MacDonald Park via Beckington Drive and minor improvements and striping on Class I and Class II facilities on Beckington Drive. The proposed Project does not include new development for habitation nor does it include development of new businesses. Therefore, the proposed Project would not induce population growth and furthermore, does not include any components that would result in an increased demand for fire protection, police protection, schools, parks, or other public services. Establishment of additional facilities to maintain acceptable service ratios for the public would not be necessary. During construction, emergency access through the Project area will be maintained at all times. Therefore, no impact would occur.

3.0 INITIAL STUDY CHECKLIST

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.15. RECREATION.				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project include recreational facilities, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

The City's General Plan (2003) contains goals and policies established to conserve existing national, State, and regional recreation areas, as well as encouragement for the development of additional recreational opportunities to meet the City's needs. In addition, the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan includes goals that encourage an exceptional public parks network throughout the City and public use of all available pedestrian and bicycle trails. The proposed Project involves the extension of a recreational trail (Laguna Creek Trail) from Camden Park to MacDonald Park via Beckington Drive. Camden Park is 21.4 acres and contains a section of Laguna Creek Trail which is used for activities such as horseback riding, bicycling, jogging, and walking. MacDonald Park is 1 acre and features a soccer field, open play area, and playground equipment.

DISCUSSION OF IMPACTS

a) *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

Less than Significant Impact. The proposed Project would extend the Laguna Creek Trail from the northern end of Camden Park to MacDonald Park via Beckington Drive. The proposed multiuse trail will essentially connect Camden Park and MacDonald Park via Beckington Drive, potentially increasing the accessibility of these parks to nearby residents. However, residents already have access to both parks under existing conditions; thus substantial physical deterioration of Camden Park, MacDonald Park, and other recreational facilities is not expected to result from the proposed Project. Although the proposed Project involves the extension of a multiuse trail for recreational purposes, it does not include a residential or commercial component that would increase human presence in the area which could result in increased use of existing parks or recreational facilities. Therefore, impacts are considered less than significant.

b) *Does the project include recreational facilities, or require the construction or expansion of existing facilities, which might have an adverse physical effect on the environment?*

Less than Significant Impact. The proposed Project involves the extension of the Laguna Creek Trail from the northern end of Camden Park to MacDonald Park via Beckington Drive. The proposed Project includes the extension of the existing Laguna Creek Trail, and minor improvements and

3.0 INITIAL STUDY CHECKLIST

striping for Class I and Class II facilities on Beckington Drive, and is consistent with the existing land uses of the Project site and surrounding area. Furthermore, the proposed Project is consistent with the City of Elk Grove General Plan and the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan, which identify the need for an off-street multiuse trail system providing connections throughout the City. The proposed improvements will not impact the usability of the trail during construction, as there is currently no bicycle or pedestrian traffic at this due to the termination of the trail approximately 100' beyond the improvement site. The proposed project does not anticipate any permanent or adverse physical impacts; therefore, impacts are considered less than significant.

3.0 INITIAL STUDY CHECKLIST

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.16 TRANSPORTATION/TRAFFIC. Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The proposed Project would extend the Laguna Creek Trail from the northern end of Camden Park to MacDonald Park via Beckington Drive. The Laguna Creek Trail is currently split into three segments. The longest segment of the trail is approximately 2.25 miles long and extends from an equestrian staging area south of the Bond Road/Waterman Road to the northern end of Camden Park, where the proposed extension of the trail would begin. The proposed Project would connect the longest segment of the Laguna Creek Trail to the second longest segment of the Laguna Creek Trail, which is approximately 0.90 mile long and extends from east of Mix Park to MacDonald Park, where the proposed extension of the trail would end.

DISCUSSION OF IMPACTS

- a) *Would the project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?*

No Impact. The proposed Project does not involve construction of a new roadway or significant physical alteration of an existing roadway. In addition, the proposed Project includes the extension of an existing multiuse trail and minor improvements and striping to existing Class I and Class II facilities, which contribute to the continuity of the off-street multiuse trail system within the City and improve bicycle access along Beckington Drive. The Project is included in, and is consistent with, the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan. Therefore, no impact would occur.

- b) *Would the project conflict with an applicable congestion management program including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?*

No Impact. The proposed Project does not involve construction of a new roadway or significant physical alteration of an existing roadway and would therefore have no impact on an established level of service standard.

- c) *Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?*

No Impact. Sunset Skyranch Airport, a privately owned, publicly used airport, is located approximately 3.5 miles southeast of the Project site; however, this facility is no longer in operation. Borges-Clarksburg Airport is a private-use airport located approximately 6.75 miles northwest of the proposed Project. The proposed Project involves construction of an off-street, multiuse path and minor striping for a Class II bike lane on an existing road and would not result in a change in air traffic patterns. In addition, the project does not propose any structures that would impede a height limitation in close proximity to an airport. No impact would occur.

- d) *Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

No Impact. The proposed Project would be designed in accordance with the standards and guidelines set forth in the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan. Specifically, trail design and maintenance shall provide for trail safety and security. The trail would not create physical entrapment areas, would allow for trail user defensible space, and would provide adequate site distance for trail users. No impact would occur.

- e) *Would the project result in inadequate emergency access?*

No Impact. On-street construction activities for the proposed Project would include minor improvements and striping for a Class II facility on Beckington Drive. Off-street construction activities for the paved multiuse trail extension from Camden Park to Beckington Drive and from Beckington Drive to MacDonald Park are not expected to interfere with emergency access on local roadways. Trail design would be consistent with the standards and guidelines provided in the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan (i.e., minimum tread width is 10

3.0 INITIAL STUDY CHECKLIST

feet of paved trail) so that upon completion of construction, emergency vehicles would be able to use the trail in the event of an emergency. Therefore, no impact would occur.

f) *Would the project conflict with adopted policies, plans or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?*

No Impact. The proposed Project involves the extension of the Laguna Creek Trail from the northern end of Camden Park to MacDonald Park via Beckington Drive and is consistent with the adopted policies, plans, and programs supporting alternative transportation including the City of Elk Grove General Plan and the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan. No impact would occur.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.17. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

Water

Water services within City limits are provided by the Sacramento County Water Agency and the Elk Grove Water District. Private service areas also exist within the City. The Project area receives water services from the Elk Grove Water District.

Wastewater Service

Urbanized portions of Sacramento County, such as the City of Elk Grove, receive wastewater service from the Sacramento Regional County Sanitation District (SRCSD), which is a publicly owned wastewater agency. Over one million people in the major Sacramento Metropolitan Area receive wastewater services from the SRCSD. Three agencies—the City of Folsom, the City of Sacramento, and Sacramento County Sanitation District 1—contribute to the wastewater services provided by SRCSD. The Project site falls within the Sacramento County Sanitation District 1 service area; however, the Project will not require wastewater service.

3.0 INITIAL STUDY CHECKLIST

Solid Waste Service

Solid waste services in the City of Elk Grove are provided by the Sacramento County Public Works Agency, Waste Management and Recycling. The Central Valley Waste Services provide solid waste services to single-family residential customers. Solid waste within the City limits is typically delivered to Sacramento County's Kiefer Landfill, the primary municipal solid waste disposal facility in Sacramento County, located at the intersection of Grant Line Road and Kiefer Boulevard. Waste is accepted from the general public, businesses and private waste haulers.

At present, the Kiefer Landfill, which comprises approximately 1,084 acres, is the only landfill within the jurisdiction of Sacramento County that is permitted to accept solid waste for disposal. The maximum tons per day allowed at the Kiefer Road Landfill is 10,815 tons per day, with an average intake of 6,362 tons per day. The landfill has a total capacity of 117 million cubic yards (58 million tons). The Kiefer Landfill is classified as a major landfill, which is defined as a facility that receives more than 50,000 tons of solid waste per year. The Kiefer Landfill has been operating below permitted capacity and is projected to have capacity for about the next 20 to 30 years (City of Elk Grove 2003b).

Electrical, Telephone, and Natural Gas Services

Electrical services within the City limits of Elk Grove are provided by the Sacramento Municipal Utilities District. Telephone services in Elk Grove are provided by Frontier Communications (formerly Citizens Communications) and Pacific Bell. Natural gas services to customers within the City limits of Elk Grove are provided by Pacific Gas and Electric Company.

Utility Relocations

Underground and overhead utility relocations are not anticipated for the proposed Project.

DISCUSSION OF IMPACTS

- a) *Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*

No Impact. The proposed Project consists of minor improvements and striping for existing Class I and Class II facilities on Beckington Drive and the extension of the existing Laguna Creek Trail from Camden Park to White Peacock Court/Beckington Drive and Beckington Drive to MacDonald Park. The proposed Project does not include any uses that would generate wastewater or any components that would result in an increased demand for wastewater treatment. Therefore, the proposed Project would not exceed wastewater treatment requirements of the RWQCB and no impact would occur.

- b) *Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

No Impact. The proposed Project does not include any uses that would generate wastewater nor does it include new development for habitation or new businesses. Population growth would not result from the proposed Project that would require or result in the construction or expansion of new water or wastewater treatment facilities. No impact would occur.

- c) *Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

Less than Significant Impact. The proposed Project involves the extension of the Laguna Creek Trail, and minor improvements and striping for existing Class I and Class II facilities on Beckington Drive. The extension of the multiuse trail would extend from the northern end of Camden Park for approximately 700 feet to Beckington Drive and from Beckington Drive for approximately 200 feet to MacDonald Park. Extending the Laguna Creek Trail would result in an increase in impervious surfaces from Camden Park to Beckington Drive and from Beckington Drive to MacDonald Park. However, the Project is not anticipated to generate excessive runoff as in the increase in impervious surfaces (totaling .21 acres) would be minor within a project footprint where the majority of the area is already paved. Construction of new stormwater drainage facilities or expansion of existing facilities would not result from the proposed Project. Impacts would be less than significant.

- d) *Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

No Impact. No increase in demand for water would result from the proposed Project. There may be a temporary need for water during construction to control dust; however, it is not expected to result in the need for water supply beyond what is currently available and no increase in demand for long-term water supply would be generated. Therefore, no impact would occur.

- e) *Would the project result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?*

No Impact. The proposed Project does not include any uses that would generate wastewater and would therefore not affect capacity of the local wastewater treatment provider. No impact would occur.

- f) *Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*

Less than Significant Impact. Solid waste generated by the proposed Project would be transported to Kiefer Landfill which has been operating below permitted capacity and is projected to have capacity for about the next 20 to 30 years (City of Elk Grove 2003b). Therefore, impacts would be less than significant.

- g) *Would the project comply with federal, state, and local statutes and regulations related to solid waste?*

No Impact. The proposed Project would comply with all applicable State, federal, and local solid waste regulations including the California Integrated Waste Management Act of 1989 (AB 939) and the California Solid Waste Re-Use and Recycling Access Act of 1991 (§42900-42911 of the Public Resources Code). No impact would occur.

3.0 INITIAL STUDY CHECKLIST

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.18. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of rare or endangered plants or animals, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DISCUSSION OF IMPACTS

- a) *Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of rare or endangered plants or animals, or eliminate important examples of the major periods of California history or prehistory?*

Less than Significant with Mitigation Incorporated. As discussed in subsection 3.4, Biological Resources, of this IS/MND, the Project site is not located within an identified corridor as identified in the CDFW BIOS Viewer (2014b). Several special-status plant and wildlife species have the potential to occur in the BSA for the Project, including special-status plant species: bristly sedge, Bolander's water-hemlock, Peruvian dodder, dwarf downingia, woolly rose mallow, legenera, Mason's lilaeopsis, Sanford's arrowhead, marsh skullcap, side-flowering skullcap, and saline clover; and special status-wildlife species: valley elderberry longhorn beetle, western pond turtle, giant garter snake, tricolored blackbird, grasshopper sparrow, western burrowing owl, Swainson's hawk, northern harrier, whitetailed kite, least bittern, song sparrow, yellow-headed blackbird, and western red bat. However, implementation of mitigation measures **MM 3.4.1** through **MM 3.4.26** (included in subsection 3.4, Biological Resources, of this IS/MND) would reduce impacts to biological resources to a less than significant level. The potential for discovery or disturbance of historical, archaeological, or paleontological resources or human remains is not anticipated. However, implementation of mitigation measure **MM 3.5.1** (included in subsection 3.5, Cultural Resources, of this IS/MND) would reduce impacts to a less than significant level by insuring that appropriate protocol is followed. Impacts are considered less than significant with mitigation incorporated.

- b) Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

Less than Significant Impact. CEQA Guidelines Section 15064(h) states that a lead agency shall consider whether the cumulative impact of a project is significant and whether the effects of the project are cumulatively considerable. The assessment of the significance of the cumulative effects of a project must therefore be conducted in connection with the effects of past projects, or other current projects, and probable future projects.

The proposed Project would extend the Laguna Creek Trail from the northern end of Camden Park to MacDonald Park via Beckington Drive. The proposed Project is consistent with the City of Elk Grove General Plan and the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan. The Project is listed in the City's Bicycle, Pedestrian, and Trails Master Plan, which expresses the City's desire to have a comprehensive off-street multiuse trail system that provides connectivity throughout the City and the wider Sacramento region. The proposed Project would complete a portion of the off-street Laguna Creek Trail system in the City of Elk Grove and improve bicycle and pedestrian access in the City. The Project would make no significant contribution to cumulatively adverse impacts associated with existing or proposed development projects in the City as the Project would not directly generate vehicle trips. Construction of the proposed Project along with other construction in the City and Sacramento County would contribute to cumulative environmental impacts. However, the proposed Project's contribution would be minimal, and impacts are considered less than cumulatively considerable.

- c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

Less than Significant Impact with Mitigation Incorporated. During operation, the proposed Project would not create a significant hazard to the public or the environment as it would improve bicycle and pedestrian access between the northern end of Camden Park and Bond Road in the City of Elk Grove. Construction of the proposed Project will result in a temporary, periodic increase in ambient noise levels and GHG emissions. However, because noise and GHG emission increases during construction will be temporary, intermittent, and limited to daytime hours, this is considered a less than significant impact. Implementation of mitigation measures **MM 3.12.1** through **MM 3.12.4** (included in subsection 3.12, Noise, of this IS/MND) will further reduce impacts to less than significant by limiting the hours of noise-generating construction operations to daytime hours, locating construction equipment and staging areas away from sensitive land uses, requiring construction equipment to be equipped with noise-reduction intake and exhaust mufflers and engineer shrouds, and prohibiting the idling of motorized construction equipment when not in use.

3.0 INITIAL STUDY CHECKLIST

This page is intentionally left blank.

4.0 LIST OF MITIGATION MEASURES

4.1 SUMMARY OF MITIGATION MEASURES

BIOLOGICAL RESOURCES (SECTION 3.4)

MM 3.4.1 During Project development, the work area shall be reduced to the smallest footprint feasible in sensitive habitat areas.

Timing/Implementation: During Project development

Enforcement/Monitoring: City of Elk Grove Planning Department

MM 3.4.2 Work shall coincide with the driest time. If water is present at the time of construction, water shall be diverted around the work area and work shall resume after the site is dry. Work within the dewatered areas shall be timed with awareness of precipitation forecasts and likely increases in water flows and flood stages. Construction activities within jurisdictional features shall cease prior to storm events until all reasonable erosion control measures have been implemented. Construction equipment and material shall be removed from the floodplain if inundation is likely. Revegetation, restoration, and erosion control work shall not be confined to this time period.

Timing/Implementation: During Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

MM 3.4.3 If work in the flowing portion of the creek/ditch is unavoidable, the entire flow shall be diverted around or through the work area during excavation and/or construction operations. Flows shall be diverted using gravity flow through temporary culverts/pipes or pumped around the work site with the use of hoses. When a temporary dam or other artificial obstruction is being constructed, maintained, or placed in operation, sufficient water shall at all times be allowed to pass downstream to maintain aquatic life below the dam pursuant to FGC Section 5937. Any temporary dam or other artificial obstruction constructed shall only be built from clean materials such as sandbags, gravel bags, water dams, or clean/washed gravel that will cause little or no siltation.

Timing/Implementation: During Project excavation and construction

Enforcement/Monitoring: City of Elk Grove Planning Department

MM 3.4.4 Prior to initiation of construction activities within jurisdictional features, construction best management practices (BMPs) shall be employed on-site to prevent degradation to on-site and off-site waters of the US. Methods shall include the use of appropriate measures to intercept and capture sediment prior to entering jurisdictional features, as well as erosion control measures along the perimeter of all work areas to prevent the displacement of fill material. All BMPs shall be in place prior to initiation of any construction activities and shall remain until construction activities are completed. All erosion control methods shall be maintained until all on-site soils are stabilized.

4.0 LIST OF MITIGATION MEASURES

- Timing/Implementation:* Prior to start of construction within jurisdictional features
- Enforcement/Monitoring:* City of Elk Grove Planning Department
- MM 3.4.5** Standard staging area practices for sediment-tracking reduction shall be implemented where necessary and may include vehicle washing and street sweeping.
- Timing/Implementation:* During Project construction
- Enforcement/Monitoring:* City of Elk Grove Planning Department
- MM 3.4.6** All exposed/disturbed areas and access points left barren of vegetation as a result of construction activities shall be restored using locally native grass seeds, locally native grass plugs, and/or a mix of quick-growing sterile nonnative grass with locally native grass seeds. Seeded areas shall be covered with broadcast straw and/or jute netted (monofilament erosion blankets are not permitted).
- Timing/Implementation:* During Project construction
- Enforcement/Monitoring:* City of Elk Grove Planning Department
- MM 3.4.7** For the approximate 0.032 acre of Laguna Creek permanently affected by the proposed Project, the City shall replace the affected acreage at a 1:1 ratio (i.e., 1 acre for every 1 acre of impact), or another approved ratio as determined by the USACE. Impacts shall be offset through the dedication of approximately 0.032 shaded riverine aquatic mitigation credit(s) within a USACE-approved mitigation bank or through the payment of in-lieu fees to an approved conservation bank.
- Timing/Implementation:* Prior to and during Project construction
- Enforcement/Monitoring:* City of Elk Grove Planning Department
- MM 3.4.8** For the approximate 0.005 acre of man-made ditch permanently affected by the proposed Project, the City shall replace the affected acreage at a 1:1 ratio, or another approved ratio as determined by the USACE. Impacts may be offset through the restoration and relocation of the ditch within the Project area, through the dedication of mitigation credit(s) within a USACE-approved mitigation bank, or through the payment of in-lieu fees to an approved conservation bank.
- Timing/Implementation:* Prior to and during Project construction
- Enforcement/Monitoring:* City of Elk Grove Planning Department
- MM 3.4.9** Prior to any vegetation removal or ground-disturbing activities, focused surveys shall be conducted to determine if special-status plants occur within the Project footprint and/or temporary construction zone. If no special-status

plant species are found, then the Project will not have any impacts to the species and no additional mitigation measures are necessary.

Timing/Implementation: Prior to vegetation removal or ground-disturbing activities

Enforcement/Monitoring: City of Elk Grove Planning Department

MM 3.4.10 If special-status species are located within the Biological Study Area (BSA) but outside the Project footprint, then the plants shall be avoided by installing protective fencing and by warning construction personnel of their presence.

Timing/Implementation: During Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

MM 3.4.11 A Worker Environmental Awareness Program (WEAP) shall be implemented to educate construction workers about the presence of special-status species and sensitive biological resources in and/or near the Project work area and to instruct them on proper avoidance.

Timing/Implementation: Prior to Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

MM 3.4.12 If any of the species are found on-site and cannot be avoided, the City shall consult with the USFWS and/or CDFW, as applicable, to determine appropriate mitigation for special-status plants, which may include but is not limited to the following measures:

- Salvage portions of the habitat or plant populations that will be lost as a result of implementation of the proposed Project.
- Transplant the plants that would be adversely affected by the proposed Project for either reestablishment after construction is complete or for planting in a new area in appropriate habitat.
- Develop a propagation program for the salvage and transfer of rare, threatened, or endangered plant populations from the Project site before the initiation of construction activities.
- Involve qualified biologists in the propagation and transport of rare, threatened, or endangered plant species. (Note: Propagation methods for the salvaged plant population must be developed on a case-by-case basis and must include the involvement of local conservation easements, preserves, and/or open space, where applicable). The propagation and transfer of individual plant species must be performed at the correct time of year and successfully be completed before the Project's construction activities eliminate or disturb the plants and habitats of concern.

Timing/Implementation: Prior to Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

4.0 LIST OF MITIGATION MEASURES

MM 3.4.13 The City shall replace the loss of one elderberry shrub/stem at a 2:1 ratio through the dedication of mitigation credit(s) within a USFWS-approved mitigation bank, or through the payment of in-lieu fees to an approved valley elderberry longhorn beetle conservation bank that results in two conservation plantings of elderberry seedlings.

Timing/Implementation: Prior to Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

MM 3.4.14 The City shall offset associated native species plantings at a 1:1 ratio through the dedication of mitigation credit(s) within a USFWS-approved mitigation bank, or through the payment of in-lieu fees to an approved valley elderberry longhorn beetle conservation bank that results in two conservation plantings of native associates.

Timing/Implementation: Prior to Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

MM 3.4.15 A preconstruction survey for western pond turtle shall be conducted within 24 hours of the onset of construction activities adjacent to Laguna Creek, Camden Lake, and/or Whitehouse Creek. The survey area shall include a 100-foot buffer of the area to be affected. If juvenile or adult turtles are found within the survey area, the individuals should be moved at least 500 feet downstream in suitable habitat. If a turtle nest is found within the survey area, construction activities shall not take place within 100 feet of the nest until the turtles have hatched, or the eggs have been moved to an appropriate location.

Timing/Implementation: Prior to Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

MM 3.4.16 If clearing and/or construction activities would occur during the raptor nesting season (January 15–August 15), preconstruction surveys to identify active nests shall be conducted by a qualified biologist within 14 days of construction initiation. Surveys must be performed by a qualified biologist for the purposes of determining presence/absence of active nest sites within the proposed impact area, including construction access routes and a 250-foot buffer (if feasible). If no active nests are found, no further mitigation is required. Surveys shall be repeated if construction activities are delayed or postponed for more than 30 days.

Timing/Implementation: Prior to Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

MM 3.4.17 If an active nest (excluding western burrowing owl) is located during preconstruction surveys, construction activities shall be restricted as necessary to avoid disturbance of the nest until it is abandoned or a qualified biologist deems disturbance potential to be minimal. Restrictions may include

establishment of exclusion zones (no ingress of personnel or equipment at a minimum radius of 30 meters (100 feet) around an active raptor nest and a 15-meter (50-foot) radius around an active migratory bird nest) or alteration of the construction schedule. Activities permitted within exclusion zones and the size may be adjusted through consultation with the CDFW and/or the City.

Timing/Implementation: Prior to and during Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

MM 3.4.18 Trees containing active migratory bird and/or raptor (excluding Swainson's hawk) nests that must be removed as a result of Project implementation shall be removed during the non-breeding season (September 1–January 1). Swainson's hawks are State and federally listed as threatened species; therefore, impacts to Swainson's hawk nest trees require regulatory authorization from the CDFW prior to removal.

Timing/Implementation: Prior to Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

MM 3.4.19 If no burrowing owls are detected, no further mitigation is required. If active burrowing owls are detected, the City shall implement the avoidance, minimization, and mitigation methodologies outlined in CDFW's (2012) Staff Report on Burrowing Owl Mitigation prior to initiating Project-related activities that may impact burrowing owls.

Timing/Implementation: Prior to Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

MM 3.4.20 The City shall mitigate for the loss of 0.081 acre of Swainson's hawk foraging habitat at a 1:1 ratio. Mitigation can be accomplished through the City of Elk Grove Swainson's Hawk Impact Mitigation Fee (Chapter 16.130 of the City Municipal Code).

Timing/Implementation: Prior to Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

MM 3.4.21 Prior to the removal of any buildings or oak trees, a bat survey shall be performed by a qualified biologist between March 1 and July 31. If bat roosts are identified, the City shall require that the bats be safely flushed from the sites where roosting habitat is planned to be removed prior to roosting season (typically May to August) and prior to the onset of construction activities. If maternity roosts are identified during the maternity roosting season (typically May to September) they must remain undisturbed until a qualified biologist has determined the young bats are no longer roosting. If roosting is found to occur on-site, replacement roost habitat (e.g., bat boxes) shall be provided to offset roosting sites removed. If no bat roosts are detected, then no further action is required if the trees and buildings are removed prior to the next breeding season. If removal is delayed, an additional survey shall be

4.0 LIST OF MITIGATION MEASURES

conducted 30 days prior to removal to ensure that a new colony has not established itself.

Timing/Implementation: Prior to Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

MM 3.4.22

If a female or maternity colony of bats are found on the Project site, and the Project can be constructed without the elimination or disturbance of the roosting colony (e.g., if the colony roosts in a large oak tree not planned for removal), a qualified biologist shall determine what buffer zones shall be employed to ensure the continued success of the colony. Such buffer zones may include a construction-free barrier of 200 feet from the roost and/or the timing of the construction activities outside of the maternity roost season (after July 31 and before March 1).

Timing/Implementation: Prior to and during Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

MM 3.4.23

If an active nursery roost is documented on-site and the Project cannot be conducted outside of the maternity roosting season, bats shall be excluded from the site after July 31 and before March 1 to prevent the formation of maternity colonies. Non-breeding bats shall be safely evicted under the direction of a bat specialist.

Timing/Implementation: Prior to and during Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

MM 3.4.24

If a giant garter snake is encountered in the project work area, construction will cease until the snake has been allowed to move away under its own volition.

Timing/Implementation: Throughout Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

MM 3.4.25

Tightly woven erosion control matting (mesh size less than 0.25 inch) or similar material shall be used for erosion control and other purposes at the Project site to ensure that snakes are not trapped or entangled by the erosion control material. The edge of the material shall be buried in the ground to prevent snakes from crawling underneath the material. The use of plastic, monofilament, jute, or similar erosion control netting with mesh sizes larger than 0.25 inch that could entangle snakes will be prohibited.

Timing/Implementation: Throughout Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

MM 3.4.26 A survey shall be conducted for giant garter snakes within the project work area 24 hours prior to the onset of construction and any time activities are halted for more than two weeks thereafter.

Timing/Implementation: Within 24 hours prior to Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

CULTURAL RESOURCES (SECTION 3.5)

MM 3.5.1 In order to mitigate for the potential discovery or disturbance of any human remains, the protocol of California Health and Safety Code Section 7050.5(b) will be adhered to as follows:

In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) or Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner, and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.

If the remains are determined to be Native American, City policy would dictate that the procedures outlined in CEQA Section 15064.5(d) and (e) be followed.

Timing/Implementation: Throughout Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

NOISE (SECTION 3.12)

MM 3.12.1 Noise-generating construction operations shall be limited to between the hours of 7 a.m. and 7 p.m. in accordance with the Elk Grove General Plan Noise Policy NO-3-Action-1.

Timing/Implementation: During Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

MM 3.12.2 Construction equipment and equipment staging areas shall be located at the farthest distance possible from adjacent sensitive land uses.

Timing/Implementation: During Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

4.0 LIST OF MITIGATION MEASURES

MM 3.12.3 Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturer recommendations. Equipment engine shrouds shall be closed during equipment operation.

Timing/Implementation: During Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

MM 3.12.4 When not in use, motorized construction equipment shall not be left idling.

Timing/Implementation: During Project construction

Enforcement/Monitoring: City of Elk Grove Planning Department

5.0 LIST OF PREPARERS

5.1 LIST OF PREPARERS

CITY OF ELK GROVE PUBLIC WORKS DEPARTMENT

Richard Shepard, P.E.	City of Elk Grove Public Works Director
Jennifer Maxwell, P.E.	CIP Manager, Capital Projects
Michael Karoly, P.E.	Project Manager

CITY OF ELK GROVE PLANNING DEPARTMENT

Jessica Jordan	Planning Manager
Joyce Hunting	Biological Resources Director
Amberly Morgan	Project Manager
Dayna Winchell	Lead Biologist
Leslie Parker	Botanist
Brian Schretzmann	GIS/Graphics

TECHNICAL SUBCONSULTANTS

Pacific Legacy, Inc.:

Hannah Ballard, M.A.	Archaeological Assessment
Samantha Schell, B.A.	Archaeological Assessment
Graham Dalldorf, M.A.	Archaeological Assessment
Elena Reese, M.A.	Archaeological Assessment
Daniel Trout, B.A.	Archaeological Assessment

5.0 LIST OF PREPARERS

This page is intentionally left blank.

6.0 LIST OF ABBREVIATIONS

6.0 LIST OF ABBREVIATIONS

AB	Assembly Bill
APE	Area of Potential Effect
AQAP	Air Quality Attainment Plan
ASR	Archaeological Survey Report
BMP	best management practice
BSA	Biological Study Area
CAAQS	California Ambient Air Quality Standards
CCAA	California Clean Air Act
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CE	Categorical Exclusion
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CH ₄	methane
CNDDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂	carbon dioxide
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DOF	California Department of Finance
DTSC	California Department of Toxic Substances Control
EIR	Environmental Impact Report
EPA	US Environmental Protection Agency
ESA	Endangered Species Act
FCAA	Federal Clean Air Act
FGC	Fish and Game Code
FR	Federal Register
GHG	greenhouse gas

6.0 LIST OF ABBREVIATIONS

HAP	hazardous air pollutant
HPSR	Historic Property Survey Report
Hz	Hertz
IS	Initial Study
L _{dn}	Day-Night Noise Level
L _{eq}	Equivalent Noise Level
L _{max}	Maximum Noise Level
L _{min}	Minimum Noise Level
MBTA	Migratory Bird Treaty Act
MMRP	Mitigation Monitoring and Reporting Program
MND	Mitigated Negative Declaration
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
ND	Negative Declaration
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NO ₂	nitrogen dioxide
NO _x	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
N ₂ O	nitrous oxide
OAP	Ozone Attainment Plan
OSHA	Occupational Safety and Health Administration
O ₃	ozone
PM	particulate matter
ppb	parts per billion
ppm	parts per million
ROG	reactive organic gases
RPW	relatively permanent waters
RWQCB	Regional Water Quality Control Board
SCEMD	Sacramento County Environmental Management Department
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO ₂	sulfur dioxide
SR	State Route
SRCSD	Sacramento Regional County Sanitation District

SSHCP	South Sacramento Habitat Conservation Plan
SVAB	Sacramento Valley Air Basin
SWPPP	stormwater pollution prevention plan
TAC	toxic air contaminant
TNW	traditionally navigable waters
USACE	US Army Corps of Engineers
USC	United States Code
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
VMT	vehicle miles traveled
VOC	volatile organic compound
WDR	waste discharge requirements
WEAP	Worker Environmental Awareness Program

6.0 LIST OF ABBREVIATIONS

This page is intentionally left blank.

7.0 REFERENCES

7.1 REFERENCES

- Caltrans (California Department of Transportation). 1998. *Traffic Noise Analysis Protocol: Technical Noise Supplement*. Sacramento, CA.
- CARB (California Air Resources Board). 1992. Aerometric Data Division. *California Surface Wind Climatology*.
- . 2004. *Initial Statement of Reasons for Proposed Rulemaking, Public Hearing to Consider Adoption of Regulations to Control Greenhouse Gas Emissions from Motor Vehicles*. <http://www.arb.ca.gov/regact/grnhsgas/isor.pdf>
- . 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. <http://www.arb.ca.gov/ch/handbook.pdf>
- . 2013. *Ambient Air Quality Standards*. <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>
- CDC (California Department of Conservation). 2013. *Sacramento County Williamson Act FY 2011/2012*. ftp://ftp.consrv.ca.gov/pub/dlrp/wa/Sacramento_11_12_WA.pdf
- . 2014. *Sacramento County Important Farmland 2012*. <ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2012/sac12.pdf>
- CDFW (California Department of Fish and Wildlife). 2014a. *California Native Diversity Database QuickView Tool in BIOS 5*. Sacramento: CDFW Biogeographic Data Branch, Sacramento, CA. <http://map.dfg.ca.gov/bios/?tool=cnddbQuick>.
- . 2014b. *BIOS 5 Viewer*. Sacramento: CDFW Biogeographic Data Branch; Sacramento, CA. <https://map.dfg.ca.gov/bios/?bookmark=327>
- CGS (California Geological Survey). 2010. *2010 Fault Activity Map of California*. <http://www.quake.ca.gov/gmaps/FAM/faultactivitymap.html>
- City of Elk Grove. 2003a. *City of Elk Grove General Plan*, http://www.egplanning.org/gp_zoning/general_plan/printables/City%20of%20Elk%20Grove%20General%20Plan%20Full%20PDF_10-2009.pdf
- . 2003b. *City of Elk Grove General Plan Draft Environmental Impact Report*. http://www.egplanning.org/gp_zoning/deir/index.asp
- . 2009. *City of Elk Grove General Plan Land Use Map*. http://www.elkgrovecity.org/UserFiles/Servers/Server_109585/File/land-use-policy-map-high.pdf
- . 2011. *City of Elk Grove Zoning Map*.
- . 2014. *City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan*. http://www.elkgrovecity.org/UserFiles/Servers/Server_109585/File/eg-bptmp.pdf
- . 2015a. *City of Elk Grove General Map Viewer*. http://elkgrovemap.gis.saccounty.net/GISViewer/Default_ElkGrove.aspx

7.0 REFERENCES

- CNPS (California Native Plant Society). 2014. Inventory of Rare and Endangered Plants of California (online edition, v8-02). CNPS, Sacramento, CA. <http://www.rareplants.cnps.org>.
- DOF (California Department of Finance). 2014. *E-1 Population Estimates for Cities, Counties, and the State – January 1, 2013 and 2014*. <http://www.dof.ca.gov/research/demographic/reports/estimates/e-1/view.php>.
- DTSC (California Department of Toxic Substances Control). 2015a. *Cortese List Data Resources*. <http://www.calepa.ca.gov/SiteCleanup/CorteseList/>
- . 2015b. EnviroStor. Accessed March 2015. <http://www.envirostor.dtsc.ca.gov/public/>.
- Environmental Laboratory. 1987. *Corps of Engineers Wetland Delineation Manual Technical Report Y-87-1*.
- EPA (U.S. Environmental Protection Agency). 1971. *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*.
- . 2014. *Six Common Air Pollutants*. <http://www.epa.gov/oaqps001/urbanair/>
- . 2015. *Regulatory Actions – Ozone Standards*. <http://www.epa.gov/groundlevelozone/actions.html>
- Lipscomb, David M., Ph.D, and Arthur C. Taylor, Jr., Ph.D. 1978. *Noise Control Handbook of Principles and Practices*. Van Nostrand Reinhold Company. New York, NY.
- National Park Service. 2008.
- . 2010.
- NRCS (Natural Resources Conservation Service). 2006. *Web Soil Survey*. <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>
- Sacramento County. 1993 (Amended 2011). *General Plan Safety Element*.
- SCWA (Sacramento County Water Agency). 2011. *2010 Zone 41 Urban Water Management Plan*.
- SMAQMD (Sacramento Metropolitan Air Quality Management District). 2004. *CEQA Guide to Air Quality Assessment*. <http://airquality.org/ceqa/ceqaguideupdate.shtml>
- . 2013. *Air Quality Standards Attainment Status*. <http://www.airquality.org/aqdata/attainmentstat.shtml>.
- State of California. 1976.
- . 1989.
- . 1992.
- . 1996.

———. 2008.

———. 2010.

USACE (US Army Corps of Engineers). 2007. *Jurisdictional Determination Form Instructional Guidebook*. USACE and US Environmental Protection Agency.

USFWS (U.S. Fish and Wildlife Service). 1999. *Draft Recovery Plan for the Giant Garter Snake (Thamnophis gigas)*. USFWS, Sacramento, CA.

———. 2014a. *Sacramento Fish & Wildlife Species Lists*.
http://www.fws.gov/sacramento/es_species/Lists/es_species_lists-form.cfm.

———. 2014b. *Critical Habitat Portal*. <http://ecos.fws.gov/>.

**Exhibit A – Laguna Creek Trail – North Camden Spur Project
(WTL005)**

Website location for Appendices to Mitigated Negative Declaration:

http://www.elkgrovecity.org/city_hall/departments_divisions/planning/environmental_review/environmental_documents/?portalId=109669&pageId=144965&objectId.15286=1997845&contextId.15286=144966&parentId.15286=245226

Embedded Link to webpage:

[Environmental Documents](#)

**Laguna Creek Trail
North Camden Spur**

NES



Natural Environment Study

Multi-Use Trail from Camden Park North to MacDonald Park

City of Elk Grove, Sacramento County, California

Caltrans District 3


Federal Project Number: CML-5479(040)

January 2015



Natural Environment Study

STATE OF CALIFORNIA
Department of Transportation
City of Elk Grove

Prepared By:  Date: 1/7/15
Summer Pardo, Senior Biologist
(916) 517-4496
2729 Prospect Park Drive, Suite 220, Rancho Cordova, CA 95670
PMC

Recommended
for Approval By:  Date: 1-9-15
Maureen Doyle
Associate Biologist/Botanist
(530) 741-4470
Environmental Management Branch, M-1
Caltrans/District 3

Approved By:  Date: 1/9/15
^{for} Susan D. Bauer, Branch Chief
(530) 741-7113
Environmental Management Branch, M-1
Caltrans/District 3

For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Maureen Doyle, District 3, 703 B Street, Marysville, CA 95991, (530) 741-4470 (Voice), or use the California Relay Service TTY number, (530) 741-4509, or use California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice) or 711

Summary

The City of Elk Grove (City) proposes to extend the multi-use trail from the west end of the existing Laguna Creek Trail at the northern tip of Camden Park North to MacDonald Park via Beckington Drive. Laguna Creek Trail offers access to Old Town Elk Grove, Camden Lake, residential neighborhoods, and many retail centers and restaurants. Camden Park's main feature is Laguna Creek Trail, which is used as a scenic horse and jogging trail. MacDonald Park features a soccer field, open play area, and playground equipment.

Currently, Laguna Creek Trail is split into three stretches – the longest extending for 2.25 miles from south of the Bond Road/Waterman Road intersection along Laguna Creek to the northern tip of Camden Park, the next longest extending for approximately 1 mile from east of Mix Park along Whitehouse Creek to just north of MacDonald Park, and the shortest extending for approximately one-third mile from Camden Lake to Whitehouse Creek. The proposed project would connect the two longest segments of Laguna Creek Trail from the existing path at the northern tip of Camden Park for approximately 700 feet of Class 1 facility to south of White Peacock Court/Beckington Drive, then along an approximately 1,050-foot-long Class 2 facility on Beckington Drive, and from White Peacock Court/Beckington Drive for approximately 200 feet of Class 1 facility to the existing path at MacDonald Park.

This document identifies and quantifies resources that may be affected by project implementation. Various studies were undertaken to identify and map biological resources within the project vicinity. The following impacts on biological resources may result from the proposed project.

Special-Status Species Impacts and Mitigation

- The project may affect bristly sedge (*Carex comosa*), Bolander's water-hemlock (*Cicuta maculata* var. *bolanderi*), Peruvian dodder (*Cuscuta obtusiflora*), dwarf downingia (*Downingia pusilla*), woolly rose mallow (*Hibiscus lasiocarpus* var. *occidentalis*), legenere (*Legenere limosa*), Mason's lilaepsis (*Lilaeopsis masonii*), Sanford's arrowhead (*Sagittaria sanfordii*), marsh skullcap (*Scutellaria galericulata*), side-flowering skullcap (*Scutellaria laterifolia*), and saline clover (*Trifolium hydrophilum*) if present in the Biological Study Area. These species are generally associated with fresh emergent wetland or annual grassland habitats. The proposed project would result in 0.032 acre of permanent impact and 0.060 acre of temporary impact to fresh emergent wetland associated with Laguna Creek, and 0.023 acre of temporary impact to open water associated with Whitehouse Creek. In addition, 0.194 acre of temporary impact and 0.081 acre of permanent impact to annual grassland habitats that may support special-status plants are anticipated due to project construction.

- The project may affect western pond turtle (*Emys marmorata*). The proposed project will result in 0.032 acre of permanent impact and 0.060 acre of temporary impact to fresh emergent wetland habitat within Laguna Creek, as well as 0.023 acre of temporary impact to open water habitat within Whitehouse Creek. In addition, the proposed project will result in 0.081 acre of permanent impact and 0.194 acre of temporary impact to annual grasslands adjacent to Laguna Creek and Camden Lake that may provide suitable over-wintering and nesting habitat for the species.
- The proposed project may affect, likely to adversely affect the valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). The project will result in direct impacts to one elderberry shrub with one stem, measuring 1 inch in diameter at ground level. No exit holes were observed, and the shrub is associated with the Whitehouse Creek riparian corridor. In order to offset these impacts, the following compensatory mitigation is proposed:
 - a. Replace the loss of one elderberry shrub/stem at a 2:1 ratio through the dedication of mitigation credit(s) within a U.S. Fish and Wildlife Service (USFWS)-approved mitigation bank, or through the payment of in-lieu fees to an approved valley elderberry longhorn beetle conservation bank that results in two conservation plantings of elderberry seedlings.
 - b. Associated native species plantings shall be offset at a 1:1 ratio through the dedication of mitigation credit(s) within a USFWS-approved mitigation bank, or through the payment of in-lieu fees to an approved valley elderberry longhorn beetle conservation bank that results in two conservation plantings of native associates.
- The project is likely to adversely affect the giant garter snake (*Thamnophis gigas*). Laguna Creek and Whitehouse Creek contain potentially suitable habitat for this species. The proposed project will result in permanent impacts to 0.037 acre of aquatic and 0.133 acre of upland (0.17 acre total) habitat. In addition, 0.096 acre of aquatic and 0.381 acre of upland habitat will be temporarily impacted. In order to offset these impacts, the following compensatory mitigation is proposed:
 - a. After completion of construction activities, all temporary fill and construction debris shall be removed and 0.096 acre of aquatic and 0.381 acre of upland habitat shall be restored to pre-project conditions, in accordance with Appendix C of the Programmatic Biological Opinion on Effects of Small Highway Projects on the Threatened Giant Garter Snake in Butte, Colusa, Glenn, Sacramento, San Joaquin, Solano, Sutter, Yolo, and Yuba Counties, California (Service File number 1-1-03-F-0154).
 - b. For every acre of aquatic and upland giant garter snake habitat permanently affected by the proposed project, the City shall replace the affected acreage at a 3:1 ratio (i.e., 3 acres for every 1 acre of impact), or another approved ratio as determined by the USFWS. Impacts shall be offset through the dedication of 0.51 mitigation credit(s) within a USFWS-approved giant garter snake mitigation bank.

- The project may adversely affect Swainson's hawk (*Buteo swainsoni*) foraging habitat, a state-listed threatened species. The proposed project would result in 0.194 acre of temporary impact and 0.081 acre of permanent impacts to annual grassland habitats suitable for Swainson's hawk foraging. In order to offset these impacts the following compensatory mitigation is proposed:
 - a. The City shall mitigate for the permanent loss of 0.081 acre Swainson's hawk foraging habitat at a 1:1 ratio. Mitigation can be accomplished through the City of Elk Grove Swainson's Hawk Impact Mitigation Fees Ordinance or other method acceptable to the California Department of Fish and Wildlife (CDFW).
- The project may adversely affect suitable nesting/foraging habitat for migratory birds and raptors. Direct mortality could occur through the removal of trees or burrows that contain active nests. Indirect impacts could result through habitat degradation, removal of suitable nesting habitat, and increased human disturbance.
- The project may adversely affect suitable habitat for special-status bat species. Removal of maternity roosts, if present, may cause direct mortality to numerous bats, while indirect impacts to bats may occur from noise and dust created by construction activities.

The project aims to reduce impacts to special-status species through the implementation of avoidance and minimization measures **BIO-1** through **BIO-22**, and provision of the compensatory mitigation outlined in Chapter 4.

Jurisdictional Features Impacts and Mitigation

The project may result in the loss of a small amount of U.S. Army Corps of Engineers (USACE) jurisdictional features, including 0.032 acre of permanent and 0.060 acre of temporary impact to fresh emergent wetland associated with Laguna Creek, 0.005 acre of permanent and 0.010 acre of temporary impact to man-made ditches, and 0.023 acre of temporary impact to open water associated with Whitehouse Creek.

- For 0.032 acre of Laguna Creek permanently affected by the proposed project, the City shall replace the affected acreage at a 2:1 ratio (i.e., 2 acres for every 1 acre of impact), or another approved ratio as determined by the USACE. Impacts shall be offset through the dedication of 0.064 shaded riverine aquatic mitigation credits within a USACE-approved mitigation bank or through the payment of in-lieu fees to an approved conservation bank.
- For 0.005 acre of man-made ditch permanently affected by the proposed project, the City shall replace the affected acreage at a 1:1 ratio, or another approved ratio as determined by the USACE. Impacts may be offset through the restoration and relocation of the ditch within the project area, through the dedication of mitigation credit(s) within a USACE-approved mitigation bank, or through the payment of in-lieu fees to an approved conservation bank.

Permitting

Permits will be required prior to implementation of the proposed project including:

- a. A Section 404 permit from the USACE.
- b. A Section 401 Water Quality Certification from the Central Valley Regional Water Quality Control Board.
- c. A 1602 Streambed Alteration Agreement from the CDFW.

A Biological Assessment is being prepared to evaluate impacts to the federally listed valley elderberry longhorn beetle and giant garter snake.

Table of Contents

Summary.....	i
<i>Special-Status Species Impacts and Mitigation</i>	i
<i>Jurisdictional Features Impacts and Mitigation</i>	iii
<i>Permitting</i>	iv
Chapter 1 – Introduction.....	1
<i>Project History</i>	1
Purpose.....	1
Need.....	1
<i>Project Description</i>	1
Chapter 2 – Study Methods.....	9
<i>Regulatory Requirements</i>	9
Federal Laws and Regulations.....	9
State Laws and Regulations.....	12
California Native Plant Society.....	15
Local Policies and Ordinances.....	16
<i>Studies Required</i>	18
Literature Review.....	18
Habitat Assessment.....	18
Wetland Delineation.....	19
Rare Plant Surveys.....	19
Tree Survey.....	19
Impact Assessment.....	20
<i>Personnel and Survey Dates</i>	21
<i>Agency Coordination and Professional Contacts</i>	21
<i>Limitations That May Influence Results</i>	21
Chapter 3 – Results: Environmental Setting.....	23
<i>Description of the Existing Biological and Physical Conditions</i>	23
Study Area.....	23
Physical Conditions.....	23
Biological Conditions.....	24
<i>Regional Species and Habitats and Natural Communities of Concern</i>	37
Chapter 4 – Results: Biological Resources, Discussion of Impacts and Mitigation.....	60
<i>Habitats and Natural Communities of Special Concern</i>	60
Discussion of "Jurisdictional Features".....	60
<i>Special-Status Plant Species</i>	64
Discussion of "Special-status Plants".....	64
<i>Special-Status Animal Species Occurrences</i>	66
Discussion of "Valley Elderberry Longhorn Beetle".....	67
Discussion of "Western Pond Turtle".....	68
Discussion of "Giant Garter Snake".....	69
Discussion of "Raptors and Migratory birds".....	76
Discussion of "Special-status Bat Species".....	80
Chapter 5 – Conclusions and Regulatory Determinations.....	82
<i>Federal Endangered Species Act Consultation Summary</i>	82
<i>California Endangered Species Act Consultation Summary</i>	82
<i>Wetlands and Other Waters Coordination Summary</i>	83
Federally Jurisdictional Waters.....	83
State Jurisdictional Waters.....	83
<i>Invasive Species</i>	84
Chapter 6 – References.....	86

Appendix A – Database Search Results	A-1
Appendix B – Wetland Delineation.....	B-1
Appendix C – Rare Plant Survey	C-1
Appendix D – Tree Survey	D-1

List of Figures

Figure 1: Regional Vicinity Map	3
Figure 2: Project Location Map	5
Figure 3: Project Impact Map	7
Figure 4: Biological Study Area.....	25
Figure 5: Biological Study Area and Project Impact Map.....	27
Figure 6: Laguna Creek Trail – North and South Camden Spur	29
Figure 7: NRCS Soils Map	31
Figure 8: Vegetative Communities Map	33
Figure 9: CNDDDB Occurrences within 1 mile of the Biological Study Area.....	40
Figure 10: Jurisdictional Feature Impacts	62
Figure 11: CNDDDB Giant Garter Snake Occurrences in the Vicinity of the Biological Study Area	72
Figure 12: Impacts to Giant Garter Snake Habitat	74
Figure 13: Impacts to Swainson’s Hawk Foraging Habitat.....	78

List of Tables

Table 1: Special-Status Species and Critical Habitat Potentially Occurring or Known to Occur in the Project Area.....	42
Table 2: Impacts to Jurisdictional Features.....	60
Table 3: Impacts to Giant Garter Snake Habitat	70
Table 4: Annual Bat Activity	80

List of Abbreviated Terms

amsl	above mean sea level
BMP	best management practice
BSA	Biological Study Area
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CWA	Clean Water Act
CWHR	California Wildlife Habitat Relationships
dbh	diameter at breast height
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act (federal)
FGC	Fish and Game Code
FHWA	Federal Highway Administration
ISA	International Society of Arboriculture
MBTA	Migratory Bird Treaty Act
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
OHWM	ordinary high water mark
RPW	relatively permanent waters
RWQCB	Regional Water Quality Control Board
TCZ	temporary construction zone
TNW	traditional navigable waters
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WDR	Waste Discharge Requirements

WEAP Worker Environmental Awareness Program
WoUS waters of the U.S.
WRCB State Water Resources Control Board

Chapter 1 – Introduction

The purpose of this Natural Environment Study (NES) is to describe the existing biological environment and to review the proposed Laguna Creek Trail – North Camden Spur project in sufficient detail to determine to what extent the project may affect biological resources. This NES summarizes technical documents, related to the effects on biological resources in the Biological Study Area (BSA), for use in the environmental document. This document presents technical information upon which later decisions regarding project design are developed.

Project History

PURPOSE

The purpose of this project is to provide bicycle-pedestrian trail connectivity between the Camden Point and Camden Estates residential areas (north of Laguna Creek) to schools and commercial retail-shopping-dining uses along or south of Bond Road. There is currently no trail crossing of Laguna Creek between East Stockton Boulevard to the west and Elk Grove Florin Road to the east. This project is the north half of two projects to improve this trail system in Elk Grove.

NEED

The project will enhance pedestrian safety for schoolchildren commuting to four schools: Ellen Feickert and James A. McKee elementary schools, Joseph Kerr Middle School, and Sheldon High School. It will link with the existing trail system as well as with bike routes and other pedestrian paths. It provides an alternative mode of travel and encourages safer pedestrian and bicycle (non-motorized) transportation and allows access along natural environmental features such as Laguna Creek and Whitehouse Creek. It also provides for use of alternative transportation means to access park and ride lots adjacent to State Route 99 via the connection to Bond Road.

Project Description

The proposed project is located in the City of Elk Grove (City), Sacramento County, California (**Figures 1 and 2**). The City of Elk Grove proposes to extend a multi-use trail from the west end of the existing Laguna Creek Trail at the northern tip of Camden Park to MacDonald Park via Beckington Drive. Laguna Creek Trail offers access to Old Town Elk Grove, Camden Lake, residential neighborhoods, and many retail centers and restaurants. Camden Park's main feature is Laguna Creek Trail, which is used as a scenic horse and jogging trail. MacDonald Park features a soccer field, open play area, and playground equipment. A trail along Whitehouse Creek is found just north of MacDonald Park. Currently, Laguna Creek Trail is split into three stretches – the longest extending for 2.25 miles from south of the Bond Road/Waterman Road intersection along Laguna Creek to the northern tip of Camden Park, the next longest extending for approximately 1 mile from east of Mix Park along Whitehouse Creek to just north of MacDonald Park, and the shortest extending for approximately one-third mile from Camden Lake to Whitehouse Creek.

The proposed project would connect the two longest segments of Laguna Creek Trail from the existing path at the northern tip of Camden Park for approximately 700 feet of Class 1 facility to south of White Peacock Court/Beckington Drive, then along an approximately 1,050-foot long Class 2 facility on Beckington Drive, and from White Peacock Court/Beckington Drive for approximately 200 feet of Class 1 facility to the existing path at MacDonald Park. Approximately 115 feet of existing Class 1 facility between homes facing White Peacock Court will require minor improvements and striping and the approximately 1,050-foot-long Class 2 facility on Beckington Drive will require only striping. The proposed project will be constructed generally within existing public right of ways and streets; however, minor acquisition and construction easements will be required. The project is consistent with the Elk Grove General Plan and the Elk Grove Bicycle, Pedestrian and Trails Master Plan. Each plan identifies the need for an off-street multi-use trail system providing connections throughout the city and the Sacramento region.

Figure 3 depicts the project impact area for the proposed project. This figure identifies the permanent impact area as defined by the project footprint and the temporary impact area as defined by the temporary construction zone (TCZ).

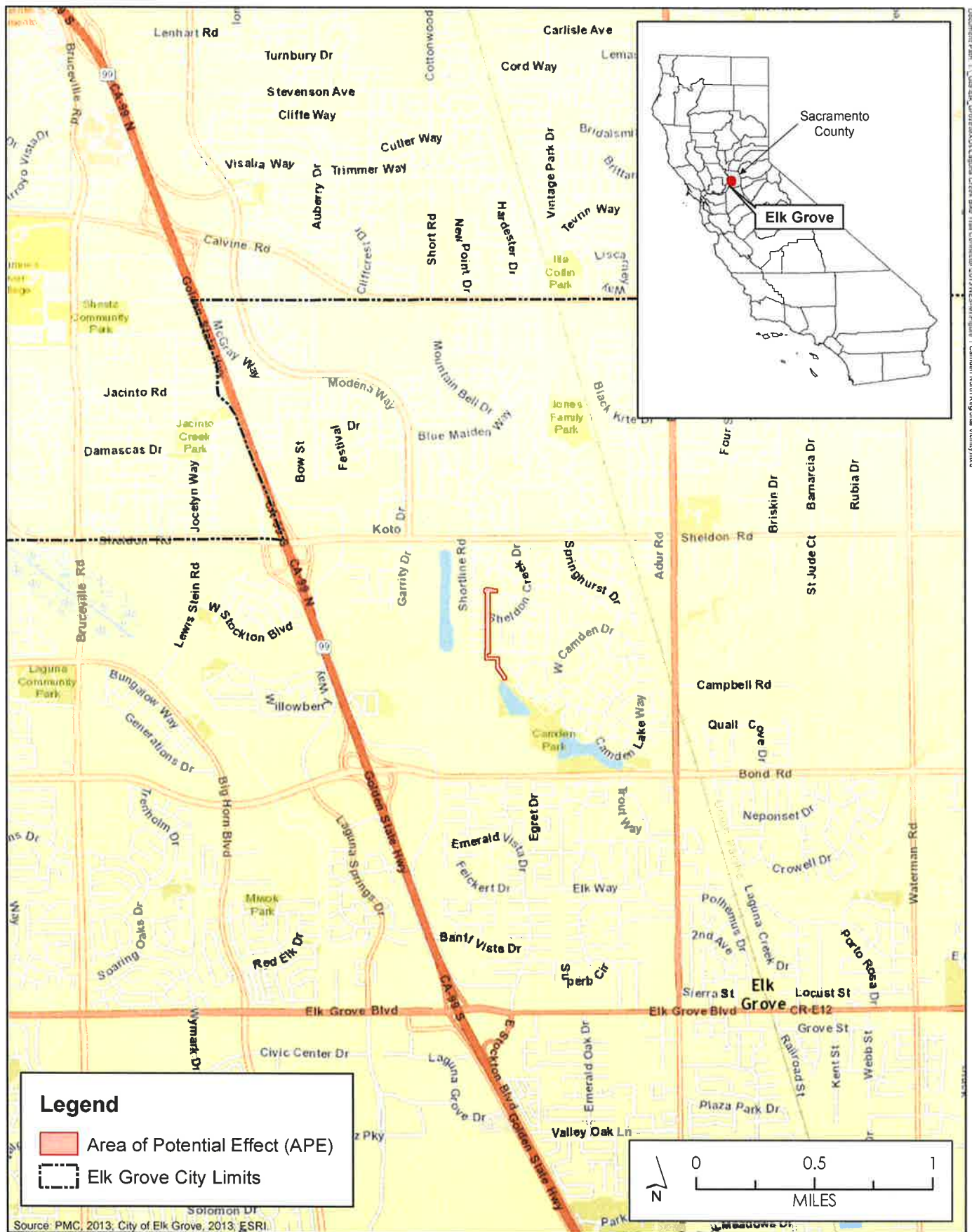
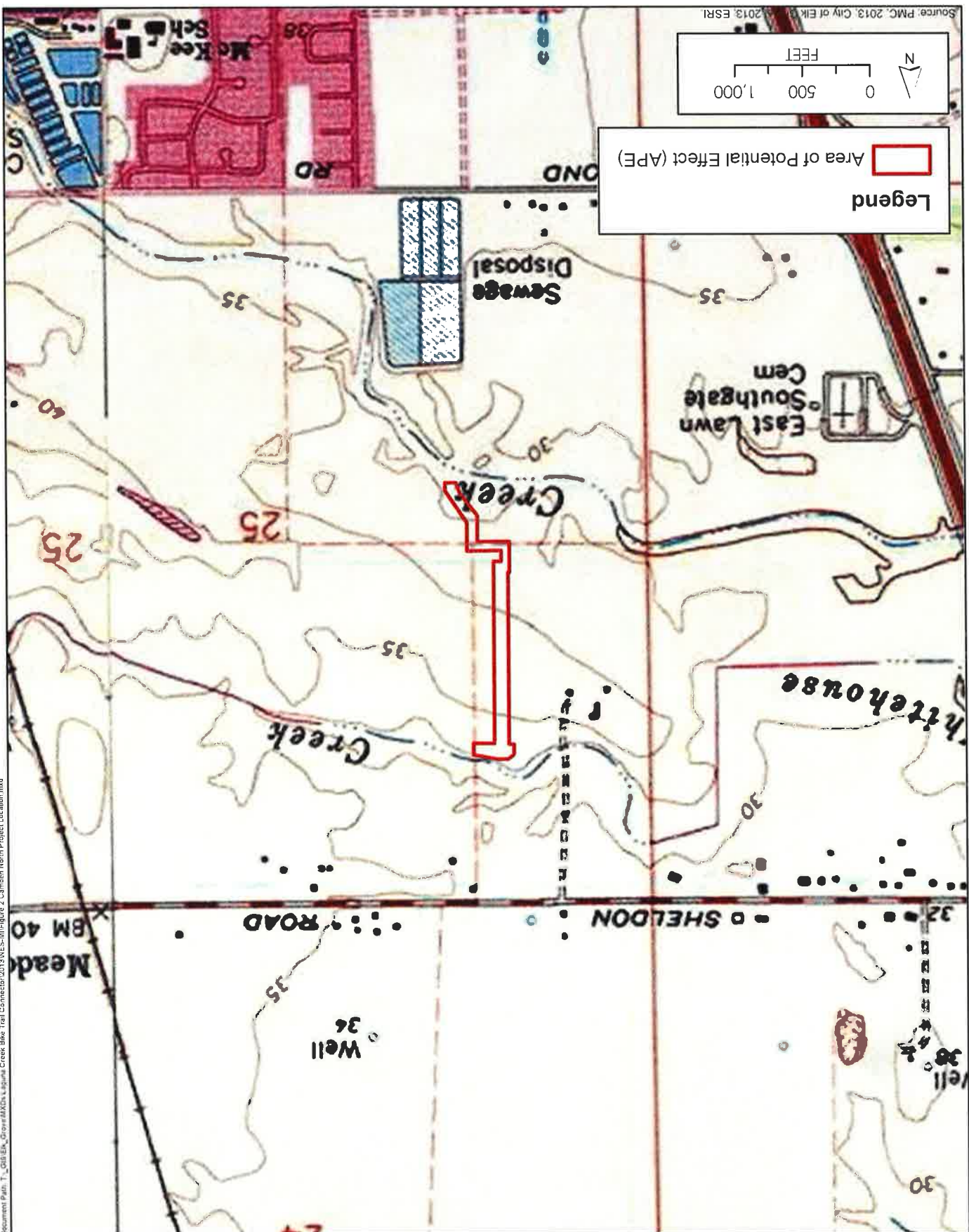


Figure 1
Regional Vicinity Map



Figure 2
Project Location Map



Document Path: T:\GIS\ELK_Grover\MapDocs\MapDocs\Creek Bike Trail Connectors\2013\NES-M\Figure 2 Camden North Project Location.mxd

Source: PMC, 2013. City of Elk Grove, 2013. ESRI



City of Elk Grove
Development Services

Figure 3
Project Impact Map

Chapter 2 – Study Methods

This chapter describes the regulatory requirements applicable to the proposed project, along with a detailed summary of the technical studies performed to date.

Regulatory Requirements

The National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) require consideration of impacts to biological resources. In addition, other types of legislation address biological resources. Relevant laws and guidelines are described below.

FEDERAL LAWS AND REGULATIONS

Endangered Species Act

The federal Endangered Species Act (ESA), as amended, provides protective measures for federally listed threatened and endangered species, including their habitats, from unlawful take (16 United States Code (USC) Sections 1531–1544). The ESA defines “take” to mean “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Title 50, Part 222, of the Code of Federal Regulations (50 CFR Section 222) further defined “harm” to include “an act which actually kills or injures fish or wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns including feeding, spawning, rearing, migrating, feeding, or sheltering.”

ESA Section 7(a)(1) requires federal agencies to utilize their authority to further the conservation of listed species. ESA Section 7(a)(2) requires consultation with the US Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) if a federal agency undertakes, funds, permits, or authorizes (termed the federal nexus) any action that may affect endangered or threatened species, or designated critical habitat. For projects that may result in the incidental take of threatened or endangered species, or critical habitat, and that lack a federal nexus, a Section 10(a)(1)(b) incidental take permit can be obtained from the USFWS and/or the NMFS.

Clean Water Act

The basis of the Clean Water Act (CWA) was established in 1948; however, it was referred to as the Federal Water Pollution Control Act. The act was reorganized and expanded in 1972 (33 USC Section 1251), and at this time the CWA became the act’s commonly used name. The basis of the CWA is the regulation of pollutant discharges into waters of the U.S. (WoUS), as well as the establishment of surface water quality standards.

Section 404

CWA Section 404 (33 USC Section 1344) established the program to regulate the discharge of dredged or fill material into WoUS, including wetlands. Under this regulation, certain activities proposed within WoUS require the obtainment of a permit prior to initiation. These activities include, but are not limited to, placement of fill for the purposes of development, water resource projects (e.g., dams and levees), infrastructure development (e.g., highways and bridges), and mining operations.

The primary objective of this program is to ensure that the discharge of dredged or fill material is not permitted if a practicable alternative to the proposed activities exists that results in less impact to WoUS or the proposed activity would result in significant adverse impacts to these waters. To comply with these objectives, a permittee must document the measures taken to avoid and minimize impacts to WoUS and provide compensatory mitigation for any unavoidable impacts.

The U.S. Environmental Protection Agency (EPA) and the USFWS are assigned roles and responsibilities in the administration of this program; however, the U.S. Army Corps of Engineers (USACE) is the lead agency in the administration of day-to-day activities, including issuance of permits. The agencies will typically assert jurisdiction over the following waters: (1) traditional navigable waters (TNW); (2) wetlands adjacent to TNWs; (3) relatively permanent waters (RPW) that are non-navigable tributaries to TNWs and have relatively permanent flow or seasonally continuous flow (typically three months); and (4) wetlands that directly abut RPWs. Case-by-case investigations are usually conducted by the agencies to ascertain their jurisdiction over waters that are non-navigable tributaries and do not contain relatively permanent or seasonal flow, wetlands adjacent to the aforementioned features, and wetlands adjacent to but not directly abutting RPWs (USACE 2007). Jurisdiction is not generally asserted over swales or erosional features (e.g., gullies or small washes characterized by low-volume/short-duration flow events) or ditches constructed wholly within and draining only uplands that do not have relatively permanent flows.

The extent of jurisdiction within WoUS, which lack adjacent wetlands, is determined by the ordinary high water mark (OHWM). The OHWM is defined in 33 CFR Section 328.3(e) as the “line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.” Wetlands are further defined under 33 CFR Section 328.3 and 40 CFR Section 230.3 as “those areas that are inundated or saturated by surface or ground water 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,” and typically include “swamps, marshes, bogs, and similar areas.” The 1987 Corps of Engineers Wetland Delineation Manual (1987 Manual) sets forth a standardized methodology for delineating the extent of wetlands under federal jurisdiction (Environmental Laboratory 1987).

The 1987 Manual outlines three parameters that all wetlands, under normal circumstances, must contain positive indicators for to be considered jurisdictional. These parameters include (1) wetland hydrology, (2) hydrophytic vegetation, and (3) hydric soils. In 2006, the USACE issued a series of Regional Supplements to address regional differences that are important to the functioning and identification of wetlands. The

supplements present “wetland indicators, delineation guidance, and other information” that is specific to the region. The USACE requires that wetland delineations submitted after June 5, 2007, be conducted in accordance with both the 1987 Manual and the applicable supplement.

Section 401

Under CWA Section 401 (33 USC Section 1341), federal agencies are not authorized to issue a permit and/or license for any activity that may result in discharges to WoUS, unless a state or tribe where the discharge originates either grants or waives CWA Section 401 certification. CWA Section 401 provides states or tribes with the ability to grant, grant with conditions, deny, or waive certification. Granting certification, with or without conditions, allows the federal permit/license to be issued and remain consistent with any conditions set forth in the CWA Section 401 certification. Denial of the certification prohibits the issuance of the federal license or permit, and waiver allows the permit/license to be issued without state or tribal comment. Decisions made by states or tribes are based on the proposed project’s compliance with EPA water quality standards as well as applicable effluent limitations guidelines, new source performance standards, toxic pollutant restrictions, and any other appropriate requirements of state or tribal law. In California, the State Water Resources Control Board (WRCB) is the primary regulatory authority for CWA Section 401 requirements (additional details below).

Migratory Bird and Treaty Act

Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) of 1918 (16 USC Sections 703–711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Section 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR Section 21). The majority of birds found in the project vicinity would be protected under the MBTA.

Bald and Golden Eagle Protection Act

The bald eagle and golden eagle are federally protected under the Bald and Golden Eagle Protection Act (16 USC Sections 668–668c). Under the act, it is illegal to take, possess, sell, purchase, barter, offer to sell or purchase or barter, transport, export, or import at any time or in any manner a bald or golden eagle, alive or dead; or any part, nest, or egg of these eagles unless authorized by the Secretary of the Interior. Violations are subject to fines and/or imprisonment for up to one year. Active nest sites are also protected from disturbance during the breeding season.

Executive Order 13112 – Invasive Species

This executive order directs all federal agencies to refrain from authorizing, funding, or carrying out actions or projects that may spread invasive species. The order further directs federal agencies to prevent the introduction of invasive species, control and monitor existing invasive species populations, restore native species to invaded ecosystems, research and develop prevention and control methods for invasive species, and promote public education on invasive species. As part of the proposed action, the USFWS and USACE would issue permits and therefore would be responsible for ensuring that the proposed action complies with Executive Order 13112 and does not contribute to the spread of invasive species.

Executive Order 11990 Protection of Wetlands (42 FR 26961, May 25, 1977)

Executive Order 11990 requires federal agencies to provide leadership and take action to minimize destruction, loss, or degradation of wetlands and to preserve and enhance the natural qualities of these lands. Federal agencies are required to avoid undertaking or providing support for new construction located in wetlands unless (1) no practicable alternative exists and (2) all practical measures have been taken to minimize harm to wetlands.

Fish and Wildlife Coordination Act of 1958 (16 USC 661 et seq.)

The Fish and Wildlife Coordination Act requires that whenever any body of water is proposed or authorized to be impounded, diverted, or otherwise controlled or modified, the lead federal agency must consult with the USFWS, the state agency responsible for fish and wildlife management, and the NMFS. Section 662(b) of the act requires the lead federal agency to consider the recommendations of the USFWS and other agencies. The recommendations may include proposed measures to mitigate or compensate for potential damages to wildlife and fisheries associated with a modification of a waterway.

STATE LAWS AND REGULATIONS

California Endangered Species Act

Under the California Endangered Species Act (CESA), the California Department of Fish and Wildlife (CDFW) has the responsibility for maintaining a list of endangered and threatened species (Fish and Game Code (FGC) Section 2070). The CDFW also maintains a list of "candidate species," which are species formally noticed as being under review for potential addition to the list of endangered or threatened species, and a list of "species of special concern," which serve as a species "watch list."

Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present and determine whether the proposed project will have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any proposed project that may impact a candidate species.

Project-related impacts to species on the CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of CESA. Take of protected species incidental to otherwise lawful management activities may be authorized under FGC Section 206.591. Authorization from the CDFW would be in the form of an incidental take permit.

California Fish and Game Code

Streambed Alteration Agreement (FGC Sections 1600–1607)

State and local public agencies are subject to FGC Section 1602, which governs construction activities that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated as waters of the state by the CDFW. Under FGC Section 1602, a discretionary Streambed Alteration Agreement must be issued by the CDFW to the project proponent prior to the initiation of construction activities within lands under CDFW jurisdiction. As a general rule, this requirement applies to any work undertaken within the 100-year floodplain of a stream or river containing fish or wildlife resources.

Native Plant Protection Act

The Native Plant Protection Act (FGC Sections 1900–1913) prohibits the taking, possessing, or sale within the state of any plants with a state designation of rare, threatened, or endangered (as defined by the CDFW). An exception in the act allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify the CDFW, and give that state agency at least 10 days to retrieve the plants before they are plowed under or otherwise destroyed (FGC Section 1913). Project impacts to these species are not considered significant unless the species are known to have a high potential to occur within the area of disturbance associated with construction of the proposed project.

Birds of Prey

Under FGC Section 3503.5, it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey) 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.

Fully Protected Species

California statutes also afford “fully protected” status to a number of specifically identified birds, mammals, reptiles, and amphibians. These species cannot be taken, even with an incidental take permit. FGC Section 3505 makes it unlawful to take “any egret or osprey, bird of paradise, goura, numidi, or any part of such a bird.” FGC Section 3511 protects from take the following fully protected birds: (a) American peregrine falcon (*Falco peregrinus anatum*); (b) brown pelican (*Pelecanus occidentalis*); (c) California black rail (*Laterallus jamaicensis coturniculus*); (d) California clapper rail (*Rallus longirostris obsoletus*); (e) California condor (*Gymnogyps californianus*); (f) California least tern (*Sterna albifrons browni*); (g) golden eagle (*Aquila chrysaetos*); (h) greater sandhill crane (*Grus canadensis tabida*); (i) light-footed clapper rail (*Rallus longirostris levipes*); (j) southern bald eagle (*Haliaeetus leucocephalus leucocephalus*); (k) trumpeter swan (*Cygnus buccinator*); (l) white-tailed kite (*Elanus leucurus*); and (m) Yuma clapper rail (*Rallus longirostris yumanensis*).

FGC Section 4700 identifies the following fully protected mammals that cannot be taken: (a) Morro Bay kangaroo rat (*Dipodomys heermanni morroensis*); (b) bighorn sheep (*Ovis canadensis*), except Nelson bighorn sheep (subspecies *Ovis canadensis nelsoni*); (c)

Guadalupe fur seal (*Arctocephalus townsendi*); (d) ring-tailed cat (genus *Bassariscus*); (e) Pacific right whale (*Eubalaena sieboldi*); (f) salt-marsh harvest mouse (*Reithrodontomys raviventris*); (g) southern sea otter (*Enhydra lutris nereis*); and (h) wolverine (*Gulo gulo*).

FGC Section 5050 protects from take the following fully protected reptiles and amphibians: (a) blunt-nosed leopard lizard (*Crotaphytus wislizenii silus*); (b) San Francisco garter snake (*Thamnophis sirtalis tetrataenia*); (c) Santa Cruz long-toed salamander (*Ambystoma macrodactylum croceum*); (d) limestone salamander (*Hydromantes brunus*); and (e) black toad (*Bufo boreas exsul*).

FGC Section 5515 identifies certain fully protected fish that cannot lawfully be taken, even with an incidental take permit. The following species are protected in this fashion: (a) Colorado River squawfish (*Ptychocheilus lucius*); (b) thicktail chub (*Gila crassicauda*); (c) Mohave chub (*Gila mohavensis*); (d) Lost River sucker (*Catostomus luxatus*); (e) Modoc sucker (*Catostomus microps*); (f) shortnose sucker (*Chasmistes brevirostris*); (g) humpback sucker (*Xyrauchen texanus*); (h) Owens River pupfish (*Cyprinodon radiosus*); (i) unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*); and (j) rough sculpin (*Cottus asperimus*).

California Wetlands and Other Water Policies

The California Natural Resources Agency and its various departments do not authorize or approve projects that fill or otherwise harm or destroy coastal, estuarine, or inland wetlands. Exceptions may be granted if all of the following conditions are met:

- The project is water-dependent.
- No other feasible alternative is available.
- The public trust is not adversely affected.
- Adequate compensation is proposed as part of the project.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1966 (California Water Code Section 13000 et seq.; California Code of Regulations (CCR) Title 23, Chapter 3, Subchapter 15) is the primary state regulation that addresses water quality. The requirements of the act are implemented by the WRCB at the state level and at the local level by the Regional Water Quality Control Board (RWQCB). The RWQCB carries out planning, permitting, and enforcement activities related to water quality in California. The act provides for waste discharge requirements (WDR) and a permitting system for discharges to land or water. Certification is required by the RWQCB for activities that can affect water quality.

Clean Water Act, Section 401 Water Quality Certification

CWA Section 401 (33 USC Section 1341) requires that any applicant for a federal license or permit, which may result in a pollutant discharge to WoUS, obtain a certification that the discharge will comply with EPA water quality standards. The state or tribal agency responsible for issuance of the Section 401 certification may also require

compliance with additional effluent limitations and water quality standards set forth in state/tribal laws. In California, the RWQCB is the primary regulatory authority for CWA Section 401 requirements.

The Central Valley RWQCB is responsible for enforcing water quality criteria and protecting water resources in the project area. In addition, the RWQCB is responsible for controlling discharges to surface waters of the state by issuing WDRs or commonly by issuing conditional waivers to WDRs. The RWQCB requires that a project proponent obtain a CWA Section 401 water quality certification for CWA Section 404 permits issued by the USACE. A request for water quality certification (including WDRs) by the RWQCB and an application for a General Permit for Storm Water Discharges Associated with Construction Activities are prepared and submitted following completion of the CEQA environmental document and submittal of the wetland delineation to the USACE.

Delegated Permit Authority

California has been delegated permit authority for the National Pollutant Discharge Elimination System (NPDES) permit program, including stormwater permits for all areas except tribal lands. Issuance of CWA Section 404 dredge and fill permits remains the responsibility of the USACE; however, the state actively uses its CWA Section 401 certification authority to ensure CWA Section 404 permits are in compliance with state water quality standards.

State Definition of Covered Waters

Under California state law, waters of the state means “any surface water or groundwater, including saline waters, within the boundaries of the state.” Therefore, water quality laws apply to both surface water and groundwater. After the U.S. Supreme Court decision in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, the Office of Chief Counsel of the WRCB released a legal memorandum confirming the state’s jurisdiction over isolated wetlands. The memorandum stated that under the California Porter-Cologne Water Quality Control Act, discharges to wetlands and other waters of the state are subject to state regulation, and this includes isolated wetlands. In general, the WRCB regulates discharges to isolated waters in much the same way as it does for WoUS, using the Porter-Cologne Water Quality Control Act rather than CWA authority.

CALIFORNIA NATIVE PLANT SOCIETY

The California Native Plant Society (CNPS) is a nongovernmental agency that classifies native plant species according to current population distribution and threat level in regard to extinction. These data are utilized by the CNPS to create/maintain a list of native California plants that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California (CNPS 2014). 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 believed to be extinct
- List 1B: Plants that are rare, threatened, or endangered in California and elsewhere
- List 2: Plants that are rare, threatened, or endangered in California, but are more numerous elsewhere

All of the plant species on List 1 and 2 meet the requirements of the Native Plant Protection Act Section 1901, Chapter 10, or FGC Section 2062 and Section 2067 and are eligible for state listing. Plants appearing on List 1 or 2 are considered to meet the criteria of CEQA Section 15380, and effects on these species are considered “significant.” Classifications for plants on List 3 (plants about which we need more information) and/or List 4 (plants of limited distribution), as defined by the CNPS, are not currently protected under state or federal law. Therefore, no detailed descriptions or impact analysis was performed on species with these classifications.

LOCAL POLICIES AND ORDINANCES

City of Elk Grove Tree Preservation and Protection Code

Chapter 19.12 of the City Municipal Code, Tree Preservation and Protection, strives to protect and preserve trees of local importance, including coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), blue oak (*Quercus douglasii*), interior live oak (*Quercus wislizeni*), oracle oak (*Quercus x moreha*), California sycamore (*Platanus racemosa*), and black walnut (*Juglans hindsii*) with a single trunk 6 inches diameter at breast height (dbh) or greater or a multi-trunk with a combined dbh of 6 inches or greater. Chapter 19.12 requires mitigation for the removal of trees of local importance with dimensions described above; trees that have been selected for preservation; all portions of adjacent offsite native trees that have driplines that extend onto the project site; and all offsite native trees that may be impacted by utility installation and/or improvements associated with the project. Current policies require that every inch lost will be mitigated by an inch planted or equivalent credit obtained from a tree mitigation bank.

City of Elk Grove Swainson’s Hawk Impact Mitigation Fees

Chapter 16.130 of the City Municipal Code, Swainson’s Hawk Impact Mitigation Fees, requires mitigation for the loss of Swainson’s hawk habitat at a 1:1 ratio. Mitigation can be achieved through the payment of a fee, which is used to fund the City’s Swainson’s hawk habitat restoration program. Other options for achieving mitigation through the code include the direct transfer to the City of a Swainson’s hawk habitat conservation easement along with an easement monitoring endowment or the purchase of credits at a CDFW-approved conservation bank. The site must be surveyed to determine whether it is suitable Swainson’s hawk foraging habitat.

City of Elk Grove General Plan

The City's General Plan identifies specific goals, objectives, and policies regarding natural resources (City of Elk Grove 2009). The General Plan serves as the overall guiding policy document for land use, development, and environmental quality for the City. The Conservation and Air Quality Element and the Parks, Trails, and Open Space Element of the General Plan include goals and policies to preserve, protect, enhance, and promote the City's valuable natural resources. The General Plan identifies specific goals and policies regarding biological and natural resources. The following policies are applicable to the proposed project.

CAQ-8: Large trees (both native and non-native) are an important aesthetic (and, in some cases, biological) resource. Trees which function as an important part of the City's or a neighborhood's aesthetic character or as natural habitat should be retained to the extent possible during the development of new structures, roadways (public and private, including roadway widening), parks, drainage channels, and other uses and structures.

CAQ-9: Wetlands, vernal pools, marshland and riparian (streamside) areas are considered to be important resources. Impacts to these resources shall be avoided unless shown to be technically infeasible. The City shall seek to ensure that no net loss of wetland areas occurs, which may be accomplished by avoidance, re-vegetation and restoration onsite or creation of riparian habitat corridors.

PTO-5: The City views open space lands of all types as an important resource which should be preserved in the region, and supports the establishment of multi-purpose open space areas to address a variety of needs, including, but not limited to:

- Maintenance of agricultural uses
- Wildlife habitat
- Recreational open space
- Aesthetic benefits
- Flood control

To the extent possible, lands protected in accordance with this policy should be in proximity to Elk Grove, to facilitate use of these areas by Elk Grove residents, assist in mitigation of habitat loss within the city, and provide an open space resource close to the urbanized areas of Elk Grove.

South Sacramento County Habitat Conservation Plan

The South Sacramento County Habitat Conservation Plan is in the process of being prepared and will address the conservation and development of lands in this portion of the county. The purpose of the plan is to encourage and simplify the process of conserving sensitive habitats for special-status species. Once the plan is approved, it will

allow for incidental take of covered species with the requirement of mitigation for lost habitat at approved ratios. Only some of the total listed species analysis that will be included in the plan are complete and include white-tailed kite, northern harrier (*Circus cyaneus*), tricolored blackbird (*Agelaius tricolor*), giant garter snake (*Thamnophis gigas*), vernal pool fairy shrimp (*Branchinecta lynchi*), and Sanford's arrowhead (*Sagittaria sanfordii*). The complete list can be found on the Sacramento County, Planning and Community Development Department website (Sacramento County 2006).

Studies Required

Biologists reviewed the project description and conceptual design plans, performed literature reviews and database searches, and conducted reconnaissance-level biological surveys to obtain information regarding habitat quality and the potential presence of sensitive plant and wildlife species within the BSA.

LITERATURE REVIEW

A list of special-status species and habitats that have the potential to occur within the BSA or project vicinity was prepared using information obtained from the USFWS (2014a) Sacramento office's Species Lists, the USFWS (2014b) Critical Habitat Portal, the CDFW (2014a) California Natural Diversity Database (CNDDDB), and the CNPS (2014) Inventory of Rare and Endangered Plants of California.

A search of the USFWS Sacramento office's Species Lists database was performed for the Elk Grove, Florin, Bruceville, Galt, Courtland, Clarksville, Sacramento East, Carmichael, and Sacramento West, California, U.S. Geological Survey (USGS) 7.5-minute quadrangles (quads) to identify special-status species under USFWS jurisdiction that may be affected by the proposed project. In addition, a query of the USFWS's Critical Habitat Portal was conducted to identify any designated critical habitat on or in the vicinity of the BSA. The CNDDDB provided a list of processed and unprocessed occurrences of special-status species identified within the aforementioned USGS quads. The CNPS database was also queried to identify special-status plant species with the potential to occur in the aforementioned USGS quads. Please see **Appendix A** for the raw data returned from the database queries.

HABITAT ASSESSMENT

A habitat assessment of the BSA was performed by PMC biologists on October 27, 2010, and again on December 11, 2013, to assess the biological resources that may be impacted as part of the proposed project, map vegetative communities on and adjacent to the BSA, and evaluate the potential suitability of those communities for special-status species returned in the literature review. A habitat layer was created for areas within the BSA using the geographic information system ArcView program based on aerial photo-interpretation and data collected during reconnaissance-level surveys. Habitat classifications were assigned using A Guide to Wildlife Habitats of California (CDFW 2014b).

WETLAND DELINEATION

A PMC biologist conducted a delineation of WoUS within the BSA. A portion of the BSA was previously delineated in 2010 and verified by the USACE (**Appendix B**). The project extent has been expanded since the 2010 delineation; therefore, the purpose of this delineation was to reverify the work done in 2010 and to map the aquatic features in the remaining portions of the BSA. The delineation and reverification were conducted on December 11, 2013, in accordance with the methodologies outlined in the USACE regulatory guidance letter regarding OHWM identification (2005), the Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987), and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Environmental Laboratory 2008).

A field review of the JD was conducted with USACE representative Lisa Gibson on April 7, 2014, and a preliminary jurisdictional determination was issued by the USACE on April 28, 2014 (**Appendix B**).

RARE PLANT SURVEYS

A rare plant survey was conducted on May 6, 2011, by a PMC biologist in accordance with the General Rare Plant Survey Guidelines (USFWS 2002) and the Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (CDFW 2000) to evaluate the presence or absence of rare plants within the BSA. A summary memo presenting the findings of this survey is provided in **Appendix C**.

Transects were systematically walked across the BSA to detect the presence of rare plant species. When potential special-status plant species were observed, their presence was recorded on a Trimble Geo XT. If the species were growing in a large clump, the numbers of individual plants were estimated. Locations of rare plants recorded in the field were then overlaid on an aerial photograph of the BSA.

Two individuals were identified in Laguna Creek that were indiscernible between the more common water plantain (*Alisma lanceolatum*) and Sanford's arrowhead due to a lack of inflorescences. The plants were found adjacent to the water's edge with common cattail (*Typha latifolia*) and bulrush (*Scirpus californicus*). If these plants are Sanford's arrowhead, based on engineering provided, the proposed project would avoid the low-water channel where these plants occur and no impact would occur to these plants.

TREE SURVEY

International Society of Arboriculture (ISA)-certified arborist (#8324) Kelly McGlothlin, with Tree Associated, conducted a tree survey on April 24, 25, and 26, 2013, and June 19, 2013. All trees adjacent to the proposed project with trunk diameters greater than 6 inches were evaluated with the following exceptions:

- For multiple-trunked species not protected by the City of Elk Grove Tree Ordinance, only those with at least one trunk greater than or equal to 6 inches were evaluated; and

- From Bond Road north to the edge of the playground area, only trees with canopies overhanging the western project boundary fence were evaluated.

For each of the 144 trees that were evaluated, the following data were collected:

- Tree number – corresponds to the tag number found on a round aluminum tag affixed to each tree.
- Species – common and Latin names.
- Trunk diameter – the diameter of the tree (in inches) at 4.5 feet above ground level, unless another measurement between 1 and 5 feet above ground level provided a more accurate reflection of the size of the tree.
- Maximum drip line radius – the measured maximum distance from the trunk to the edge of the branches (in feet).
- Tree protection zone – the radius (in feet) of a circular area centered at the tree trunk which, if left undisturbed, will result in a low impact to the tree.
- Health rating – rating of poor to excellent regarding tree health. A rating of fair/good or greater indicated no significant health concerns.
- Structural rating – rating of poor to excellent regarding tree structure. A rating of fair/good or greater generally indicated no acute structural concerns.
- Comments – comments regarding tree features significant to tree condition.
- Recommendations – recommendations for tree work, treatments, or further evaluation necessary to improve tree structure or health.

Results of this assessment are present in the memo provided in **Appendix D**. No protected trees are proposed for removal as a result of this project; therefore, no impacts are anticipated and no further mitigation or impact analysis is provided.

IMPACT ASSESSMENT

The impact assessment is based on information provided in the project description, environmental setting, and conceptual plans; federal, state, and local regulatory requirements regarding impacts to biological resources; and data collected from the literature review, habitat assessment, and wetland delineation. When information about the presence of a particular special-status species is unknown, but suitable habitat is present, the impact analysis takes a conservative approach and presence is inferred. This impact assessment considers permanent and temporary impacts in addition to cumulative and indirect impacts of each biological resource being analyzed. Impacts to specific biological resources are identified and appropriate avoidance, minimization, compensation, and/or mitigation measures are discussed further in Chapter 4.

Personnel and Survey Dates

A delineation and habitat assessment was conducted by a PMC biologist on October 27, 2010.

A PMC biologist conducted a site visit on March 11, 2011, to analyze the potential of adjacent seasonal wetlands to support listed vernal pool crustaceans.

A PMC biologist conducted a rare plant survey on May 6, 2011.

ISA-certified arborist (#8324) Kelly McGlothlin with Tree Associated conducted a tree survey on April 24, 25, and 26, 2013, and June 19, 2013.

A delineation and habitat assessment was performed by a PMC biologist on December 11, 2013.

PMC biologists conducted a site visit on April 9, 2014, to evaluate and take measurements of one elderberry bush located at the northern end of the BSA.

Agency Coordination and Professional Contacts

On April 7, 2014, PMC biologists met with USACE representative Lisa Gibson to review the delineation.

On April 14, 2014, City of Elk Grove staff met with staff from Caltrans at the project site to discuss project impacts, including impacts to biological resources associated with the project.

Limitations That May Influence Results

No limitations to the assessment efforts or information collected to date have been identified. Standard protocols were used for biological surveys that were conducted; surveys were conducted during appropriate seasons and under appropriate weather conditions. The presence of potentially occurring special-status species is inferred in suitable habitat within and adjacent to the BSA until protocol-level and/or preconstruction surveys are completed, as necessary.

Chapter 3 – Results: Environmental Setting

This chapter describes the region in which the project will occur, including a concise description of the area's topography, soils, vegetation, aquatic resources, and level of human or natural disturbance.

Description of the Existing Biological and Physical Conditions

The following descriptions of the existing biological and physical conditions are described in relation to the BSA boundaries. The BSA was used as the limit for biological studies conducted in support of the project and will be used when determining potential impacts to special-status species as described in Chapter 4.

STUDY AREA

The BSA for this project was defined using a 250-foot buffer off the project footprint (**Figure 4**). This boundary was chosen due to the presence of vernal pool features in proximity to the project footprint. The USFWS typically considers all vernal pool features within 250 feet of the proposed development indirectly affected. In addition, this boundary includes all areas that could be impacted by the project, plus a buffer to accommodate any changes to project limits and project design that may occur during project development. **Figure 5** depicts the BSA limits along with the project impact area (footprint and TCZ).

The proposed project directly abuts a concurrent project to the south, Laguna Creek Trail-South Camden Spur (**Figure 6**). In order to avoid overlap in evaluation of species impacts associated with each project, both project footprints were joined, a 250-foot buffer applied, and the BSA was split between the two projects. As a result, the 250-foot buffer does not apply to the southern project boundary.

The area within the BSA is designated as public open space, public park, and low-density residential according to the City of Elk Grove General Plan Land Use Policy Map (City of Elk Grove 2009). The BSA is generally bounded by Laguna Creek and Camden Park to the south and Whitehouse Creek to the north.

PHYSICAL CONDITIONS

Topography

The BSA is located in the Sacramento Valley, which is primarily flat land with no hills or valleys. The BSA elevation is between 38 and 47 feet above mean sea level (amsl). The elevation is relatively flat through the Camden Passage neighborhood. In the southern portion of the BSA, the topography slopes from the edge of residential development south toward Laguna Creek.

Hydrology

Hydrologic features in the BSA include Laguna Creek, Whitehouse Creek, Camden Lake, and man-made ditches. Precipitation and other surface water in the southern portion of the BSA sheet flows to either Laguna Creek or Camden Lake. Within the Camden Passage neighborhood, surface water sheet flows into the storm drain system; however, in the northern portion of the BSA some surface water outfalls into Whitehouse Creek.

Soils

The Natural Resources Conservation Service's (NRCS) Web Soil Survey identifies four soil types within the BSA (**Figure 7**). Each soil type is described below based on descriptions obtained from the Web Soil Survey (USDA 2014). Hydric soils ratings describe the proportion of map units that meet the hydric soils criteria (USDA 2014). Hydric means that 100% of the components listed for a given map unit are rated as being hydric. Predominantly hydric means that 66% to 99% of the components listed for a given map unit meet the hydric soils criteria. Partially hydric means that 33% to 65% of the map unit components are hydric; predominantly nonhydric means that 1% to 32% of the map unit components are hydric; and nonhydric means that none of the map unit components meet hydric soil criteria.

- **Bruella sandy loam, 0 to 2 percent slopes (111)**. This is a well drained soil that occurs on terraces between 30 and 150 amsl. The depth to the restrictive feature is more than 80 inches, and the soil is composed of alluvium derived from granite. The hydric rating for this soil type is **nonhydric**.
- **San Joaquin silt loam (213, 214, 215)**. This is a moderately well drained soil that occurs on terraces between 20 and 500 amsl. The depth to the duripan is 28 to 54 inches, and the soil is composed of alluvium derived from granite. The hydric rating for this soil type is **predominantly nonhydric**.

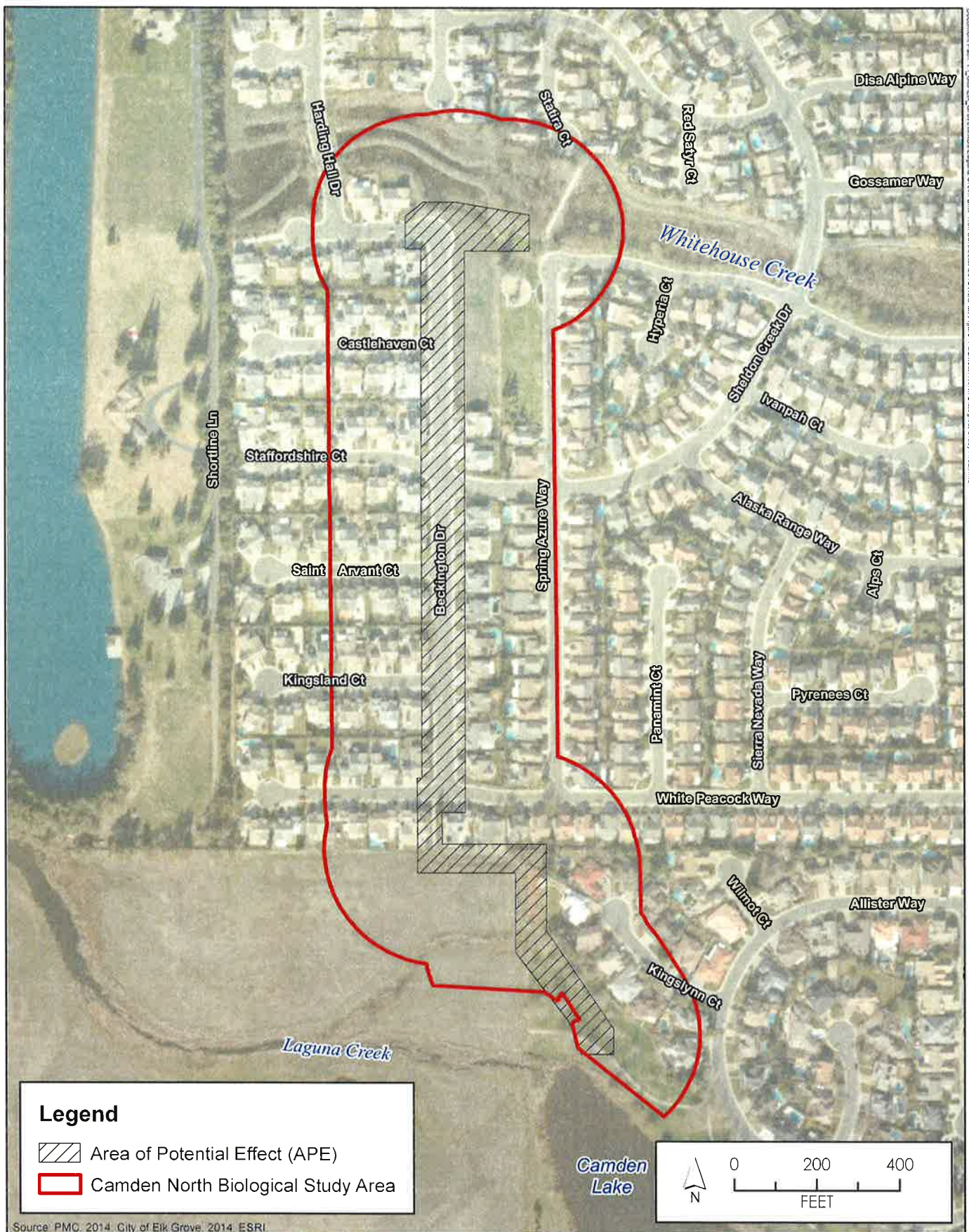
BIOLOGICAL CONDITIONS

Vegetative communities are assemblages of plant species that occur in the same area and are defined by species composition and relative abundance. The BSA consists of urban land uses, annual grassland, man-made ditch, fresh emergent wetland, open water, and valley foothill riparian habitats (**Figure 8**). Each community is described below and is based on descriptions obtained from the CDFW's A Guide to Wildlife Habitats of California (2014b).

Vegetative Communities

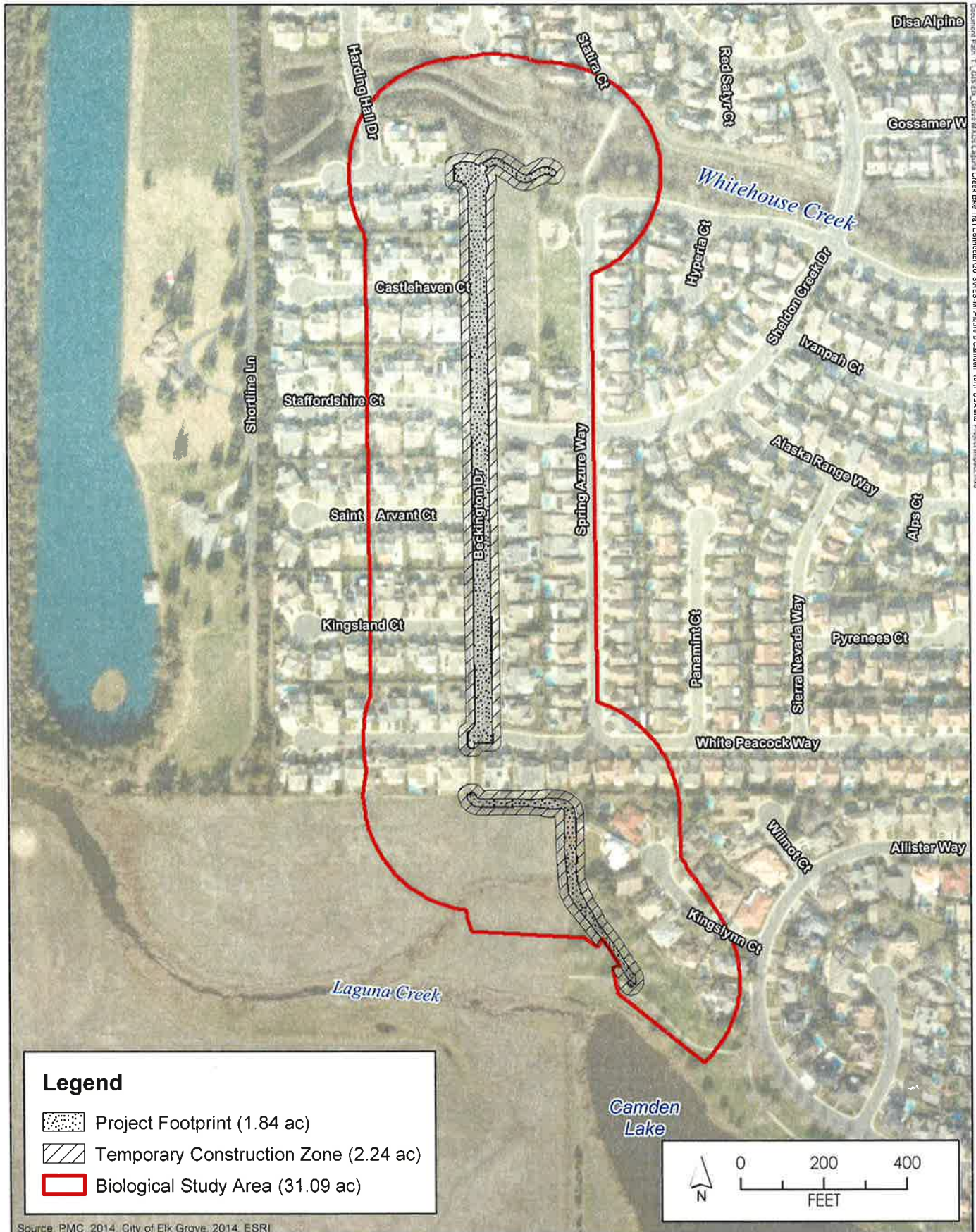
Urban

Urban habitat is characterized by the presence of both native and exotic species maintained in a relatively static composition within a downtown, residential, or suburban setting. Species richness in these areas depends greatly on community design (i.e., open space considerations) and proximity to the natural environment.



Source: PMC, 2014; City of Elk Grove, 2014; ESRI

Figure 4
Biological Study Area

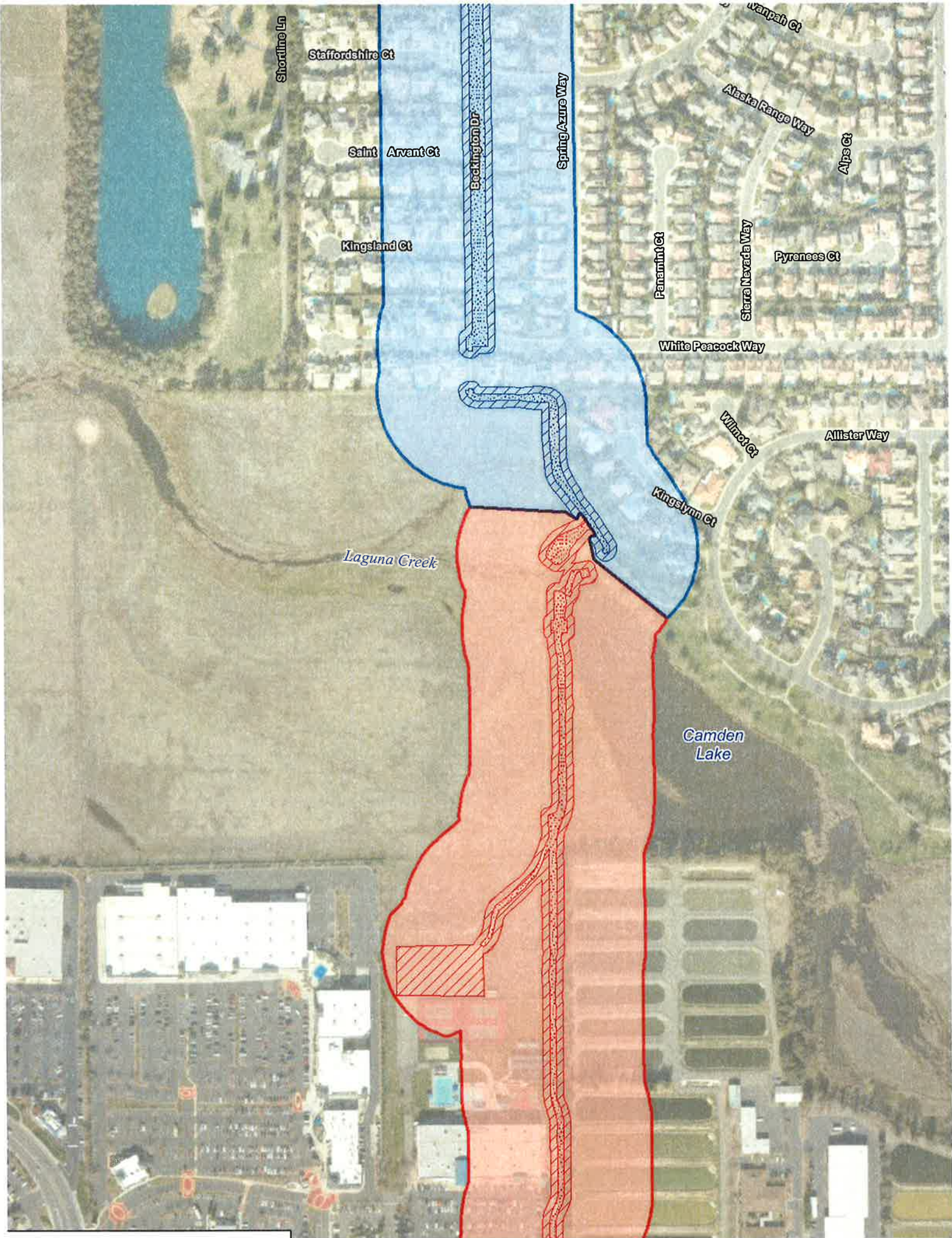


Source: PMC, 2014; City of Elk Grove, 2014; ESRI



City of Elk Grove
Development Services

Figure 5
Biological Study Area and Project Impact Map



Shoreline Ln

Staffordshire Ct

Saint Arvant Ct

Kingsland Ct

Beckington Dr

Spring Azure Way

Panama Ct

Sierra Nevada Way

Pyrenees Ct

Alps Ct

White Peacock Way

Wilnot Ct

Allister Way

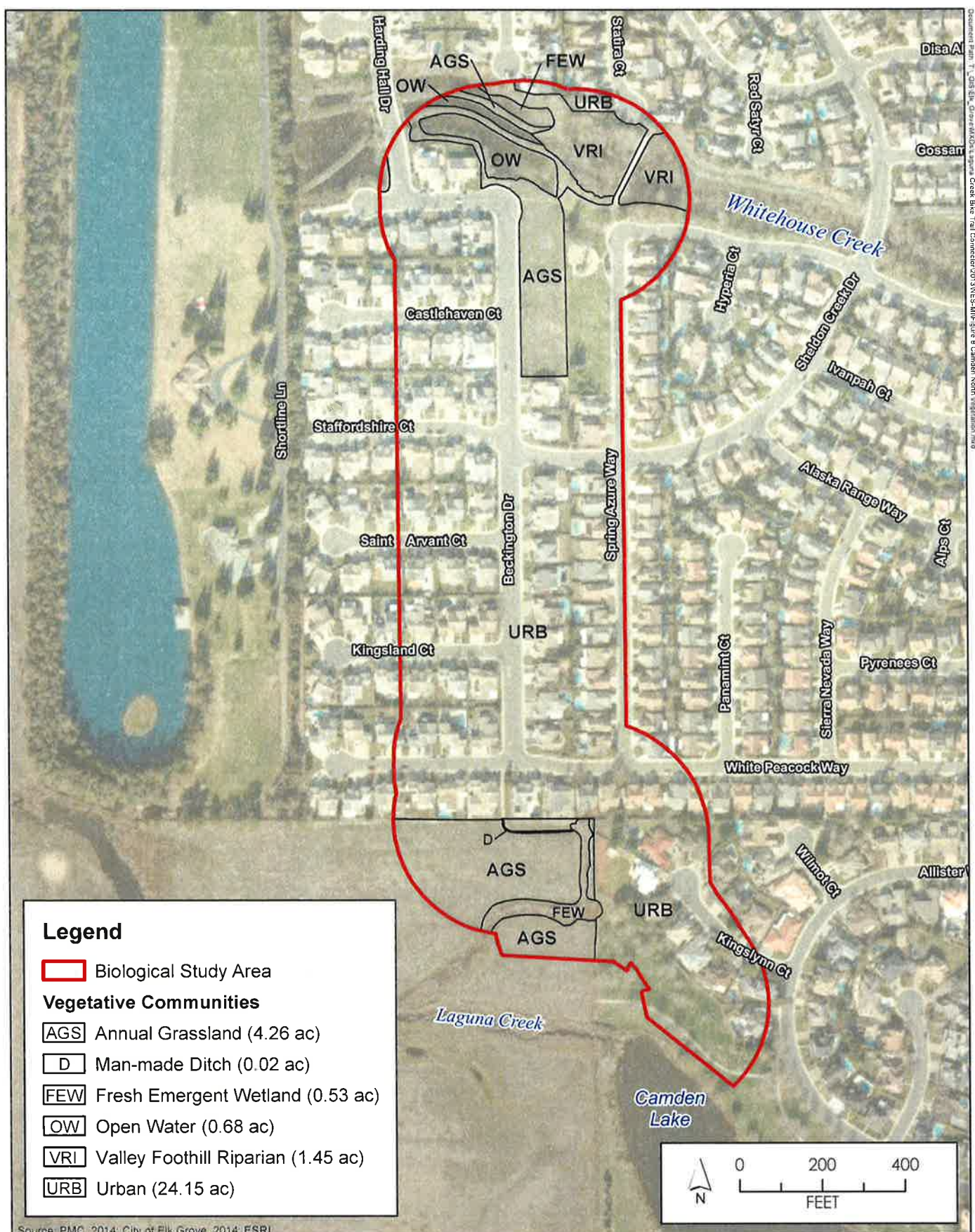
Laguna Creek

Kingslyn Ct

Camden Lake



Figure 7
NRCS Soils Map



Source: PMC, 2014; City of Elk Grove, 2014; ESRI

Figure 8

Vegetative Communities Map

The California Wildlife Habitat Relationships system classifies urban habitat into five different vegetation types: tree grove, street strip, shade tree/lawn, lawn, and shrub cover. Tree groves refer to conditions typically found in city parks, greenbelts, and cemeteries. These areas vary in tree height, spacing, crown shape, and understory conditions; however, they have a continuous canopy. Street strip vegetation, located roadside, varies with species type but typically includes a ground cover of grass. Shade trees and lawns refer to characteristic residential landscape, which is reminiscent of natural savannas. Lawns are composed of a variety of grasses, maintained at a uniform height with continuous ground cover through irrigation and fertilization. Shrub cover refers to areas commonly landscaped and maintained with hedges, as typically found in commercial districts. All five types of urban habitat are generally found in combination, creating considerable edge effect, which can be more valuable to wildlife than any one individual unit. All five types of urban habitat are present in the BSA and include all the residential development and associated infrastructure, as well as all landscaped areas, including Edie MacDonald and Camden Park.

Annual Grassland

The dominant species found within the annual grassland community includes introduced grasses such as Italian ryegrass (*Lolium multiflorum*), barnyard grass (*Echinochloa crus-galli*), wild oat (*Avena fatua*), Mediterranean barley (*Hordeum marinum*), foxtail barley (*Hordeum murinum*), Bermuda grass (*Cynodon dactylon*), and soft-chess brome (*Bromus hordeaceus*). Common forbs observed within these grasslands include mustards (*Brassica* spp.), spring vetch (*Vicia sativa*), field bindweed (*Convolvulus arvensis*), turkey mullein (*Eremocarpus setigerus*), Italian thistle (*Carduus pycnocephalus*), yellow star-thistle (*Centaurea solstitialis*) and dove's-foot geranium (*Geranium molle*).

Many wildlife species use annual grasslands for foraging, but some require special habitat features such as cliffs, caves, ponds, or habitats with woody plants for breeding, resting, and cover. Characteristic reptiles that breed in annual grasslands include the western fence lizard (*Sceloporus occidentalis*), common garter snake (*Thamnophis sirtalis*), and western rattlesnake (*Crotalus viridis helleri*). Mammals typically found in this habitat include the black-tailed jackrabbit (*Lepus californicus*), California ground squirrel (*Spermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), western harvest mouse (*Reithrodontomys megalotis*), California vole (*Microtus californicus*), and coyote (*Canis latrans*). Birds known to breed in annual grasslands include the western burrowing owl (*Athene cunicularia hypugaea*), horned lark (*Eremophila alpestris*), and western meadowlark (*Sturnella neglecta*). This habitat also provides important foraging habitat for turkey vulture (*Cathartes aura*), northern harrier (*Circus cyaneus*), and American kestrel (*Falco sparverius*).

Man-made Ditch

A man-made drainage ditch conveys runoff from the Camden Passage development into Laguna Creek. Man-made drainage ditches are highly modified channels that vary in species composition and persistence of water. Some areas of native vegetation include broad-leaved cattail (*Typha latifolia*), Pacific rush (*Juncus effusus* var. *pacificus*), fringed willowherb (*Epilobium ciliatum* ssp. *ciliatum*), and tall flatsedge (*Cyperus eragrostis*).

Fresh Emergent Wetland

Freshwater emergent wetlands are characterized by erect, rooted herbaceous hydrophytes such as common cattail. Emergent wetlands are flooded frequently enough so that the roots of the vegetation are in an anaerobic environment. On the upper margins of this habitat, saturated or periodically flooded soils support several moist soil plant species including big-leaf sedge (*Carex amplifolia*), Baltic rush (*Juncus balticus*), tall flatsedge, and on more alkali sites, saltgrass (*Distichlis spicata*). The upland limit of freshwater emergent wetlands and deep water habitats is the deep water edge of the emergent vegetation. Within the BSA, freshwater emergent wetlands are associated with Laguna Creek and Whitehouse Creek.

Freshwater emergent wetlands are among the most productive wildlife habitats in California. Many species rely on freshwater emergent wetlands for their entire life cycle. The rare giant garter snake uses these wetlands as its primary habitat. Slow-moving waters provide important resting and foraging habitats for migratory water birds such as the mallard (*Anas platyrhynchos*) and cinnamon teal (*A. cyanoptera*). Wetlands also provide habitat for the American coot (*Fulica americana*), great blue heron (*Ardea herodias*), great egret (*Ardea alba*), and black phoebe (*Sayornis nigricans*). Beaver (*Castor canadensis*) is commonly found within the waterways in the city and may be found along Laguna Creek.

Open Water

Open water or lacustrine habitats are inland depressions or dammed riverine channels containing standing water. Depth can vary from a few centimeters to hundreds of meters. Typical lacustrine habitats include permanently flooded lakes and reservoirs, intermittent lakes, and ponds. Most permanent lacustrine systems support fish life; intermittent types usually do not. As sedimentation and accumulation of organic matter increases toward the shore, floating rooted aquatics such as water lilies (*Nymphaea* spp.) and smartweed (*Polygonum amphibium* var. *stipulaceum*) often appear. Open water habitat within the BSA is associated with Whitehouse Creek.

Suspended organisms such as plankton are found in the open water of lacustrine habitats. Submerged plants such as algae and pondweeds serve as supports for smaller algae and as cover for swarms of minute aquatic animals. Floating plants offer food and support for numerous herbivorous animals that feed both on plankton and floating plants. Wading ducks often frequent ponded areas. Aquatic species include mosquito fish (*Gambusia affinis*) and Louisiana red swamp crayfish (*Procambarus clarkii*).

Valley Foothill Riparian

Valley foothill riparian habitats are found in valleys bordered by sloping alluvial fans, slightly dissected terraces, lower foothills, and coastal plains. They are generally associated with low velocity flows, floodplains, and gentle topography. Typically, this habitat consists of an overstory tree layer, subcanopy tree layer, understory shrub layer, and herbaceous layer; however, the riparian habitat in the BSA consists mainly of willows (*Salix* spp.) and has not reached late successional stages of this habitat type. The willows within Whitehouse Creek and Laguna Creek are small (approximately 8 to 15 feet). The herbaceous layer consists of sedges (*Cyperus* spp.), rushes (*Juncus* spp.), poison hemlock (*Conium maculatum*), and various grasses.

Riparian habitats provide food, water, migration, and dispersal corridors, as well as escape, nesting, and thermal cover for an abundance of wildlife. Since the riparian habitat in the BSA is limited both in size and species composition, wildlife species found in the adjoining habitats are expected to occur here as well. Mammal species may include opossum (*Didelphis virginiana*), western gray squirrel (*Sciurus griseus*), beaver, coyote, raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*).

Habitat Connectivity

The CDFW Biogeographic Information & Observation System (2014c) was reviewed to determine if the BSA is located within an Essential Connectivity Area. The BSA does not occur within an Essential Connectivity Area; therefore, the project is not likely to adversely affect migratory corridors.

Regional Species and Habitats and Natural Communities of Concern

Habitats of concern include areas of special concern to resource agencies, areas protected under CEQA, areas designated as sensitive natural communities by the CDFW, areas outlined in Section 1600 of the FGC, areas regulated under Section 404 of the federal CWA, and areas protected under local regulations and policies. Sensitive habitats identified in or adjacent to the BSA include seasonal wetlands and Laguna Creek East.

Candidate, sensitive, or special-status species are commonly characterized as species that are at potential risk or actual risk to their persistence in a given area or across their native habitat. These species have been identified and assigned a status ranking by governmental agencies such as the CDFW and the USFWS, and private organizations such as the CNPS. The degree to which a species is at risk of extinction is the determining factor in the assignment of a status ranking. Some common threats to a species' or a population's persistence include habitat loss, degradation, and fragmentation, as well as human conflict and intrusion. For the purposes of this NES, special-status species are defined by the following codes:

- Listed, proposed, or candidates for listing under the ESA (50 CFR Section 17.11 – listed; 61 Federal Register Section 7591, February 28, 1996, candidates)
- Listed or proposed for listing under CESA (FGC 1992 Section 2050 et seq.; 14 California CCR Section 670.1 et seq.)
- Designated as Species of Special Concern by the CDFW
- Designated as Fully Protected by the CDFW (FGC Sections 3511, 4700, 5050, 5515)
- Species that meet the definition of rare or endangered under CEQA (14 CCR Section 15380), including CNPS List 1 and 2

The result of the USFWS, CNDDDB, and CNPS database queries identified several special-status species with the potential to be impacted by the proposed project. **Figure 9** depicts CNDDDB occurrence data within 1 mile of the BSA. **Table 1** provides a

summary of all species identified in the search results, a description of the habitat requirements for each species, and conclusions regarding the potential for each species to be impacted by the proposed project.

Terrestrial Habitat

10	<i>Sagittaria sanjoranii</i>	Saniora's arrowhead	NONE	NONE	LB...
11	<i>Thamnophis gigas</i>	giant garter snake	Threatened	Threatened	

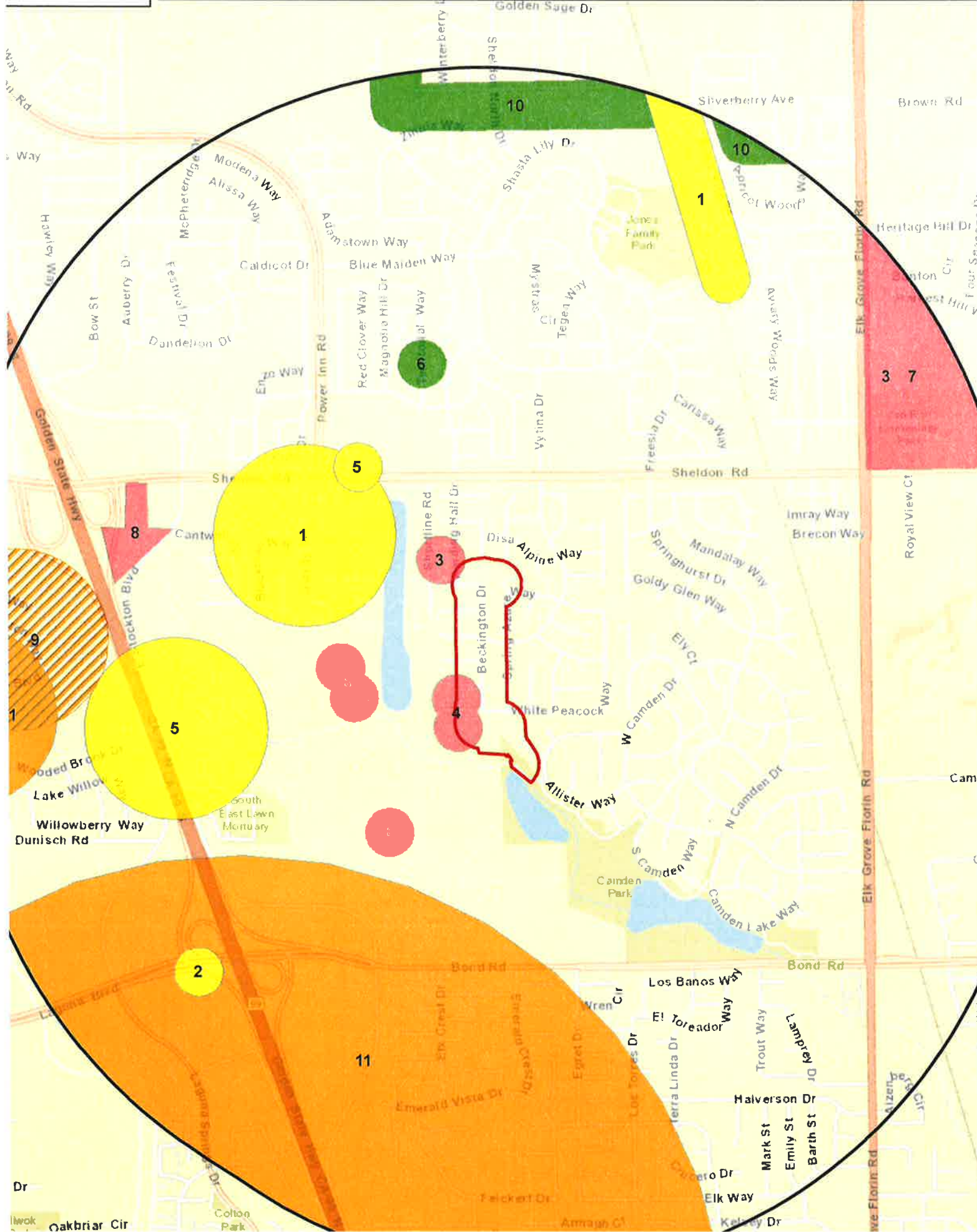


Table 1: Special-Status Species and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Habitat	Habitat Present/Absent	Potential to Occur
Plants							
<i>Astragalus tener</i> <i>var. ferrisiae</i>	Ferris' milk-vetch	-	-	1B.1	Vernally mesic meadows and seeps, and subalkaline flats in valley and foothill grasslands. Elev: 7-246 ft. (2-75 m.) Blooms: April-May (CNPS 2014).	A	No effect. Suitable habitat not present.
<i>Brasenia schreberi</i>	watershield	-	-	2B.3	Freshwater marshes and swamps. Elev: 98-7,218 ft. (30-2,200 m.) Blooms: June-Sept (CNPS 2014).	A	No effect. BSA below elevation range.
<i>Carex comosa</i>	bristly sedge	-	-	2B.1	Marshes, swamps and lake margins. Elev: 0-2,051 ft. (0-625 m.) Blooms: May-Sept (CNPS 2014).	P	May affect. Suitable habitat present.
<i>Calystegia stebbinsii</i>	Stebbins' morning glory	FE	SE	1B.1	Cismontane woodland and openings in chaparral. Associated with gabbroic or serpentinite soil. Elevation: 607-3,576 ft. (185-1,090 m.) Blooms: April-July (CNPS 2014).	A	No effect. Suitable habitat not present.
<i>Castilleja campestris</i> ssp. <i>succulenta</i>	succulent owl's-clover	FT	SE	1B.1	Acidic vernal pools. Elev: 164-2,461 ft. (50-750 m.) Blooms: April-May (CNPS 2014).	A	No effect. BSA below elevation range.
	Critical Habitat, succulent owl's-clover	X	-	-		A	No effect. BSA not located within Critical Habitat Unit.

<i>Ceanothus roderickii</i>	Pine Hill ceanothus	FE	SR	1B.2	Serpentine or gabbroic soil in chaparral and cismontane woodland. Elev: 804-2,067 ft. (245-630 m.) Blooms: April-June (CNPS 2014).	A	No effect. Suitable habitat not present.
<i>Cicuta maculata</i> var. <i>bolanderi</i>	Bolander's water-hemlock	-	-	2B.1	Coastal, fresh or brackish marshes and swamps. Elev: 0-656 ft. (0-200 m.) Blooms: July-Sept (CNPS 2014).	P	May affect. Suitable habitat present.
<i>Cuscuta obtusiflora</i> var. <i>glandulosa</i>	Peruvian dodder	-	-	2B.2	Freshwater marshes and swamps. Elev: 49-919 ft. (15-280 m.) Blooms: July-Oct (CNPS 2014).	P	May affect. Suitable habitat present.
<i>Downingia pusilla</i>	dwarf downingia	-	-	2B.2	Vernal pools and mesic valley and foothill grasslands. Elev: 3-1,459 ft. (1-445 m.) Blooms: March-May (CNPS 2014).	P	May affect. Suitable habitat present.
<i>Fremontodendron californicum</i> ssp. <i>decumbens</i>	Pine Hill flannelbush	FE	-	1B.2	Gabbroic, serpentinite, rocky soils in chaparral and cismontane woodlands. Elev: 1,394-2,493 ft. (425-760 m.) Blooms: April-July (CNPS 2014).	A	No effect. Suitable habitat not present.
<i>Galium californicum</i> ssp. <i>sierrae</i>	El Dorado bedstraw	FE	SR	1B.2	Gabbroic soils in chaparral, cismontane woodland and lower montane coniferous forest. Elev: 328-1,919 ft. (100-585 m.) Blooms: May-June (CNPS 2014).	A	No effect. Suitable habitat not present.

<i>Gnatiola heterosepala</i>	Boggs Lake hedge-hyssop	-	SE	1B.2	Clay soils in marshes, swamps, lake margins and vernal pools. Elev: 33-7,792 ft. (10-2,375 m.) Blooms: April-Aug (CNPS 2014).	A	No effect. Suitable soils not present. Soils in BSA are silt loam and sandy loam (USDA 2014).
<i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i>	woolly rose mallow	-	-	1B.2	Freshwater marshes and swamps. Elev: 0-394 ft. (0-120 m.) Blooms: June-Sept (CNPS 2014).	P	May affect. Suitable habitat present.
<i>Juglans hindsii</i>	Northern California black walnut	-	-	1B.1	Riparian forest/woodland. Elev: 0-1,444 ft. (0-440 m.) Blooms: April-May (CNPS 2014).	A	No effect. No individuals documented within BSA.
<i>Juncus leiospermus</i> var. <i>ahartii</i>	Ahart's dwarf rush	-	-	1B.2	Mesic valley and foothill grasslands. Elev: 98-751 ft. (30-229 m.) Blooms: March-May (CNPS 2014).	A	No effect. BSA below elevation range.
<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	Delta tulle pea	-	-	1B.2	Freshwater and brackish marshes and swamps. Elev: 0-13 ft. (0-4 m.) Blooms: May-Sept (CNPS 2014).	A	No effect. BSA outside species elevation range.
<i>Legenere limosa</i>	legenere	-	-	1B.1	Vernal pools. Elev: 3-2,887 ft. (1-880 m.) Blooms: April-June (CNPS 2014).	P	May affect. Suitable habitat present.
<i>Lepidium latipes</i> var. <i>heckardii</i>	Heckard's pepper-grass	-	-	1B.2	Alkaline flats in valley and foothill grasslands. Elev: 7-656 ft. (2-200 m.) Blooms: March-May (CNPS 2014).	A	No effect. Suitable habitat not present.
<i>Lilaeopsis masonii</i>	Mason's lilaeopsis	-	SR	1B.1	Riparian scrub, and brackish or freshwater marshes and swamps. Elev: 3-33 ft. (0-10 m.) Blooms: April-Nov (CNPS 2014).	P	May affect. Suitable habitat present.

<i>Limosella australis</i>	Delta mudwort	-	2B.1	Usually mud banks in riparian scrub, and freshwater or brackish marshes and swamps. Elev: 0-10 ft. (0-3 m.) Blooms: May-Aug (CNPS 2014).	A	No effect. BSA above elevation range.
	slender Orcutt grass	FT	1B.1	Vernal pools. Elev: 115-5,774 ft. (35-1,760 m.) Blooms: May-Oct (CNPS 2014).	A	No effect. BSA below elevation range.
<i>Orcuttia tenuis</i>	Critical Habitat, slender Orcutt grass	X	-		A	No effect. BSA not located within Critical Habitat Unit.
	Sacramento Orcutt grass	FE	1B.1	Vernal pools. Elev: 98-328 ft. (30-100 m.) Blooms: April-Sep (CNPS 2014).	A	No effect. BSA below elevation range.
<i>Orcuttia viscida</i>	Critical Habitat, Sacramento Orcutt grass	X	-		A	No effect. BSA not located within Critical Habitat Unit.
<i>Packera layneae</i> (= <i>Senecio layneae</i>)	Layne's ragwort	FT	1B.2	Serpentine or gabbroic, rocky soils in chaparral and cismontane woodland. Blooms: April-Aug. Elev: 660-3,300 ft. (200-1,000 m.) (CNPS 2014).	A	No effect. Suitable habitat not present.
<i>Sagittaria sanfordii</i>	Sanford's arrowhead	-	1B.2	Assorted shallow freshwater marshes and swamps. Elev: 0-2,133 ft. (0-650 m.) Blooms: May-Oct (CNPS 2014).	P	May affect. Suitable habitat present.
<i>Scutellaria galericulata</i>	marsh skullcap	-	2B.2	Lower montane coniferous forest, meadows, seeps, marshes, and swamps. Elev: 0-6,890 ft. (0-2,100 m.) Blooms: June-Sept (CNPS 2014).	P	May affect. Suitable habitat present.

<i>Scutellaria laterifolia</i>	side-flowering skullcap	-	-	2B.2	Marshes, swamps, mesic meadows and seeps. Elev: 0-1,640 ft. (0-500 m.) Blooms: July-Sept (CNPS 2014).	P	May affect. Suitable habitat present.
<i>Symphotrichum lentum</i>	Suisun Marsh aster	-	-	1B.2	Brackish and freshwater marshes and swamps. Elev: 0-10 ft. (0-3 m.) Blooms: May-Nov (CNPS 2014).	A	No effect. BSA above elevation range.
<i>Trifolium hydrophilum</i>	saline clover	-	-	1B.2	Marshes and swamps, valley and foothill grassland (mesic, alkaline), and vernal pools. Elev: 0-984 ft. (0-300 m.) Blooms: April-June (CNPS 2014).	P	May affect. Suitable habitat present.
Invertebrates							
<i>Branchinecta conservatio</i>	conservancy fairy shrimp	FE	-		Vernal pools, often large and turbid pools (USFWS 2005).	A	No effect. Species not known to occur in this part of the Central Valley.
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT	-		Found in vernal pools and ephemeral wetlands. Distributed throughout the Central Valley, including Sacramento County (USFWS 2005).	A	No effect. Suitable habitat not present.
<i>Desmocerus californicus dimorphus</i>	Critical Habitat, vernal pool fairy shrimp	X	-		Dependent on hostplant, elderberry (<i>Sambucus</i> spp.), which generally grows in riparian	A	No effect. BSA not located within Critical Habitat Unit.
	valley elderberry longhorn beetle	FT	-			P	May affect, likely to adversely affect. Hostplant present within BSA.

	Critical Habitat, valley elderberry longhorn beetle	X	-		woodlands and upland habitats of the Central Valley. Current distribution in the Central Valley from Shasta County to Fresno County (USFWS 1999a).	A	No effect. BSA not located within Critical Habitat Unit.	
	vernal pool tadpole shrimp	FE	-		Wide variety of ephemeral wetland habitats, including vernal pools. Distributed throughout Central Valley and San Francisco Bay area (USFWS 2005).	A	No effect. Suitable habitat not present.	
<i>Lepidurus packardii</i>	Critical Habitat, vernal pool tadpole shrimp	X	-			A	No effect. BSA not located within Critical Habitat Unit.	
Fish								
	green sturgeon	FT	SSC		Spawning occurs in Sacramento River and Klamath River (USFWS 1996). Oceanic waters, bays, and estuaries during non-spawning season. Spawning habitat = deep pools in large, turbulent, freshwater mainstems (NMFS 2005).	A	No effect. Creeks within BSA inaccessible to anadromous fish species due to fish passage barriers.	
<i>Acispenser medirostris</i>	delta smelt	FT	SE		Distribution includes the Sacramento River below Isleton, San Joaquin River below Mossdale, and Suisun Bay. Spawning areas include the Sacramento River below Sacramento, Mokelumne River system, Cache Slough, the delta, and Montezuma Slough (USFWS 1996).	A	No effect. BSA not located within Critical Habitat Unit.	
<i>Hypomesus transpacificus</i>	Critical Habitat, delta smelt	X	-			A	No effect. BSA not located within Critical Habitat Unit.	

<i>Lampetra ayresii</i>	river lamprey	-	SSC	<p>Adults require clean, gravelly riffles in permanent streams for spawning, while the ammocoetes require sandy backwaters or stream edges in which to bury themselves, where water quality is continuously high and temperatures do not exceed 25°C (Moyle et al. 1995).</p> <p>Small to large streams in a low to mid-elevation environment. May also inhabit lakes or reservoirs. Their preferred stream temperature might easily exceed 20°C, though these fish do not favor low dissolved oxygen levels. Therefore the hardhead minnow is usually found in clear deep streams with a slow but present flow. Though spawning may occur in pools, runs, or riffles, the bedding area will typically be characterized by gravel and rocky substrate (CalFish 2014).</p>	A	<p>No effect. Creeks within BSA inaccessible to anadromous fish species due to fish passage barriers.</p>
<i>Mylopharodon conocephalus</i>	hardhead	-	SSC	<p>Small to large streams in a low to mid-elevation environment. May also inhabit lakes or reservoirs. Their preferred stream temperature might easily exceed 20°C, though these fish do not favor low dissolved oxygen levels. Therefore the hardhead minnow is usually found in clear deep streams with a slow but present flow. Though spawning may occur in pools, runs, or riffles, the bedding area will typically be characterized by gravel and rocky substrate (CalFish 2014).</p>	A	<p>No effect. Creeks within BSA inaccessible to anadromous fish species due to fish passage barriers.</p>

<i>Oncorhynchus mykiss</i>	Central Valley steelhead	FT	-	Spawning habitat = gravel-bottomed, fast-flowing, well-oxygenated rivers and streams. Non-spawning = estuarine, marine waters (Busby et al. 1996).	A	No effect. Creeks within BSA inaccessible to anadromous fish species due to fish passage barriers.
	Critical Habitat, Central Valley steelhead	X	-		A	No effect. BSA not located within Critical Habitat Unit.
<i>Oncorhynchus tshawytscha</i>	Central Valley spring-run chinook salmon	FT	ST	Spawning habitat = fast moving, freshwater streams and rivers. Juvenile habitat = brackish estuaries. Non-spawning = marine waters (Myers et al. 1998).	A	No effect. Creeks within BSA inaccessible to anadromous fish species due to fish passage barriers.
	Critical Habitat, Central Valley spring-run chinook salmon	X	-		A	No effect. BSA not located within Critical Habitat Unit.
	winter-run chinook salmon, Sacramento River	FE	SE		A	No effect. Creeks within BSA inaccessible to anadromous fish species due to fish passage barriers.
	chinook salmon, Central Valley fall/late fall-run ESU	-	SSC		A	No effect. Creeks within BSA inaccessible to anadromous fish species due to fish passage barriers.

<i>Pogonichthys macrolepidotus</i>	Sacramento splittail	-	SSC			Prefers slow-moving sections of freshwater rivers and sloughs. Most abundant in Suisun Bay and Marsh region. Largely absent from Sacramento River except during spawning (USFWS 1996). Adults and juveniles require salt or brackish estuary waters. Spawning takes place in freshwater over sandy-gravel substrates, rocks, and aquatic plants (Moyle et al 1995).	A	No effect. Suitable habitat not present. Project-related activities are not anticipated to impact the stream.	
<i>Spirinchus thaleichthys</i>	longfin smelt	FC	ST/SSC				A	No effect. Suitable habitat not present.	
Amphibians									
<i>Ambystoma californiense</i>	California tiger salamander, central population	FT	ST			Occurs in grasslands of the Central Valley and oak savannah communities in the Central Valley, the Sierra Nevada and Coast ranges, and the San Francisco Bay Area. Needs seasonal or semi-permanent wetlands to reproduce, and terrestrial habitat with active ground squirrel or gopher burrows (Bolster 2010).	A	No effect. BSA outside known range in Sacramento County.	
	Critical Habitat, CA tiger salamander, central population	X	-				A	No effect. BSA not located within Critical Habitat Unit.	

<i>Rana draytonii</i>	California red-legged frog	FT	SSC		Found mainly near ponds in humid forests, woodlands, grasslands, coastal scrub, and streambanks with plant cover. Most common in lowlands or foothills. Frequently found in woods adjacent to streams. Breeding habitat is in permanent or ephemeral water sources; lakes, ponds, reservoirs, slow streams, marshes, bogs, and swamps. Ephemeral wetland habitats require animal burrows or other moist refuges for aestivation when the wetlands are dry. From sea level to 5,000 ft. (1,525 m.) (Nafis 2014).	A	No effect. Suitable habitat not present.
<i>Spea hammondi</i>	western spadefoot	-	SSC		Open areas with sandy/gravelly soils. Variable habitats including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Rainpools which do not contain bullfrogs, fish, or crayfish are necessary for breeding (Nafis 2014).	A	No effect. Suitable habitat not present.

Reptiles						
<i>Emys marmorata</i>	western pond turtle	-	SSC	Found in ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches, with abundant vegetation, and either rocky or muddy bottoms, in woodland, forest, and grassland. In streams, prefers pools to shallower areas. Logs, rocks, cattail mats, and exposed banks are required for basking. May enter brackish water and even seawater. Found at elevations from sea level to over 5,900 ft (1,800 m). (Nafis 2014).	P	May affect. Suitable habitat present.
<i>Thamnophis gigas</i>	giant garter snake	FT	ST	Marshes, sloughs, ponds, small lakes, low gradient streams, irrigation and drainage canals, rice fields and their associated uplands. Upland habitat should have burrows or other soil crevices suitable for snakes to reside during their dormancy period (November–mid-March). Ranges in the Central Valley from Butte County to Buena Vista Lake in Kern County. Endemic to valley floor wetlands (USFWS 2012).	P	Likely to adversely affect. Suitable habitat present.

Birds						
<i>Agelaius tricolor</i>	tricolored blackbird	-	SSC		Nests in wetlands or in dense vegetation near open water. Dominant nesting substrates: cattails, bulrushes, blackberry, agricultural silage. Nesting substrate must either be flooded, spinous, or in some way defended against predators (Hamilton 2004).	May affect. Suitable nesting substrate present.
<i>Ammodramus savannarum</i>	grasshopper sparrow	-	SSC		In the foothills and lowlands west of the Cascades/Sierras. Dry, dense grasslands, especially those with a variety of grasses and tall forbs and scattered shrubs for singing perches (CDFW 2014d).	May affect. Suitable habitat present.
<i>Aquila chrysaetos</i>	golden eagle	-	FP		Uncommon resident and migrant throughout California, except center of Central Valley. Habitat typically rolling foothills, mountain areas, sage-juniper flats, desert (CDFW 2014d).	No effect. Suitable habitat not present.

<i>Athene cunicularia</i>	western burrowing owl	-	SSC	Open, flat expanses with short, sparse vegetation and few shrubs, level to gentle topography and well-drained soils. Requires underground burrows or cavities for nesting and roosting. Can use rock cavities, debris piles, pipes and culverts if burrows unavailable. Habitats include grassland, shrub steppe, desert, agricultural land, vacant lots and pastures (CDFW 2014d).	P	May affect. Suitable habitat present. Species not previously documented onsite; however, presence of suitable habitat results in potential for future colonization.
<i>Buteo swainsoni</i>	Swainson's hawk	-	ST	Nests in stands with few trees in riparian areas, juniper-sage flats, and oak savannah in the Central Valley. Forages in adjacent grasslands, agricultural fields and pastures (CDFW 2014d). Prefers redwood and Douglas fir habitats with nest sites in large hollow trees and snags, especially tall, burnt-out stubs (CDFW 2014d).	P	May affect. Suitable foraging and nesting habitat present.
<i>Chaetura vauxi</i>	Vaux's swift	-	SSC		A	No effect. Suitable habitat not present.

<i>Circus cyaneus</i>	northern harrier	-	SSC			Nests on the ground in patches of dense, tall vegetation in undisturbed areas. Breeds and forages in variety of open habitats such as marshes, wet meadows, weedy borders of lakes, rivers and streams, grasslands, pastures, croplands, sagebrush flats and desert sinks (Shuford and Gardali 2008).	P	May affect. Suitable habitat present.
<i>Coccyzus americanus occidentalis</i>	western yellow-billed cuckoo	PT	SE			Requires large, dense tracts of riparian woodland with well-developed understories. Occurs in deciduous trees or shrubs. Prefers willow, but will also nest in orchards adjacent to streams in Sacramento Valley. Restricted to moist habitats along slow-moving waterways during breeding season (CDFW 2014d).	A	No effect. Suitable habitat not present. This species shows increased occupancy with increased patch size (>20 hectares) (Laymon 1998). Riparian habitat within BSA <1 hectare.
<i>Elanus leucurus</i>	white-tailed kite	-	FP			Typically nests in the upper third of trees that may be 10–160 ft. (33-525 m.) tall. These can be open-country trees growing in isolation, or at the edge of or within a forest (CDFW 2014d).	P	May affect. Suitable foraging and nesting habitat present.

<i>Grus canadensis canadensis</i>	lesser sandhill crane	-	SSC	In summer, occurs in and near wet meadow, shallow lacustrine, and fresh emergent wetland habitats. In winter, frequents moist croplands with rice or corn stubble, and open, emergent wetlands. Prefers treeless plains. Nests in remote portions of extensive wetlands or sometimes shortgrass prairies (CDFW 2014d).	A	No effect. Not present in BSA during summer nesting months.
<i>Grus canadensis tabida</i>	greater sandhill crane	-	ST/FP		A	No effect. Not present in BSA during summer nesting months.
<i>Ixobrychus exilis</i>	least bittern	-	SSC	Large, freshwater wetlands with dense emergent vegetation (CDFW 2014d).	P	May affect. Suitable habitat present.
<i>Lanius ludovicianus</i>	loggerhead shrike	-	SSC	Breeds in shrublands or open woodlands with a fair amount of grass cover and areas of bare ground (Shuford and Gardali 2008).	A	No effect. Suitable habitat not present.
<i>Melospiza melodia</i>	song sparrow ("Modesto" population)	-	SSC	Breeds and winters in riparian, fresh or saline emergent wetland, and wet meadows. Breeds in riparian thickets of willows, other shrubs, vines, tall herbs, and fresh or saline emergent vegetation (CDFW 2014d).	P	May affect. Suitable habitat present.

<i>Progne subis</i>	purple martin	-	SSC		Woodland and forest habitats with numerous suitable nest cavities, open air space above nest sites, and aerial insect prey (Shuford and Gardali 2008).	A	No effect. Suitable habitat not present.
<i>Riparia riparia</i>	bank swallow	-	ST		Riparian areas with sandy, vertical bluffs or riverbanks. Also nests in earthen banks and bluffs, as well as sand and gravel pits (CDFW 2014d).	A	No effect. Suitable habitat not present.
<i>Sternula antillarum browni</i>	California least tern	FE	SE/FP		Nests and roosts in colonies on open beaches, forages near shore ocean waters and in shallow estuaries and lagoons (USFWS 2006).	A	No effect. Suitable habitat not present.
<i>Xanthocephalus xanthocephalus</i>	yellow-headed blackbird	-	SSC		Nests in marshes with tall, emergent vegetation (e.g., tules and cattails) adjacent to deepwater (Shuford and Gardali 2008).	P	May affect. Suitable habitat present.
Mammals							
<i>Lasius blossevillii</i>	western red bat	-	SSC		Roosting habitat includes forests and woodlands, often in edge habitats adjacent to streams, fields, or urban areas (CDFW 2014d).	P	May affect. Suitable habitat present.

<i>Taxidea taxus</i>	American badger	-	SSC	Open shrub, forest and herbaceous habitats with friable soils. Associated with treeless regions, prairies, park lands and cold desert areas. Range includes most of California, except the North Coast (CDFW 2014d).	A	Not likely to affect. Grasslands provide suitable habitat; however, it is unlikely this species would den so close to the road. In addition, species is highly mobile and is likely to leave area at signs of disturbance.
----------------------	-----------------	---	-----	--	---	--

Key	
Federal & State Status	CNPS Rare Plant Rank
(FC) Federal Candidate	Rareness Ranks
(FD) Federally Delisted	(1A) Presumed Extinct in California
(FE) Federal Endangered	(1B) Rare, Threatened, or Endangered in California and Elsewhere
(FP) Fully Protected	(2B) Rare, Threatened, or Endangered in California, But More Common Elsewhere
(FT) Federal Threatened	Threat Ranks
(PT) Proposed Threatened	(0.1) Seriously threatened in California
(SCE) State Candidate Endangered	(0.2) Fairly threatened in California
(SCT) State Candidate Threatened	(0.3) Not very threatened in California
(SE) State Endangered	
(SR) State Rare	
(SSC) State Species of Special Concern	
(ST) State Threatened	
(X) Federally Designated Critical Habitat	

Chapter 4 – Results: Biological Resources, Discussion of Impacts and Mitigation

Habitats and Natural Communities of Special Concern

Natural communities of special concern are habitats that have been determined by natural resource agencies such as the CDFW to be sensitive or rare. The BSA contains jurisdictional features characterized by freshwater emergent wetland and valley foothill riparian habitat, which are considered in this analysis. No trees are proposed for removal in association with this project; therefore, there should be no conflict with the City's tree preservation and protection code.

Annual grassland and urban habitats are not considered to be natural communities of special concern and, therefore, will not be discussed further unless in the context of habitat for special-status species.

DISCUSSION OF "JURISDICTIONAL FEATURES"

Survey Results

A 0.015 acre man-made ditch, 0.387 acre of Laguna Creek, and 2.24 acres of Whitehouse Creek occur within the BSA. All features are considered WoUS and are, therefore, subject to CWA regulations. Impacts to these features will require a CWA 404 nationwide permit from the USACE, and CWA 401 water quality certification from the RWQCB. In addition, Whitehouse Creek and Laguna Creek will be subject to, and the man-made ditch may be subject to, FGC Sections 1600-1607. As a result, impacts to these features will also require authorization from CDFW via a streambed alteration agreement.

Project Impacts

The proposed project will result in permanent and temporary impacts to the man-made ditch and fresh emergent wetland habitat within Laguna Creek, as well as temporary impacts to open water habitat within Whitehouse Creek. These impacts are summarized in **Table 2** below and are depicted on **Figure 10**.

Table 2: Impacts to Jurisdictional Features

Feature Type	Total Acres in the BSA	Acres Permanently Impacted	Acres Temporarily Impacted
Laguna Creek (fresh emergent wetland)	0.387	0.032	0.060
Whitehouse Creek (open water)	2.240	0	0.023
Man-made Ditch	0.015	0.005	0.010
Total	2.642	0.037	0.093

Avoidance and Minimization Efforts

The following protective measures are recommended to minimize impacts to jurisdictional features during construction:

- BIO-1:** During project development, the work area will be reduced to the smallest footprint feasible in sensitive habitat areas.
- BIO-2:** Work shall coincide with the driest time. If water is present at the time of construction, water shall be diverted around the work area and work shall resume after the site is dry. Work within the dewatered areas shall be timed with awareness of precipitation forecasts and likely increases in water flows and flood stages. Construction activities within jurisdictional features shall cease prior to storm events until all reasonable erosion control measures have been implemented. Construction equipment and material shall be removed from the floodplain if inundation is likely. Revegetation, restoration, and erosion control work shall not be confined to this time period.
- BIO-3:** If work in the flowing portion of the creek/ditch is unavoidable, the entire flow shall be diverted around or through the work area during excavation and/or construction operations. Flows shall be diverted using gravity flow through temporary culverts/pipes or pumped around the work site with the use of hoses. When a temporary dam or other artificial obstruction is being constructed, maintained, or placed in operation, sufficient water shall at all times be allowed to pass downstream to maintain aquatic life below the dam pursuant to FGC Section 5937. Any temporary dam or other artificial obstruction constructed shall only be built from clean materials such as sandbags, gravel bags, water dams, or clean/washed gravel that will cause little or no siltation.
- BIO-4:** Prior to initiation of construction activities within jurisdictional features, construction best management practices (BMPs) shall be employed onsite to prevent degradation to onsite and offsite WoUS. Methods shall include the use of appropriate measures to intercept and capture sediment prior to entering jurisdictional features, as well as erosion control measures along the perimeter of all work areas to prevent the displacement of fill material. All BMPs shall be in place prior to initiation of any construction activities and shall remain until construction activities are completed. All erosion control methods shall be maintained until all onsite soils are stabilized.
- BIO-5:** In addition, standard staging area practices for sediment-tracking reduction shall be implemented where necessary and may include vehicle washing and street sweeping.
- BIO-6:** All exposed/disturbed areas and access points left barren of vegetation as a result of construction activities shall be restored using locally native grass seeds, locally native grass plugs, and/or a mix of quick-growing sterile non-native grass with locally native grass seeds. Seeded areas shall be covered with broadcast straw and/or jute netted (monofilament erosion blankets are not permitted).

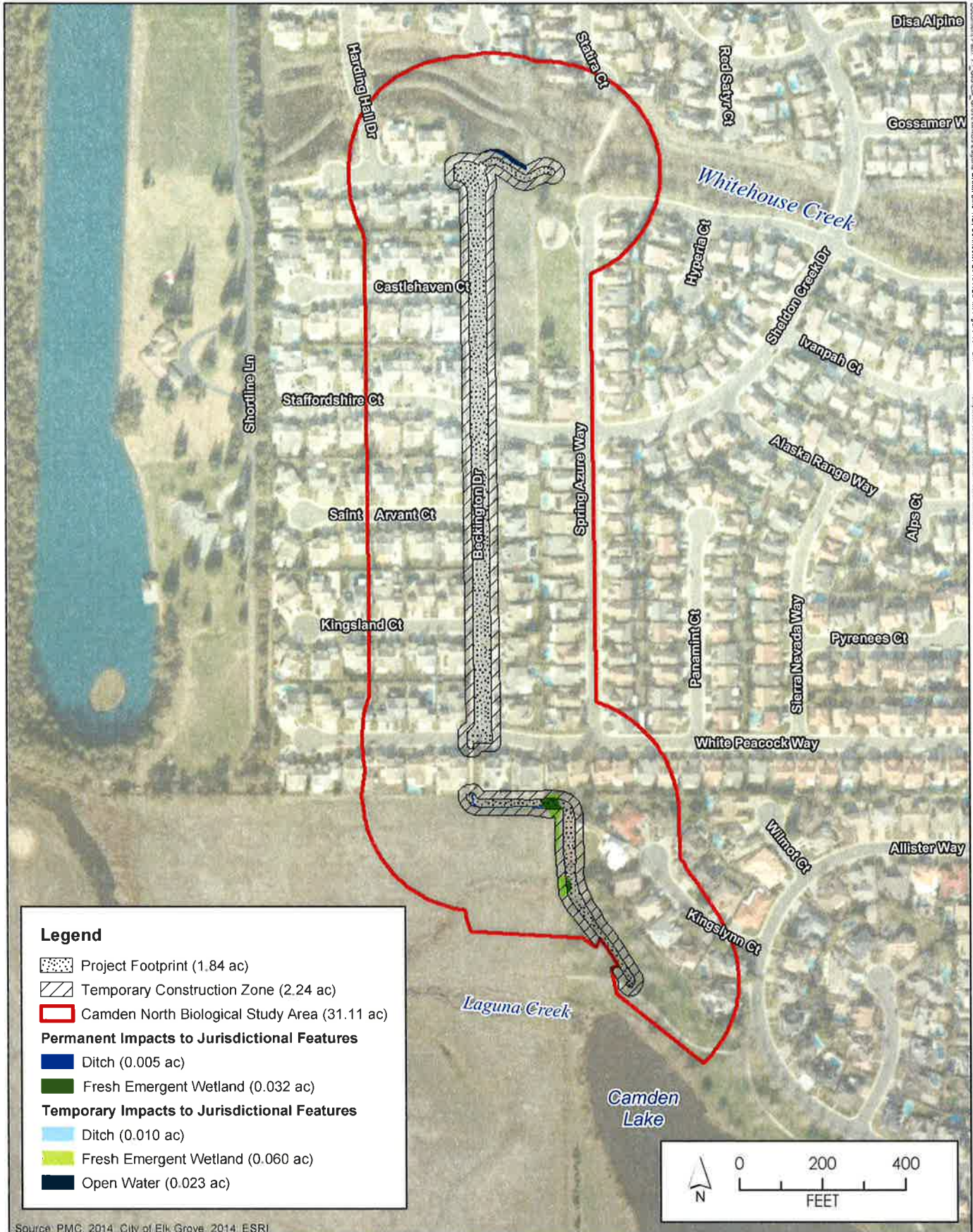


Figure 10
Jurisdictional Feature Impacts

Compensatory Mitigation

Temporary impacts to jurisdictional features shall be offset through the implementation of **BIO-6** above. Permanent impacts shall be offset through the following compensatory mitigation.

- For the 0.032 acre of Laguna Creek permanently affected by the proposed project, the City shall replace the affected acreage at a 2:1 ratio (i.e., 2 acres for every 1 acre of impact), or another approved ratio as determined by the USACE. Impacts shall be offset through the dedication of 0.064 shaded riverine aquatic mitigation credit(s) within a USACE-approved mitigation bank or through the payment of in-lieu fees to an approved conservation bank.
- For the 0.005 acre of man-made ditch permanently affected by the proposed project, the City shall replace the affected acreage at a 1:1 ratio, or another approved ratio as determined by the USACE. Impacts may be offset through the restoration and relocation of the ditch within the project area, through the dedication of mitigation credit(s) within a USACE-approved mitigation bank, or through the payment of in-lieu fees to an approved conservation bank.

Cumulative Impacts

No current or foreseeable actions will contribute to the cumulative effect on jurisdictional features within the BSA. Although there will be some permanent impacts to jurisdictional features due to the proposed project, these features already exhibit signs of degradation due to human intrusion and adjacent development. Permanent impacts will be mitigated through implementation of the above compensatory mitigation strategy; therefore, no cumulative impacts to jurisdictional features are anticipated.

Special-Status Plant Species

Eleven special-status plant species were identified as having the potential to occur within the BSA: bristly sedge, Bolander's water-hemlock, Peruvian dodder, dwarf downingia, woolly rose mallow, legenere, Mason's lilaeopsis, Sanford's arrowhead, marsh skullcap, side-flowering skullcap, and saline clover. These species are discussed further below, which includes a discussion of the extent of known and/or potential habitat within the BSA, potential impacts to the species from the construction of the proposed project, recommended measures to avoid, minimize, and mitigate for project-related impacts, and the cumulative effects the proposed project will have on the continued existence of the species. According to the results of the database searches, surveys, or historic records, no other special-status plant species have potential to occur within the BSA.

DISCUSSION OF "SPECIAL-STATUS PLANTS"

Survey Results

A rare plant survey was conducted on May 6, 2011, by a PMC biologist in accordance with the General Rare Plant Survey Guidelines (USFWS 2002) and the Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (CDFW 2000) to evaluate the presence or absence of

rare plants within the BSA. A summary memo presenting the findings of this survey is provided in **Appendix C**.

Transects were systematically walked across the BSA to detect presence of rare plant species. When potential special-status plant species were observed, their presence was recorded on a Trimble Geo XT. If the species was growing in a large clump, the numbers of individual plants were estimated. Locations of rare plants recorded in the field were then overlaid on an aerial photograph of the BSA.

Two individuals were identified in Laguna Creek that were indiscernible between the more common water plantain and Sanford's arrowhead due to a lack of inflorescences. The plants were found adjacent to the water's edge with common cattail and bulrush. If these plants are Sanford's arrowhead, based on engineering provided, the proposed project would avoid the low-water channel where these plants occur and no impact would occur to these plants.

No other special-status plant species were identified during this survey effort; however, suitable habitat exists within the BSA for all eleven special-status plant species.

Project Impacts

If any special-status plants are present within the project footprint and/or TCZ, individuals may be directly impacted by trampling, compaction, or removal. These species are generally associated with fresh emergent wetland or annual grassland habitats. The proposed project would result in 0.032 acre of permanent and 0.060 acre of temporary impact to fresh emergent wetland associated with Laguna Creek, and 0.023 acre of temporary impact to open water associated with Whitehouse Creek. In addition, 0.194 acre of temporary impact and 0.081 acre of permanent impact to annual grassland habitats that may support special-status plants are anticipated due to project construction.

Avoidance and Minimization Efforts

The following protective measures and **BIO-1** and **BIO-6** are recommended to minimize impacts to special-status plants during construction:

BIO-7: Prior to any vegetation removal or ground-disturbing activities, focused surveys shall be conducted to determine if special-status plants occur within the project footprint and/or TCZ. Surveys shall be conducted in accordance with CDFW Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities (CDFW 2009). These guidelines require rare plant surveys to be conducted at the proper time of year when rare or endangered species are both "evident" and identifiable. Surveys shall be scheduled to coincide with known blooming periods, and/or during periods of physiological development that are necessary to identify the plant species of concern. If no special-status plant species are found, then the project will not have any impacts to the species and no additional mitigation measures are necessary.

BIO-8: If special-status species are located within the BSA but outside the project footprint, then the plants shall be avoided by installing protective fencing and warning construction personnel of their presence.

BIO-9: If special-status plants are present within the BSA, a Worker Environmental Awareness Program (WEAP) shall be implemented to educate construction workers about the presence of special-status plant species in and/or near the project work area and to instruct them on proper avoidance.

Compensatory Mitigation

If any of the species are found onsite and cannot be avoided, the City shall consult with the USFWS and/or CDFW, as applicable, to determine appropriate mitigation for special-status plants, which may include but is not limited to the following measures:

- Salvage portions of the habitat or plant populations that will be lost as a result of implementation of the proposed project.
- Transplant the plants that would be adversely affected by the proposed project for either re-establishment after construction is complete or for planting in a new area, in appropriate habitat.
- Develop a propagation program for the salvage and transfer of rare, threatened, or endangered plant populations from the project site before the initiation of construction activities.
- Qualified biologists shall be involved in the propagation and transport of rare, threatened, or endangered plant species. (Note: Propagation methods for the salvaged plant population must be developed on a case-by-case basis and must include the involvement of local conservation easements, preserves, and/or open space, where applicable). The propagation and transfer of individual plant species must be performed at the correct time of year and successfully completed before the project's construction activities eliminate or disturb the plants and habitats of concern.

Cumulative Impacts

The avoidance and minimization measures in addition to the compensatory mitigation would effectively mitigate any potential impacts to special-status plant species and, therefore, would not substantially contribute to cumulative impacts to special-status plant species.

Special-Status Animal Species Occurrences

Based on the results of the literature review and habitat assessment, thirteen special-status wildlife species have the potential to occur in the vicinity of the BSA: valley elderberry longhorn beetle, western pond turtle, giant garter snake, tricolored blackbird, grasshopper sparrow, western burrowing owl, Swainson's hawk, northern harrier, white-tailed kite, least bittern, song sparrow, yellow-headed blackbird, and western red bat. Individual discussions of these species or guilds are presented below. The following discussions detail the extent of known and/or potential habitat within the BSA, potential impacts to these species from the construction of the proposed project, recommended measures to avoid, minimize, and mitigate for project-related impacts, and the cumulative effects the proposed project will have on the continued existence of these species.

According to the results of the database searches, surveys, or historic records, no other special-status wildlife species have potential to occur within the BSA.

DISCUSSION OF "VALLEY ELDERBERRY LONGHORN BEETLE"

Survey Results

Protocol-level surveys for valley elderberry longhorn beetle were completed within a 100-foot buffer of the project footprint in April and May of 2010, in accordance with USFWS (1999a) Conservation Guidelines for the Valley Elderberry Longhorn Beetle. USFWS requires that a minimum setback of 20 feet be maintained from the dripline of each elderberry plant. USFWS also requires that the area within 100 feet of the project footprint be restored and/or protected during and after construction. Therefore, all shrubs or clumps within the project footprint and within a 100-foot buffer of the project footprint were surveyed. The survey conducted by PMC biologists identified one elderberry shrub in the BSA.

Project Impacts

The project will result in direct impacts to one elderberry shrub. Direct impacts were calculated by identifying all elderberry shrubs within the limits of construction and a 20-foot buffer of the limits of construction. Minimization ratios provided by the USFWS (1999a) are based on the number of stems potentially impacted by a project, presence of exit holes, and association with riparian or non-riparian habitat. The one shrub identified contained one stem, measuring 1 inch in diameter at ground level. No exit holes were observed, and the shrub is associated with the Whitehouse Creek riparian corridor.

Avoidance and Minimization Efforts

Only one elderberry shrub was identified in the BSA, which will be removed during project construction. No elderberry shrubs will be indirectly affected (i.e., remain during project construction); therefore, no avoidance and minimization measures are proposed.

Compensatory Mitigation

The following compensatory mitigation is proposed to offset impacts to one elderberry shrub:

- Replace the loss of one elderberry shrub/stem at a 2:1 ratio through the dedication of mitigation credit(s) within a USFWS-approved mitigation bank, or through the payment of in-lieu fees to an approved valley elderberry longhorn beetle conservation bank that results in two conservation plantings of elderberry seedlings.
- Associated native species plantings shall be offset at 1:1 ratio through the dedication of mitigation credit(s) within a USFWS-approved mitigation bank, or through the payment of in-lieu fees to an approved valley elderberry longhorn beetle conservation bank that results in two conservation plantings of native associates.

The above mitigation ratios were derived from the USFWS (1999a) Conservation Guidelines for the Valley Elderberry Longhorn Beetle.

Cumulative Impacts

Implementation of the mitigation strategy outlined above will ensure that the loss of valley elderberry longhorn beetle habitat is fully compensated for; therefore, the project will not substantially contribute to cumulative impacts to this species.

DISCUSSION OF "WESTERN POND TURTLE"

Survey Results

Western pond turtle is a California species of special concern. It prefers slow-water aquatic habitat with terrestrial and aquatic basking sites, and requires upland egg-laying sites with a high-clay or silt fraction in the vicinity of the aquatic site. The aquatic habitats of the Whitehouse Creek, Camden Lake, and Laguna Creek within the BSA provide suitable habitat for this species.

Project Impacts

The proposed project will result in 0.032 acre of permanent impact and 0.060 acre of temporary impact to fresh emergent wetland habitat within Laguna Creek, as well as 0.023 acre of temporary impact to open water habitat within Whitehouse Creek. In addition, the proposed project will result in 0.081 acre of permanent impact and 0.194 acre of temporary impact to annual grasslands adjacent to Laguna Creek and Camden Lake that may provide suitable over-wintering and nesting habitat for the species.

Indirect impacts occur for a number of reasons, though primarily through increased human/wildlife interactions, habitat fragmentation, encroachment by exotic weeds, and area-wide changes in surface water flows due to development of previously undeveloped areas. The proposed project will be traveled with pedestrians, increasing the amount and severity of indirect impacts to this species and its habitat in the BSA.

Avoidance and Minimization Efforts

To avoid and minimize impacts to potential western pond turtle, the following measure is recommended, as well as **BIO-1**, **BIO-9** (WEAP to include discussion regarding western pond turtle), and **BIO-11** (below).

BIO-10: A preconstruction survey for western pond turtle shall be conducted within 24 hours of the onset of construction activities adjacent to Laguna Creek, Camden Lake, and/or Whitehouse Creek. The survey area shall include a 100-foot buffer of the area to be affected. If juvenile or adult turtles are found within the survey area, the individuals should be moved at least 500 feet downstream in suitable habitat. If a turtle nest is found within the survey area, construction activities should not take place within 100 feet of the nest until the turtles have hatched, or the eggs have been moved to an appropriate location.

Compensatory Mitigation

The avoidance and minimization measures outlined above are sufficient to compensate for potential impacts to western pond turtle. In addition, the re-vegetation of temporary construction areas, per **BIO-6**, would minimize adverse effects to this species' habitat.

Cumulative Impacts

It is not anticipated that construction of the proposed project will substantially contribute to cumulative impacts to the western pond turtle. If this species is present and the avoidance and minimization measures listed above are completed, adverse effects to individuals and their habitat will be limited and will therefore not result in any cumulative impacts.

DISCUSSION OF "GIANT GARTER SNAKE"

Survey Results

Giant garter snake is federally and state-listed as threatened. The giant garter snake inhabits marshes, sloughs, ponds, small lakes, low gradient streams, other waterways, agricultural wetlands, such as irrigation and drainage canals and rice fields, and the adjacent uplands (USFWS 1999b). Essential habitat components consist of:

- Adequate water during the snake's active period (i.e., early spring through mid-fall) to provide a prey base and cover;
- Emergent, herbaceous wetland vegetation, such as cattails and bulrushes, for escape cover and foraging habitat;
- Upland habitat for basking, cover, and retreat sites; and
- Higher elevation uplands for cover and refuge from floodwaters.

Potentially suitable aquatic habitat for giant garter snake is present within Laguna Creek and Whitehouse Creek. All undeveloped communities within 200 feet of aquatic habitat are considered potentially suitable upland habitat (USFWS 1999b). The closest occurrence (#169) of giant garter snake is ± 3.4 miles southeast of the BSA (CDFW 2014e) and east of State Route 99 (SR 99). This occurrence is located near Elk Grove Creek, which is separated from the Laguna Creek/Whitehouse Creek by extensive development. No aquatic features containing the essential habitat components connect Laguna Creek and Elk Grove Creek, east of SR 99.

The closest extant occurrence (#198) on Laguna Creek is located approximately 5.4 river miles west of the BSA, near the Sacramento County Wastewater Treatment Plant (**Figure 11**). There are two possibly extirpated occurrences (#14 and #84) on Laguna Creek just west of the BSA and SR 99. Due to the distance between the extant occurrence on Laguna Creek to the west and the presence of potential dispersal barriers (e.g., roads) between this occurrence and the BSA, as well as the lack of suitable dispersal habitat between the BSA and the extant occurrence near Elk Grove Creek, the presence of this species within the BSA is considered unlikely.

Project Impacts

The USFWS categorizes project impacts to the giant garter snake in three levels: 1, 2, and 3. It is anticipated that the proposed project would have Level 1 and Level 3 impacts to giant garter snake habitat. It is not anticipated that the project would have Level 2 impacts.

- Level 1 actions are minimal environmental effects. Examples of Level 1 actions include repair, rehabilitation, or replacement of existing structures where implementation of the project, including restoration of the temporarily disturbed areas, required one season to complete. The work will not result in any permanent loss of snake habitat, and the temporary disturbance area will not exceed 20 acres of snake habitat.
- Level 2 actions include activities such as repair, rehabilitation, or replacement of previously authorized structures where implementation of the project, including restoration of the temporarily disturbed area, requires two seasons to complete. The work will not result in any permanent loss of snake habitat and will not exceed 20 acres of temporary disturbance over two seasons.
- Level 3 actions include road crossings and bridge replacements or improvements that will result in the permanent loss of snake habitat that will not exceed 3 acres of snake aquatic and upland habitats, including no more than 1 acre of aquatic snake habitat, and temporary disturbances that will not exceed 20 acres of snake aquatic and upland habitats. Project with temporary disturbance to snake habitat that require more than two seasons to complete are also categorized as Level 3.

The proposed project will result in permanent and temporary impacts to suitable aquatic and upland habitat within the BSA (**Figure 12**). **Table 3** summarizes the anticipated impacts to giant garter snake habitat.

Table 3: Impacts to Giant Garter Snake Habitat

Habitat Type	Acres Permanently Impacted (Level 3)	Acres Temporarily Impacted (Level 1)
Aquatic	0.037	0.096
Upland	0.133	0.381
Total	0.17	0.477

Avoidance and Minimization Efforts

To avoid and minimize impacts to giant garter snake, the following measures are recommended, as well as **BIO-1** and **BIO-9** (WEAP to include discussion regarding giant garter snake).

BIO-11: The City will implement all of the minimization and avoidance measures found in Appendix C of the Programmatic Biological Opinion on Effects of Small Highway Projects on the Threatened Giant Garter Snake in Butte,

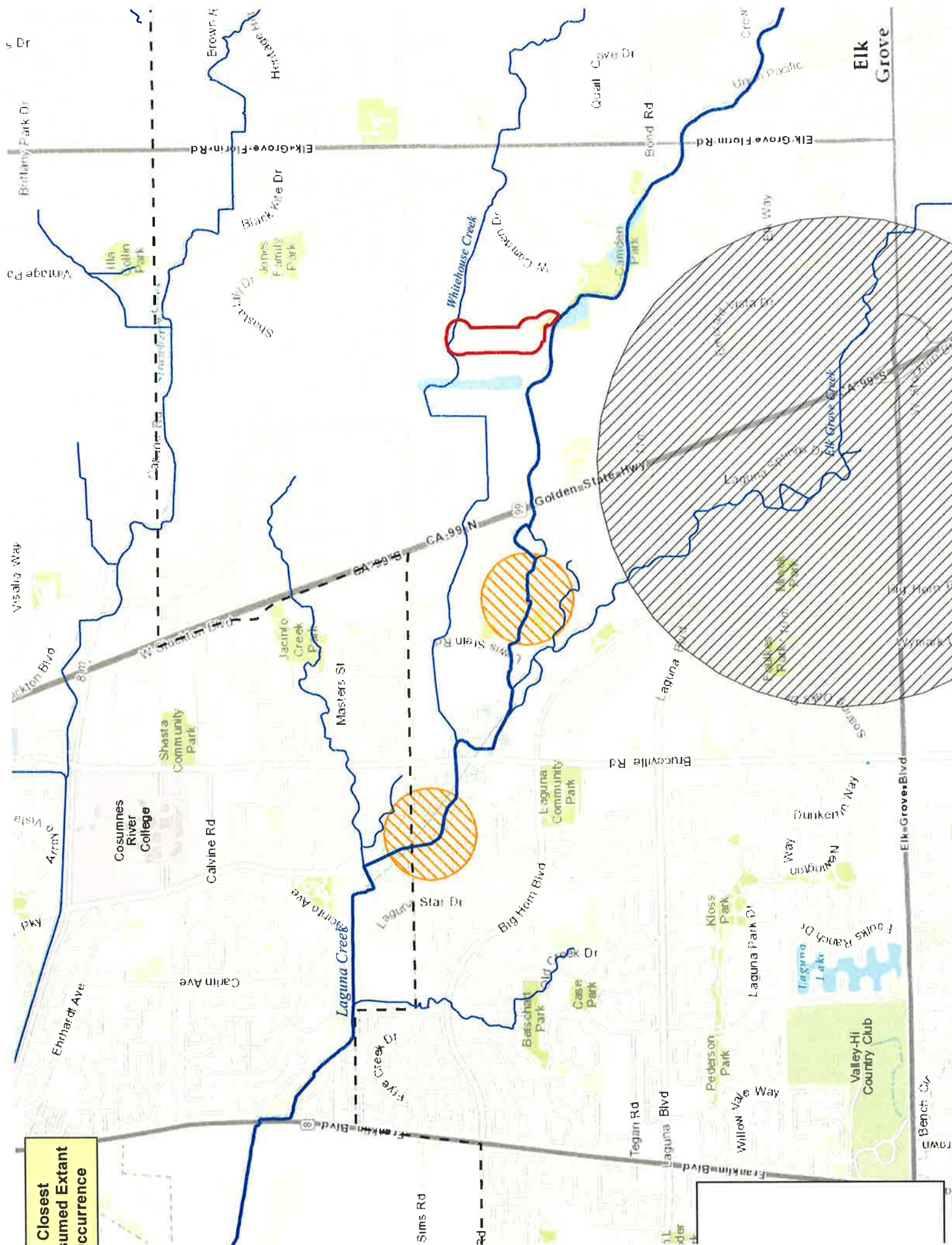
Colusa, Glenn, Sacramento, San Joaquin, Solano, Sutter, Yolo, and Yuba Counties, California (Service File #1-1-03-F-0154), except the restriction on construction only occurring between May 1 and October 1. See **BIO-12**.

- BIO-12:** During all phases of construction, snake exclusionary fencing will be installed between aquatic habitats and the TCZ. During the snake's active period (May 1–October 1), the exclusionary fencing will be located close to the OHWM of Laguna Creek, Camden Lake, and Whitehouse Creek to provide the construction crew room to maneuver heavy construction equipment within the TCZ. On or before October 1 (the end of the snake's active season), the exclusionary fencing will be moved up to the edge of the TCZ to minimize the potential for snakes to enter the construction area. All activities during the inactive season will only occur within the project footprint and the TCZ. The exclusionary fencing shall be maintained by the construction contractor during all phases of construction. Any breaches in the fencing shall be fixed within a 24-hour period.
- BIO-13:** If a snake is encountered within the project work area, the snake must be allowed to move away under its own volition.
- BIO-14:** The City or contractor will prohibit the use of plastic, monofilament, jute, or similar erosion control matting that could entangle snakes at the project site.
- BIO-15:** A survey shall be conducted for the giant garter snake within the project area 24 hours prior to the onset of construction and any time activities are halted for more than two weeks thereafter.

Compensatory Mitigation

In addition to the aforementioned avoidance and minimization, the following compensatory mitigation is proposed:

- After completion of construction activities, all temporary fill and construction debris shall be removed and 0.096 acre of aquatic and 0.381 acre of upland habitat shall be restored to pre-project conditions, in accordance with Appendix C of the Programmatic Biological Opinion on Effects of Small Highway Projects on the Threatened Giant Garter Snake in Butte, Colusa, Glenn, Sacramento, San Joaquin, Solano, Sutter, Yolo, and Yuba Counties, California (Service File #1-1-03-F-0154).
- For every acre of aquatic and upland giant garter snake habitat permanently affected by the proposed project, the City shall replace the affected acreage at a 3:1 ratio (i.e., 3 acres for every 1 acre of impact), or another approved ratio as determined by the USFWS. Impacts shall be offset through the dedication of 0.51 mitigation credits within a USFWS-approved giant garter snake mitigation bank.



**Closest
summed Extant
occurrence**

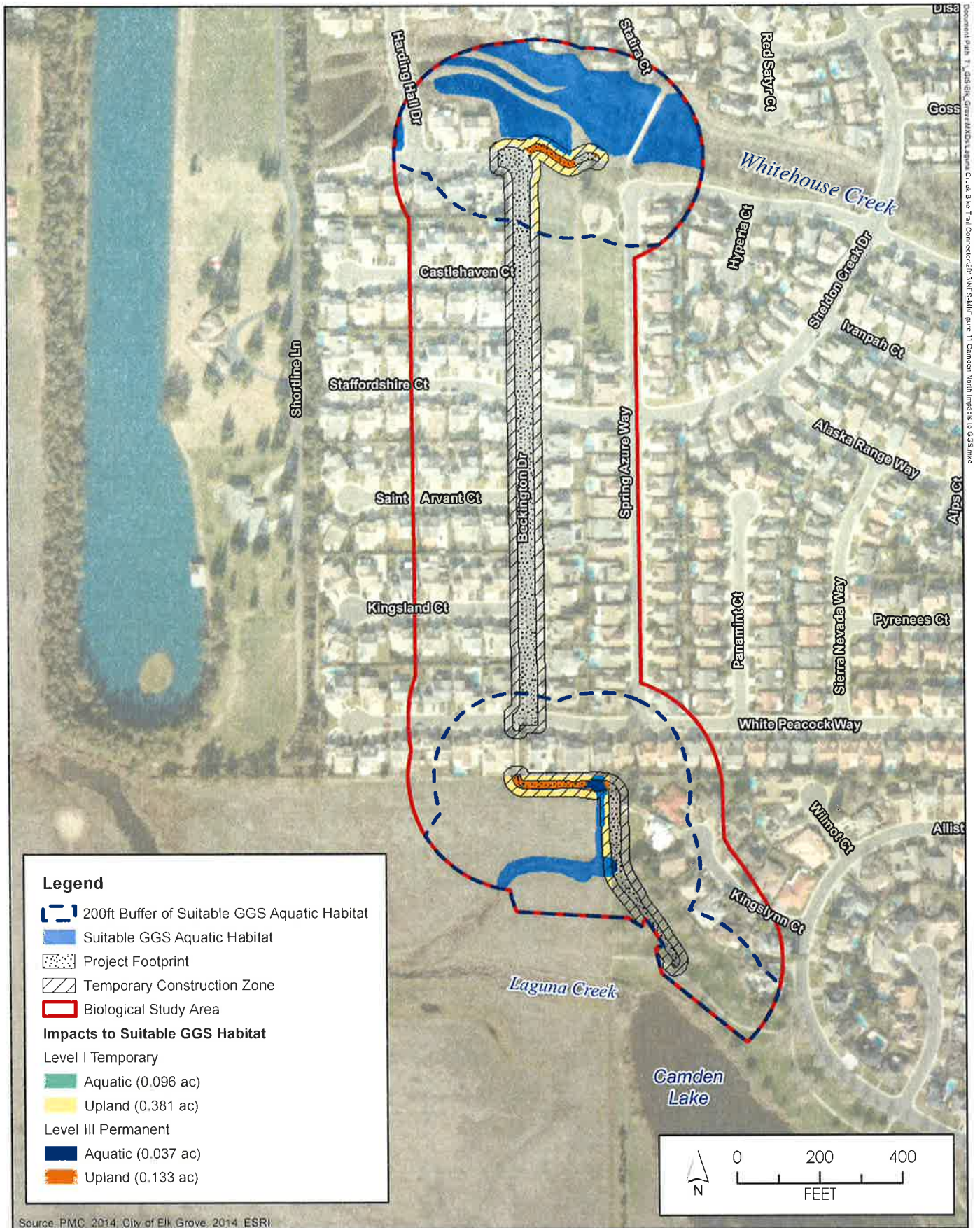


Figure 12
Impacts to Giant Garter Snake Habitat

Cumulative Impacts

If mitigation measures required by the USFWS are followed, the loss of giant garter snake habitat will be fully compensated, and the project will not substantially contribute to cumulative impacts to giant garter snake.

DISCUSSION OF "RAPTORS AND MIGRATORY BIRDS"

Survey Results

Various migratory birds and raptor species have the potential to inhabit the project vicinity. Tricolored blackbird, grasshopper sparrow, western burrowing owl, Swainson's hawk, northern harrier, white-tailed kite, and least bittern are afforded additional protection from state laws. Swainson's hawk is listed in California as a threatened species under CESA. The tricolored blackbird, grasshopper sparrow, western burrowing owl, northern harrier, least bittern, song sparrow, and yellow-headed blackbird are California species of special concern. The white-tailed kite is a California fully protected species. Some raptor and migratory bird species, such as red-tailed hawk, American kestrel, and oak titmouse, are not considered special-status species because they are not rare or protected under the ESA or CESA; however, the nests of all raptor species are protected under the MBTA and Section 3503.5 of the FGC. The nests of all migratory birds are protected under the MBTA, which makes it illegal to destroy any active migratory bird nest. The trees, shrubs, and grasslands found in the BSA and within the vicinity provide potential nesting habitat for raptors and migratory birds that occur in the region. In addition, the annual grasslands located within and adjacent to the BSA represent suitable foraging habitat for the Swainson's hawk and other raptor species, as well as suitable nesting habitat for western burrowing owl.

Project Impacts

If nesting migratory birds and/or raptors are present during project construction, the proposed project may cause direct mortality through impacts to habitats that contain active nests. Excessive noise, disturbance, and vibrations can cause nesting raptors and birds to abandon their nests. The loss of active nests or direct mortality is prohibited by the MBTA and FGC Section 3503.5. The proposed project could result in indirect impacts to migratory birds and raptors through habitat degradation and removal of trees/shrubs suitable for nesting, as well as from increased human presence.

In addition, the annual grassland habitats located in the southern portion of the BSA and adjacent lands could provide suitable foraging habitat for Swainson's hawk (**Figure 13**), as well as suitable nesting habitat for western burrowing owl. The proposed project would result in 0.194 acre of temporary impact and 0.081 acre of permanent impact to annual grassland habitats suitable for Swainson's hawk foraging.

Avoidance and Minimization Efforts

To avoid and minimize impacts to potential migratory birds and raptor species, the following measures are recommended, as well as **BIO-1** and **BIO-9** (WEAP to include discussion regarding migratory birds and raptors).

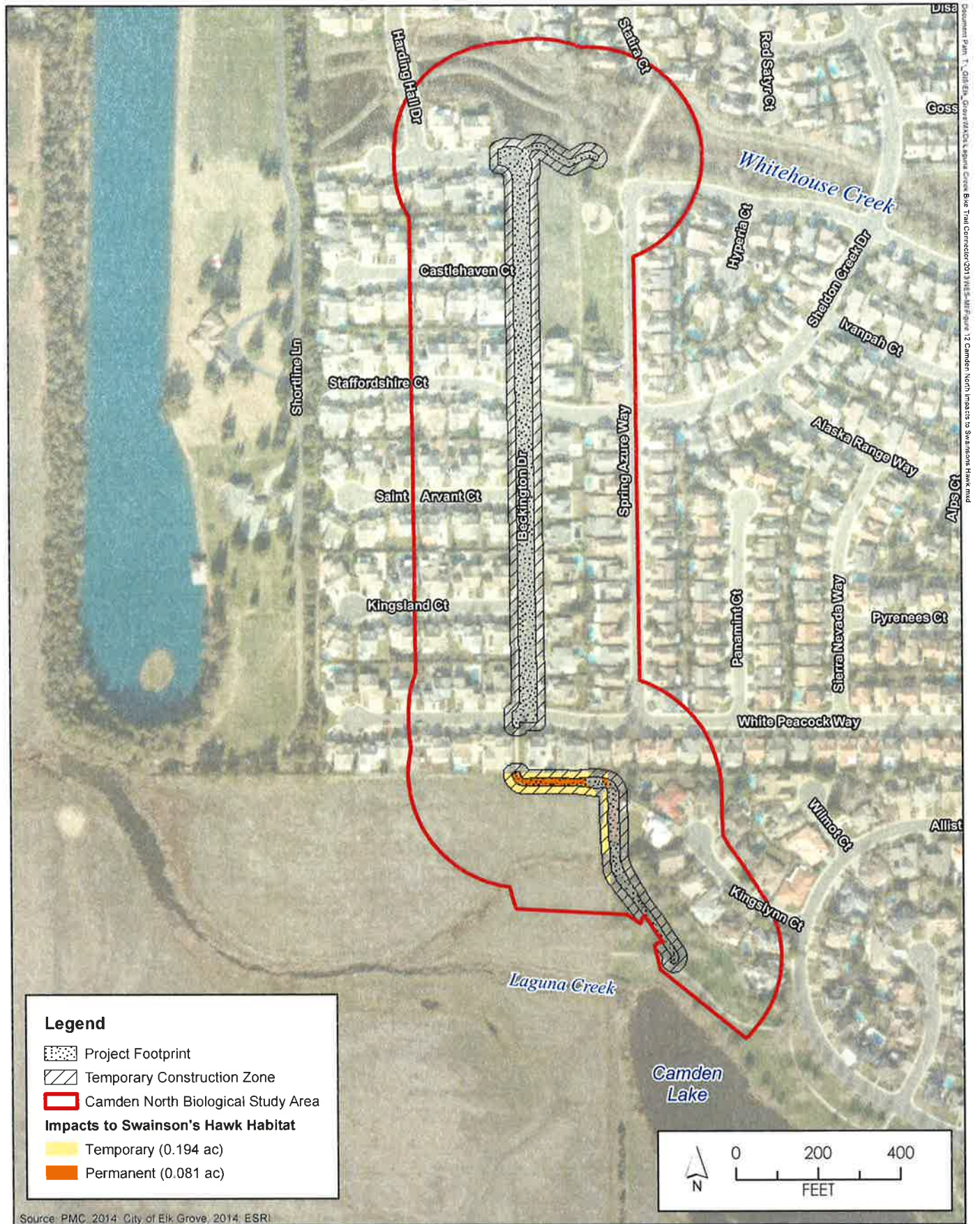
- BIO-16:** If clearing and/or construction activities would occur during the raptor nesting season (January 15–August 15), preconstruction surveys to identify active nests shall be conducted by a qualified biologist within 14 days of construction initiation. Surveys must be performed by a qualified biologist for the purposes of determining presence/absence of active nest sites within the proposed impact area, including construction access routes and a 250-foot buffer (if feasible). If no active nests are found, no further mitigation is required. Surveys shall be repeated if construction activities are delayed or postponed for more than 30 days.
- BIO-17:** If an active nest (excluding western burrowing owl) is located during preconstruction surveys, construction activities shall be restricted as necessary to avoid disturbance of the nest until it is abandoned or a qualified biologist deems disturbance potential to be minimal. Restrictions may include establishment of exclusion zones (no ingress of personnel or equipment at a minimum radius of 30 meters (100 feet) around an active raptor nest and a 15-meter (50-foot) radius around an active migratory bird nest) or alteration of the construction schedule. Activities permitted within exclusion zones and the size may be adjusted through consultation with the CDFW and/or the City.
- BIO-18:** Trees containing active migratory bird and/or raptor (excluding Swainson's hawk) nests that must be removed as a result of project implementation shall be removed during the non-breeding season (September 1–January 1). Swainson's hawks are state and federally listed as threatened species; therefore, impacts to Swainson's hawk nest trees require regulatory authorization from the CDFW prior to removal.
- BIO-19:** If no burrowing owls are detected, no further mitigation is required. If active burrowing owls are detected, the City shall implement the avoidance, minimization, and mitigation methodologies outlined in CDFW's (2012) Staff Report on Burrowing Owl Mitigation prior to initiating project-related activities that may impact burrowing owls.

Compensatory Mitigation

The City shall mitigate for the loss of 0.081 acre Swainson's hawk foraging habitat at a 1:1 ratio. Mitigation can be accomplished through the City of Elk Grove Swainson's Hawk Impact Mitigation Fees Ordinance or other method acceptable to the CDFW. No additional mitigation is proposed, as implementation of avoidance and minimization measures is sufficient to compensate for potential impacts to migratory birds and raptors.

Cumulative Impacts

Although potential foraging habitat could be directly impacted, annual grassland (foraging habitat) will be replaced to ensure no net loss. Therefore, it is not anticipated that construction of the proposed project will substantially contribute to cumulative impacts to migratory birds and raptors.



Document Path: I:\GIS\Elk_Grove\GIS\Map_Services\Creek_Bike_Trail_Connectors\2013\Map_Services\Figure_12_Camden_North_maps_to_Swainsons_Hawk.mxd
 Goss
 Alps Ct
 Allst

Figure 13

Impacts to Swainson's Hawk Foraging Habitat

DISCUSSION OF "SPECIAL-STATUS BAT SPECIES"

Survey Results

Bats, including western red bat, are known to occur in the vicinity of the BSA. These species are California species of special concern due to recent population declines. Habitat for bat species consists of foraging habitat, night-roosting cover, maternity roost sites, and winter hibernacula. These bat species may forage in a variety of habitats. In general, the CDFW is most concerned about the loss of maternity roosting sites. Suitable roosting sites within these habitats include caves, rock crevices, cliffs, buildings, tree bark, and snags. Potential maternity and night-roosting sites occur in snags, under bark, and in human structures (i.e., bridges) within the BSA.

Precautions must be taken to avoid the deliberate killing or injury of bats. The most common and effective method of avoiding these offenses is to carry out the work at an appropriate time of the year. The great majority of roosts are used only seasonally, so there is usually some period when bats are not present. Although there are differences between species, maternity sites are generally occupied between May and September and hibernation sites between October and March, depending on the weather. An adequate survey and good understanding of the seasonal activity patterns of the particular species involved will help in determining the optimum time to carry out the proposed work. The recommended times shown in **Table 4** should be modified in light of site-specific species information.

Table 4: Annual Bat Activity

Bat Usage of Site	Optimum Period for Carrying Out Work (Some Variation Between Species)
Maternity	October 1 – May 1
Summer (not a proven maternity site)	September 1 – May 1
Hibernation	May 1 – October 1
Mating/swarming	November 1 – August 1

Project Impacts

If maternity roost sites are located within the BSA during construction activities, the proposed project has the potential to directly and indirectly impact special-status bat species. Bats are at their most vulnerable in buildings or other roost sites during the summer, when large numbers may be gathered together and young bats, unable to fly, may be present. Removal of maternity roost sites may cause direct mortality of numerous bats. Noise and dust from construction could indirectly impact bat species during construction.

Avoidance and Minimization Efforts

To avoid and minimize impacts to potential special-status bat species the following measures are recommended, as well as **BIO-1** and **BIO-9** (WEAP to include discussion regarding special-status bat species).

- BIO-20:** Prior to the removal of any oak trees or buildings, a bat survey shall be performed by a qualified biologist between March 1 and July 31. If bat roosts are identified, the City shall require that the bats be safely flushed from the

sites where roosting habitat is planned to be removed prior to roosting season (typically May to August) and prior to the onset of construction activities. If maternity roosts are identified during the maternity roosting season (typically May to September) they must remain undisturbed until a qualified biologist has determined the young bats are no longer roosting. If roosting is found to occur onsite, replacement roost habitat (e.g., bat boxes) shall be provided to offset roosting sites removed. If no bat roosts are detected, then no further action is required if the trees and buildings are removed prior to the next breeding season. If removal is delayed, then an additional survey shall be conducted 30 days prior to removal to ensure that a new colony has not established itself.

BIO-21: If a female or maternity colony of bats are found on the project site, and the project can be constructed without the elimination or disturbance of the roosting colony (e.g., if the colony roosts in a large oak tree not planned for removal), a qualified biologist shall determine what buffer zones shall be employed to ensure the continued success of the colony. Such buffer zones may include a construction-free barrier of 200 feet from the roost and/or the timing of the construction activities outside of the maternity roost season (after July 31 and before March 1).

BIO-22: If an active nursery roost is documented onsite and the project cannot be conducted outside of the maternity roosting season, bats shall be excluded from the site after July 31 and before March 1 to prevent the formation of maternity colonies. Non-breeding bats shall be safely evicted, under the direction of a bat specialist.

Compensatory Mitigation

The avoidance and minimization measures outlined above are sufficient to compensate for potential impacts to special-status bats.

Cumulative Impacts

The proposed project is not anticipated to cause cumulative effects to special-status bat species since habitat loss is minimal and the implementation of mitigation measures will ensure that this species is avoided during construction.

Chapter 5 – Conclusions and Regulatory Determinations

Federal Endangered Species Act Consultation Summary

The US Congress passed the ESA in 1973 to protect those species that are endangered or threatened with extinction. The ESA is intended to operate in conjunction with NEPA to help protect the ecosystems upon which endangered and threatened species depend.

The ESA 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 [ESA 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 Section 222). Harass 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 Section 222). Actions that result in take can result in civil or criminal penalties.

The ESA directs all federal agencies to participate in endangered species conservation. Specifically, Section 7 of the ESA charges federal agencies to aid in the conservation of listed species [Section 7(a)(1)] and requires federal agencies to ensure that the actions they fund, authorize, permit, or otherwise carry out are not likely to jeopardize the continued existence of listed species or adversely modify designated critical habitats [Section 7(a)(2)].

In the context of the proposed project, ESA consultation with the USFWS would be initiated if development could result in take of a threatened or endangered species or adversely modify critical habitat of such a species. Consultation with the USFWS with regard to potential impacts to giant garter snake is anticipated. A Biological Assessment is being prepared to evaluate impacts to this species.

California Endangered Species Act Consultation Summary

The State of California enacted CESA in 1984. CESA is similar to the federal ESA but pertains to state-listed endangered and threatened species. CESA requires state agencies to consult with the CDFW when preparing CEQA documents. The purpose is to ensure that the state lead agency 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 (FGC Section 2080). CESA directs agencies to consult with the CDFW on projects or actions that could affect listed species, directs the CDFW to determine whether jeopardy would occur, and allows the CDFW to identify “reasonable and prudent alternatives” to the project consistent with conserving the species. CESA allows the CDFW 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 (FGC Section 2081). Consultation with the CDFW may be required in regard to giant garter snake, Swainson’s hawk, western burrowing owl, and special-status bat species. Additional consultation with the CDFW will be necessary if active migratory bird/raptor nests are identified prior to construction as having the potential to be impacted by construction activities.

Wetlands and Other Waters Coordination Summary

FEDERALLY JURISDICTIONAL WATERS

The USACE regulates discharge of dredged or fill material into WoUS under Section 404 of the CWA. "Discharges of fill material" is defined as the addition of fill material into WoUS, 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; or fill for intake and outfall pipes and subaqueous utility lines [33 CFR §328.2(f)]. In addition, Section 401 of the CWA (33 USC 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into WoUS to obtain a certification from the RWQCB that the discharge will comply with the applicable effluent limitations and water quality standards.

WoUS 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 CFR §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 OHWM [33 CFR §328.4(c)(1)]. The OHWM is defined by the USACE 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 CFR §328.3(e)].

Prior to construction of the proposed project the City will obtain CWA Section 401 and 404 permits from the RWQCB and USACE, respectively. The CWA permit that would be required is a nationwide permit 14 (linear transportation projects).

STATE JURISDICTIONAL WATERS

The CDFW is a trustee agency that has jurisdiction under Section 1600 et seq. of the FGC. Under Section 1602, a party must notify the CDFW 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 1602." If an existing fish or wildlife resource may be substantially adversely affected by the activity, the CDFW may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the party, they may enter into an agreement with the CDFW identifying the approved activities and associated mitigation measures. Prior to construction of the proposed project, the City shall obtain a Streambed Alteration Agreement from the CDFW.

Invasive Species

Executive Order 13112 directs all federal agencies to refrain from authorizing, funding, or carrying out actions or projects that may spread invasive species. The order further directs federal agencies to prevent the introduction of invasive species, control and monitor existing invasive species populations, restore native species to invaded ecosystems, research and develop prevention and control methods for invasive species, and promote public education on invasive species. The proposed action will comply with Executive Order 13112 as necessary.

Chapter 6 – References

- Bolster, B.C. 2010. A Status Review of the California Tiger Salamander (*Ambystoma californiense*). Nongame Wildlife Program Report 210-4; Sacramento, CA.
- Busby, P.J., T.C. Wainwright, G.J. Bryant, L.J. Lierheimer, R.S. Waples, F.W. Waknitz, and I.V. Lagomarsino. 1996. Status review of west coast steel head from Washington, Idaho, Oregon, and California. NOAA Technical Memorandum NMFS-NWFSC-27; Seattle, WA.
- California Department of Fish and Wildlife (CDFW). 2000. Guidelines for Assessing the Effects of Projects on Rare, Threatened, and Endangered Plants and Natural Communities (revision of 1983 guidelines). Sacramento, CA.
- . 2009. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities.
- . 2012. Staff Report on Burrowing Owl Mitigation.
- . 2014a. California Natural Diversity Database QuickView Tool in BIOS 5. Sacramento: CDFW Biogeographic Data Branch; Sacramento, CA. <https://map.dfg.ca.gov/bios/?tool=cnddbQuick>.
- . 2014b. A Guide to Wildlife Habitats of California (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. http://www.dfg.ca.gov/biogeodata/cwhr/wildlife_habitats.asp.
- . 2014c. BIOS 5 Viewer. Sacramento: CDFW Biogeographic Data Branch; Sacramento, CA. <https://map.dfg.ca.gov/bios/?bookmark=327>.
- . 2014d. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx>.
- . 2014e. California Natural Diversity Database – September 2 monthly update. CDFW Biogeographic Data Branch; Sacramento, CA.
- California Fish Website (CalFish). 2014. Hardhead (*Mylopharodon conocephalus*). UC Davis Division of Agriculture and Natural Resources; Davis, CA. <http://calfish.ucdavis.edu/species/?uid=37&ds=241#>.
- California Native Plant Society (CNPS). 2014. Inventory of Rare and Endangered Plants of California (online edition, v8-02). CNPS; Sacramento, CA. <http://www.rareplants.cnps.org>.
- City of Elk Grove. 2009. Elk Grove General Plan. http://www.egplanning.org/gp_zoning/general_plan.
- Environmental Laboratory. 1987. Corps of Engineers Wetland Delineation Manual. Technical Report Y-87-1. USACE Waterways Experiment Station; Vicksburg, MS.

- Hamilton, W. J. 2004. Tricolored Blackbird (*Agelaius tricolor*). In The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight.
- Laymon, S. A. 1998. Yellow-billed Cuckoo (*Coccyzus americanus*). In The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight. http://www.prbo.org/calpif/htmldocs/riparian_v-2.html.
- Moyle, P.B., R.M. Yoshiyama, J.E. Williams, and E.D. Wikramamayake. 1995. Fish Species of Special Concern in California, 2nd Ed. CDFG and UC Davis; Sacramento, CA.
- Myers, J.M, R.G. Kope, G.J. Bryant, D. Teel, L.J. Lierheimer, T.C Wainwright, W.S. Grant, F.W. Waknitz, K. Neely, S.T. Lindley, and R.S. Waples. 1998. Status review of Chinook salmon from Washington, Idaho, Oregon, and California. NOAA Technical Memorandum NMFS-NWFSC-35.
- Nafis, Gary. 2014. California Herps: A Guide to Reptiles and Amphibians of California. <http://www.californiaherps.com>.
- National Marine Fisheries Service (NMFS). 2005. Green Sturgeon (*Acipenser medirostris*) status review update. NMFS Southwest Fish Science Center; Santa Cruz, CA.
- Sacramento County, Planning and Community Development Department. 2006. Draft South Sacramento Habitat Conservation Plan Overview.
- Shuford, W.D. and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and CDFW, Sacramento, CA.
- U.S. Army Corps of Engineers (USACE). 2005. Ordinary High Water Mark Identification.
- . 2007. Jurisdictional Determination Form Instructional Guidebook. USACE and U.S. Environmental Protection Agency.
- . 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West (Version 2.0). Technical Report TR-08-28. USACE Research and Development Center; Vicksburg, MS.
- U.S. Department of Agriculture (USDA). 2014. Natural Resources Conservation Service (NRCS) Web Soil Survey 2.3. <http://websoilsurvey.nrcs.usda.gov/>.
- U.S. Fish and Wildlife Service (USFWS). 1996. Sacramento-San Joaquin Delta Native Fishes Recovery Plan. USFWS; Portland, OR.
- . 1999a. Conservation Guidelines for the Valley Elderberry Longhorn Beetle. USFWS; Sacramento, CA.

- . 1999b. Draft Recovery Plan for the Giant Garter Snake (*Thamnophis gigas*). USFWS; Sacramento, CA.
- . 2002. General Rare Plant Survey Guidelines. USFWS; Bakersfield, CA.
- . 2005. Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon. USFWS; Portland, OR.
- . 2006. California Least Tern 5-Year Review. USFWS; Carlsbad, CA.
- . 2012. Giant Garter Snake (*Thamnophis gigas*) 5-Year Review: Summary and Evaluation. USFWS; Sacramento, CA.
- . 2014a. Sacramento Fish & Wildlife Office Species Lists. http://www.fws.gov/sacramento/es_species/Lists/es_species_lists-form.cfm.
- . 2014b. Critical Habitat Portal. Accessed September. <http://ecos.fws.gov/>.

Appendix A – Database Search Results

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Federal Endangered and Threatened Species that Occur in
or may be Affected by Projects in the Counties and/or
U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 140625123349

Current as of: June 25, 2014

Quad Lists

Listed Species

Invertebrates

- Branchinecta conservatio*
Conservancy fairy shrimp (E)
- Branchinecta lynchi*
Critical habitat, vernal pool fairy shrimp (X)
vernal pool fairy shrimp (T)
- Desmocerus californicus dimorphus*
Critical habitat, valley elderberry longhorn beetle (X)
valley elderberry longhorn beetle (T)
- Elaphrus viridis*
delta green ground beetle (T)
- Lepidurus packardi*
Critical habitat, vernal pool tadpole shrimp (X)
vernal pool tadpole shrimp (E)

Fish

- Acipenser medirostris*
green sturgeon (T) (NMFS)
- Hypomesus transpacificus*
Critical habitat, delta smelt (X)
delta smelt (T)
- Oncorhynchus mykiss*
Central Valley steelhead (T) (NMFS)
Critical habitat, Central Valley steelhead (X) (NMFS)
- Oncorhynchus tshawytscha*
Central Valley spring-run chinook salmon (T) (NMFS)
Critical Habitat, Central Valley spring-run chinook (X) (NMFS)
Critical habitat, winter-run chinook salmon (X) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

- Ambystoma californiense*
California tiger salamander, central population (T)
- Rana draytonii*
California red-legged frog (T)

Reptiles

- Thamnophis gigas*
giant garter snake (T)

Birds

- Vireo bellii pusillus*
Least Bell's vireo (E)

Plants

Calystegia stebbinsii
Stebbins's morning-glory (E)

Castilleja campestris ssp. *succulenta*
succulent (=fleshy) owl's-clover (T)

Ceanothus roderickii
Pine Hill ceanothus (E)

Fremontodendron californicum ssp. *decumbens*
Pine Hill flannelbush (E)

Galium californicum ssp. *sierrae*
El Dorado bedstraw (E)

Orcuttia tenuis
Critical habitat, slender Orcutt grass (X)
slender Orcutt grass (T)

Orcuttia viscida
Critical habitat, Sacramento Orcutt grass (X)
Sacramento Orcutt grass (E)

Senecio layneae
Layne's butterweed (=ragwort) (T)

Quads Containing Listed, Proposed or Candidate Species:

ELK GROVE (496A)
FLORIN (496B)
BRUCEVILLE (496C)
GALT (496D)
COURTLAND (497D)
CLARKSVILLE (511A)
SACRAMENTO EAST (512C)
CARMICHAEL (512D)
SACRAMENTO WEST (513D)

County Lists

Sacramento County

Listed Species

Invertebrates

Apodemia mormo langei
Lange's metalmark butterfly (E)

Branchinecta conservatio
Conservancy fairy shrimp (E)

Branchinecta lynchi
Critical habitat, vernal pool fairy shrimp (X)
vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
Critical habitat, valley elderberry longhorn beetle (X)
valley elderberry longhorn beetle (T)

Elaphrus viridis
delta green ground beetle (T)

Lepidurus packardii

Critical habitat, vernal pool tadpole shrimp (X)
vernal pool tadpole shrimp (E)

Fish

Acipenser medirostris
green sturgeon (T) (NMFS)

Hypomesus transpacificus
Critical habitat, delta smelt (X)
delta smelt (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)
Critical habitat, Central Valley steelhead (X) (NMFS)

Oncorhynchus tshawytscha
Central Valley spring-run chinook salmon (T) (NMFS)
Critical Habitat, Central Valley spring-run chinook (X) (NMFS)
Critical habitat, winter-run chinook salmon (X) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)
Critical habitat, CA tiger salamander, central population (X)

Rana draytonii
California red-legged frog (T)

Reptiles

Thamnophis gigas
giant garter snake (T)

Birds

Charadrius alexandrinus nivosus
western snowy plover (T)

Rallus longirostris obsoletus
California clapper rail (E)

Sternula antillarum (=Sterna, =albifrons) browni
California least tern (E)

Vireo bellii pusillus
Least Bell's vireo (E)

Mammals

Reithrodontomys raviventris
salt marsh harvest mouse (E)

Sylvilagus bachmani riparius
riparian brush rabbit (E)

Vulpes macrotis mutica
San Joaquin kit fox (E)

Plants

Arctostaphylos myrtifolia
Ione manzanita (T)

Calystegia stebbinsii
Stebbins's morning-glory (E)

Castilleja campestris ssp. succulenta
Critical habitat, succulent (=fleshy) owl's-clover (X)
succulent (=fleshy) owl's-clover (T)

Ceanothus roderickii
Pine Hill ceanothus (E)

Cordylanthus mollis ssp. mollis
soft bird's-beak (E)

Cordylanthus palmatus
palmate-bracted bird's-beak (E)

Eriogonum apricum var. apricum
Ione buckwheat (E)

Eriogonum apricum var. prostratum
Irish Hill buckwheat (E)

Erysimum capitatum ssp. angustatum
Contra Costa wallflower (E)
Critical Habitat, Contra Costa wallflower (X)

Fremontodendron californicum ssp. decumbens
Pine Hill flannelbush (E)

Galium californicum ssp. sierrae
El Dorado bedstraw (E)

Lasthenia conjugens
Contra Costa goldfields (E)

Neostapfia colusana
Colusa grass (T)

Oenothera deltoides ssp. howellii
Antioch Dunes evening-primrose (E)
Critical habitat, Antioch Dunes evening-primrose (X)

Orcuttia tenuis
Critical habitat, slender Orcutt grass (X)

slender Orcutt grass (T)

Orcuttia viscida

Critical habitat, Sacramento Orcutt grass (X)

Sacramento Orcutt grass (E)

Senecio layneae

Layne's butterweed (=ragwort) (T)

Sidalcea keckii

Keck's checker-mallow (=checkerbloom) (E)

Candidate Species

Birds

Coccyzus americanus occidentalis

Western yellow-billed cuckoo (C)

Key:

(E) *Endangered* - Listed as being in danger of extinction.

(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.

(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.

(NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service.

Consult with them directly about these species.

Critical Habitat - Area essential to the conservation of a species.

(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.

(C) *Candidate* - Candidate to become a proposed species.

(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

(X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online [Inventory of Rare and Endangered Plants](#).

Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our [Protocol](#) and [Recovery Permits](#) pages.

For plant surveys, we recommend using the [Guidelines for Conducting and Reporting Botanical Inventories](#). The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal [consultation](#) with the Service.

During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our [Map Room](#) page.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. [More info](#)

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6520.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be September 23, 2014.

CNDDDB 9-Quad Species List 328 records.

Element Type	Scientific Name	Common Name	Element Code	Federal Status	State Status	CDFW Status	CA Rare Plant Rank	Quad Code	Quad Name	Data Status	Taxonomic Sort
Animals - Amphibians	Ambystoma californiense	California tiger salamander	AAAAA01180	Threatened	Threatened	SSC	-	3812133	Galt	Mapped and Unprocessed	Animals - Amphibians - Ambystomatidae - Ambystoma californiense
Animals - Amphibians	Spea hammondi	western spadefoot	AAABF02020	None	None	SSC	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Amphibians - Scaphiopodidae - Spea hammondi
Animals - Birds	Accipiter cooperii	Cooper's hawk	ABNKC12040	None	None	WL	-	3812144	Florin	Mapped	Animals - Birds - Accipitridae - Accipiter cooperii
Animals - Birds	Accipiter cooperii	Cooper's hawk	ABNKC12040	None	None	WL	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Birds - Accipitridae - Accipiter cooperii
Animals - Birds	Accipiter cooperii	Cooper's hawk	ABNKC12040	None	None	WL	-	3812154	Sacramento East	Mapped	Animals - Birds - Accipitridae - Accipiter cooperii
Animals - Birds	Accipiter cooperii	Cooper's hawk	ABNKC12040	None	None	WL	-	3812143	Elk Grove	Mapped	Animals - Birds - Accipitridae - Accipiter cooperii
Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP WL	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Birds - Accipitridae - Aquila chrysaetos
Animals - Birds	Buteo regalis	ferruginous hawk	ABNKC19120	None	None	WL	-	3812153	Carmichael	Mapped	Animals - Birds - Accipitridae - Buteo regalis
Animals - Birds	Buteo regalis	ferruginous hawk	ABNKC19120	None	None	WL	-	3812144	Florin	Mapped	Animals - Birds - Accipitridae - Buteo regalis
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812143	Elk Grove	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812135	Courtland	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812133	Galt	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812134	Bruceville	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812153	Carmichael	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812154	Sacramento East	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812144	Florin	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812145	Clarksburg	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Circus cyaneus	northern harrier	ABNKC11010	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Birds - Accipitridae - Circus cyaneus
Animals - Birds	Circus cyaneus	northern harrier	ABNKC11010	None	None	SSC	-	3812135	Courtland	Unprocessed	Animals - Birds - Accipitridae - Circus cyaneus
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812135	Courtland	Mapped and Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus

Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812144	Florin	Mapped and Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812143	Elk Grove	Mapped	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812133	Galt	Mapped	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812134	Bruceville	Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812154	Sacramento East	Mapped and Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3812153	Carmichael	Unprocessed	Animals - Birds - Accipitridae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3812134	Bruceville	Unprocessed	Animals - Birds - Accipitridae - Pandion haliaetus
Animals - Birds	Chaetura vauxi	Vaux's swift	ABNUA03020	None	None	SSC	-	3812153	Carmichael	Unprocessed	Animals - Birds - Apodidae - Chaetura vauxi
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3812133	Galt	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3812144	Florin	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3812135	Courtland	Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3812135	Courtland	Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3812144	Florin	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3812133	Galt	Mapped	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3812154	Sacramento East	Mapped	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Botaurus lentiginosus	American bittern	ABNGA01020	None	None	-	-	3812144	Florin	Unprocessed	Animals - Birds - Ardeidae - Botaurus lentiginosus

Animals - Birds	Egretta thula	snowy egret	ABNGA06030	None	None	-	-	3812144	Florin	Unprocessed	Animals - Birds - Ardeidae - Egretta thula
Animals - Birds	Egretta thula	snowy egret	ABNGA06030	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Birds - Ardeidae - Egretta thula
Animals - Birds	Ixobrychus exilis	least bittern	ABNGA02010	None	None	SSC	-	3812144	Florin	Unprocessed	Animals - Birds - Ardeidae - Ixobrychus exilis
Animals - Birds	Ixobrychus exilis	least bittern	ABNGA02010	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Ardeidae - Ixobrychus exilis
Animals - Birds	Nycticorax nycticorax	black-crowned night heron	ABNGA11010	None	None	-	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Ardeidae - Nycticorax nycticorax
Animals - Birds	Nycticorax nycticorax	black-crowned night heron	ABNGA11010	None	None	-	-	3812144	Florin	Mapped and Unprocessed	Animals - Birds - Ardeidae - Nycticorax nycticorax
Animals - Birds	Nycticorax nycticorax	black-crowned night heron	ABNGA11010	None	None	-	-	3812135	Courtland	Unprocessed	Animals - Birds - Ardeidae - Nycticorax nycticorax
Animals - Birds	Nycticorax nycticorax	black-crowned night heron	ABNGA11010	None	None	-	-	3812133	Galt	Mapped	Animals - Birds - Ardeidae - Nycticorax nycticorax
Animals - Birds	Cardinalis cardinalis	northern cardinal	ABPBX60010	None	None	WL	-	3812133	Galt	Unprocessed	Animals - Birds - Cardinalidae - Cardinalis cardinalis
Animals - Birds	Charadrius montanus	mountain plover	ABNNB03100	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Charadriidae - Charadrius montanus
Animals - Birds	Pica nuttalli	yellow-billed magpie	ABPAV09020	None	None	-	-	3812154	Sacramento East	Unprocessed	Animals - Birds - Corvidae - Pica nuttalli
Animals - Birds	Coccyzus americanus occidentalis	western yellow-billed cuckoo	ABNRB02022	Proposed Threatened	Endangered	-	-	3812145	Clarksburg	Mapped	Animals - Birds - Cuculidae - Coccyzus americanus occidentalis
Animals - Birds	Coccyzus americanus occidentalis	western yellow-billed cuckoo	ABNRB02022	Proposed Threatened	Endangered	-	-	3812134	Bruceville	Unprocessed	Animals - Birds - Cuculidae - Coccyzus americanus occidentalis
Animals - Birds	Ammodramus savannarum	grasshopper sparrow	ABPBXA0020	None	None	SSC	-	3812134	Bruceville	Unprocessed	Animals - Birds - Emberizidae - Ammodramus savannarum
Animals - Birds	Ammodramus savannarum	grasshopper sparrow	ABPBXA0020	None	None	SSC	-	3812144	Florin	Unprocessed	Animals - Birds - Emberizidae - Ammodramus savannarum
Animals - Birds	Ammodramus savannarum	grasshopper sparrow	ABPBXA0020	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Birds - Emberizidae - Ammodramus savannarum
Animals - Birds	Ammodramus savannarum	grasshopper sparrow	ABPBXA0020	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Emberizidae - Ammodramus savannarum
Animals - Birds	Ammodramus savannarum	grasshopper sparrow	ABPBXA0020	None	None	SSC	-	3812154	Sacramento East	Unprocessed	Animals - Birds - Emberizidae - Ammodramus savannarum
Animals - Birds	Chondestes grammacus	lark sparrow	ABPBX96010	None	None	-	-	3812154	Sacramento East	Unprocessed	Animals - Birds - Emberizidae - Chondestes grammacus

Animals - Birds	Chondestes grammacus	lark sparrow	ABPBX96010	None	None	-	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Emberizidae - Chondestes grammacus
Animals - Birds	Melospiza melodia	song sparrow (-inModesto-in population)	ABPBXA3010	None	None	SSC	-	3812155	Sacramento West	Mapped	Animals - Birds - Emberizidae - Melospiza melodia
Animals - Birds	Melospiza melodia	song sparrow (-inModesto-in population)	ABPBXA3010	None	None	SSC	-	3812154	Sacramento East	Mapped	Animals - Birds - Emberizidae - Melospiza melodia
Animals - Birds	Melospiza melodia	song sparrow (-inModesto-in population)	ABPBXA3010	None	None	SSC	-	3812145	Clarksburg	Mapped	Animals - Birds - Emberizidae - Melospiza melodia
Animals - Birds	Melospiza melodia	song sparrow (-inModesto-in population)	ABPBXA3010	None	None	SSC	-	3812144	Florin	Mapped	Animals - Birds - Emberizidae - Melospiza melodia
Animals - Birds	Melospiza melodia	song sparrow (-inModesto-in population)	ABPBXA3010	None	None	SSC	-	3812134	Bruceville	Mapped	Animals - Birds - Emberizidae - Melospiza melodia
Animals - Birds	Melospiza melodia	song sparrow (-inModesto-in population)	ABPBXA3010	None	None	SSC	-	3812135	Courtland	Mapped	Animals - Birds - Emberizidae - Melospiza melodia
Animals - Birds	Spizella breweri	Brewer's sparrow	ABPBX94040	None	None	-	-	3812154	Sacramento East	Unprocessed	Animals - Birds - Emberizidae - Spizella breweri
Animals - Birds	Spizella breweri	Brewer's sparrow	ABPBX94040	None	None	-	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Emberizidae - Spizella breweri
Animals - Birds	Falco columbarius	merlin	ABNKD06030	None	None	WL	-	3812144	Florin	Mapped	Animals - Birds - Falconidae - Falco columbarius
Animals - Birds	Falco mexicanus	prairie falcon	ABNKD06090	None	None	WL	-	3812154	Sacramento East	Unprocessed	Animals - Birds - Falconidae - Falco mexicanus
Animals - Birds	Falco mexicanus	prairie falcon	ABNKD06090	None	None	WL	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Falconidae - Falco mexicanus
Animals - Birds	Grus canadensis canadensis	lesser sandhill crane	ABNMK01011	None	None	SSC	-	3812134	Bruceville	Unprocessed	Animals - Birds - Gruidae - Grus canadensis canadensis
Animals - Birds	Grus canadensis tabida	greater sandhill crane	ABNMK01014	None	Threatened	FP	-	3812134	Bruceville	Unprocessed	Animals - Birds - Gruidae - Grus canadensis tabida
Animals - Birds	Grus canadensis tabida	greater sandhill crane	ABNMK01014	None	Threatened	FP	-	3812144	Florin	Unprocessed	Animals - Birds - Gruidae - Grus canadensis tabida
Animals - Birds	Progne subis	purple martin	ABPAU01010	None	None	SSC	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Birds - Hirundinidae - Progne subis
Animals - Birds	Progne subis	purple martin	ABPAU01010	None	None	SSC	-	3812154	Sacramento East	Mapped and Unprocessed	Animals - Birds - Hirundinidae - Progne subis
Animals - Birds	Riparia riparia	bank swallow	ABPAU08010	None	Threatened	-	-	3812154	Sacramento East	Mapped	Animals - Birds - Hirundinidae - Riparia riparia
Animals - Birds	Riparia riparia	bank swallow	ABPAU08010	None	Threatened	-	-	3812153	Carmichael	Mapped	Animals - Birds - Hirundinidae - Riparia riparia
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	None	SSC	-	3812153	Carmichael	Mapped	Animals - Birds - Icteridae - Agelaius tricolor

Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	None	SSC	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	None	SSC	-	3812144	Florin	Mapped and Unprocessed	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	None	SSC	-	3812143	Elk Grove	Mapped	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	None	SSC	-	3812135	Courtland	Unprocessed	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	None	SSC	-	3812134	Bruceville	Mapped and Unprocessed	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	None	SSC	-	3812133	Galt	Mapped and Unprocessed	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Xanthocephalus xanthocephalus	yellow-headed blackbird	ABPBXB3010	None	None	SSC	-	3812144	Florin	Mapped	Animals - Birds - Icteridae - Xanthocephalus xanthocephalus
Animals - Birds	Xanthocephalus xanthocephalus	yellow-headed blackbird	ABPBXB3010	None	None	SSC	-	3812145	Clarksburg	Mapped	Animals - Birds - Icteridae - Xanthocephalus xanthocephalus
Animals - Birds	Lanius ludovicianus	loggerhead shrike	ABPBR01030	None	None	SSC	-	3812144	Florin	Unprocessed	Animals - Birds - Laniidae - Lanius ludovicianus
Animals - Birds	Lanius ludovicianus	loggerhead shrike	ABPBR01030	None	None	SSC	-	3812134	Bruceville	Unprocessed	Animals - Birds - Laniidae - Lanius ludovicianus
Animals - Birds	Sternula antillarum browni	California least tern	ABNNM08103	Endangered	Endangered	FP	-	3812144	Florin	Unprocessed	Animals - Birds - Laridae - Sternula antillarum browni
Animals - Birds	Baeolophus inornatus	oak titmouse	ABPAW01100	None	None	-	-	3812144	Florin	Unprocessed	Animals - Birds - Paridae - Baeolophus inornatus
Animals - Birds	Dendroica occidentalis	hermit warbler	ABPBX03090	None	None	-	-	3812133	Galt	Unprocessed	Animals - Birds - Parulidae - Dendroica occidentalis
Animals - Birds	Dendroica petechia brewsteri	yellow warbler	ABPBX03018	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Parulidae - Dendroica petechia brewsteri
Animals - Birds	Icteria virens	yellow-breasted chat	ABPBX24010	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Birds - Parulidae - Icteria virens
Animals - Birds	Phalacrocorax auritus	double-crested cormorant	ABNFD01020	None	None	WL	-	3812134	Bruceville	Unprocessed	Animals - Birds - Phalacrocoracidae - Phalacrocorax auritus
Animals - Birds	Phalacrocorax auritus	double-crested cormorant	ABNFD01020	None	None	WL	-	3812144	Florin	Mapped and Unprocessed	Animals - Birds - Phalacrocoracidae - Phalacrocorax auritus
Animals - Birds	Picoides nuttallii	Nuttall's woodpecker	ABNYF07020	None	None	-	-	3812144	Florin	Unprocessed	Animals - Birds - Picidae - Picoides nuttallii
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812154	Sacramento East	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia

Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812144	Florin	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812143	Elk Grove	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812134	Bruceville	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812133	Galt	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Plegadis chihi	white-faced ibis	ABNGE02020	None	None	WL	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Threskiornithidae - Plegadis chihi
Animals - Birds	Vireo bellii pusillus	least Bell's vireo	ABPBW01114	Endangered	Endangered	-	-	3812155	Sacramento West	Mapped	Animals - Birds - Vireonidae - Vireo bellii pusillus
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812154	Sacramento East	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812144	Florin	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812145	Clarksburg	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812133	Galt	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812134	Bruceville	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812143	Elk Grove	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812135	Courtland	Mapped	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta mesovallensis	midvalley fairy shrimp	ICBRA03150	None	None	-	-	3812143	Elk Grove	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta mesovallensis
Animals - Crustaceans	Branchinecta mesovallensis	midvalley fairy shrimp	ICBRA03150	None	None	-	-	3812133	Galt	Mapped	Animals - Crustaceans - Branchinectidae - Branchinecta mesovallensis
Animals - Crustaceans	Branchinecta mesovallensis	midvalley fairy shrimp	ICBRA03150	None	None	-	-	3812144	Florin	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta mesovallensis

Animals - Crustaceans	Branchinecta mesovalleensis	midvalley fairy shrimp	ICBRA03150	None	None	-	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta mesovalleensis
Animals - Crustaceans	Dumontia oregonensis	hairy water flea	ICBRA23010	None	None	-	-	3812153	Carmichael	Mapped	Animals - Crustaceans - Dumontiidae - Dumontia oregonensis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3812154	Sacramento East	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3812144	Florin	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3812145	Clarksburg	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3812133	Galt	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3812134	Bruceville	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3812143	Elk Grove	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3812135	Courtland	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3812143	Elk Grove	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3812134	Bruceville	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3812133	Galt	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3812145	Clarksburg	Mapped	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3812144	Florin	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi

Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3812154	Sacramento East	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Fish	Acipenser transmontanus	white sturgeon	AFCAA01050	None	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Acipenseridae - Acipenser transmontanus
Animals - Fish	Archoplites interruptus	Sacramento perch	AFCQB07010	None	None	SSC	-	3812155	Sacramento West	Mapped	Animals - Fish - Centrarchidae - Archoplites interruptus
Animals - Fish	Lavinia exilicauda exilicauda	Central Valley hitch	AFCJB19012	None	None	-	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Cyprinidae - Lavinia exilicauda exilicauda
Animals - Fish	Lavinia exilicauda exilicauda	Central Valley hitch	AFCJB19012	None	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Cyprinidae - Lavinia exilicauda exilicauda
Animals - Fish	Lavinia exilicauda exilicauda	Central Valley hitch	AFCJB19012	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Fish - Cyprinidae - Lavinia exilicauda exilicauda
Animals - Fish	Mylopharodon conocephalus	hardhead	AFCJB25010	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Cyprinidae - Mylopharodon conocephalus
Animals - Fish	Mylopharodon conocephalus	hardhead	AFCJB25010	None	None	SSC	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Cyprinidae - Mylopharodon conocephalus
Animals - Fish	Mylopharodon conocephalus	hardhead	AFCJB25010	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Cyprinidae - Mylopharodon conocephalus
Animals - Fish	Pogonichthys macrolepidotus	Sacramento splittail	AFCJB34020	None	None	SSC	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Fish - Cyprinidae - Pogonichthys macrolepidotus
Animals - Fish	Pogonichthys macrolepidotus	Sacramento splittail	AFCJB34020	None	None	SSC	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Cyprinidae - Pogonichthys macrolepidotus
Animals - Fish	Pogonichthys macrolepidotus	Sacramento splittail	AFCJB34020	None	None	SSC	-	3812145	Clarksburg	Mapped and Unprocessed	Animals - Fish - Cyprinidae - Pogonichthys macrolepidotus
Animals - Fish	Pogonichthys macrolepidotus	Sacramento splittail	AFCJB34020	None	None	SSC	-	3812144	Florin	Mapped	Animals - Fish - Cyprinidae - Pogonichthys macrolepidotus
Animals - Fish	Pogonichthys macrolepidotus	Sacramento splittail	AFCJB34020	None	None	SSC	-	3812134	Bruceville	Unprocessed	Animals - Fish - Cyprinidae - Pogonichthys macrolepidotus
Animals - Fish	Pogonichthys macrolepidotus	Sacramento splittail	AFCJB34020	None	None	SSC	-	3812135	Courtland	Mapped and Unprocessed	Animals - Fish - Cyprinidae - Pogonichthys macrolepidotus
Animals - Fish	Hysteroecarpus traski traski	Sacramento-San Joaquin tule perch	AFCQK02012	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Fish - Embiotocidae - Hysteroecarpus traski traski
Animals - Fish	Hysteroecarpus traski traski	Sacramento-San Joaquin tule perch	AFCQK02012	None	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Embiotocidae - Hysteroecarpus traski traski

Animals - Fish	Hysterothorax traski	Sacramento-San Joaquin tule perch	AFCQK02012	None	None	-	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Embiotocidae - Hysterothorax traski
Animals - Fish	Hysterothorax traski	Sacramento-San Joaquin tule perch	AFCQK02012	None	None	-	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Embiotocidae - Hysterothorax traski
Animals - Fish	Hypomesus transpacificus	Delta smelt	AFCHB01040	Threatened	Endangered	-	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Osmeridae - Hypomesus transpacificus
Animals - Fish	Hypomesus transpacificus	Delta smelt	AFCHB01040	Threatened	Endangered	-	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Osmeridae - Hypomesus transpacificus
Animals - Fish	Hypomesus transpacificus	Delta smelt	AFCHB01040	Threatened	Endangered	-	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Osmeridae - Hypomesus transpacificus
Animals - Fish	Hypomesus transpacificus	Delta smelt	AFCHB01040	Threatened	Endangered	-	-	3812134	Bruceville	Unprocessed	Animals - Fish - Osmeridae - Hypomesus transpacificus
Animals - Fish	Hypomesus transpacificus	Delta smelt	AFCHB01040	Threatened	Endangered	-	-	3812135	Courtland	Unprocessed	Animals - Fish - Osmeridae - Hypomesus transpacificus
Animals - Fish	Spirinchus thaleichthys	longfin smelt	AFCHB03010	Candidate	Threatened	SSC	-	3812135	Courtland	Mapped	Animals - Fish - Osmeridae - Spirinchus thaleichthys
Animals - Fish	Spirinchus thaleichthys	longfin smelt	AFCHB03010	Candidate	Threatened	SSC	-	3812145	Clarksburg	Mapped	Animals - Fish - Osmeridae - Spirinchus thaleichthys
Animals - Fish	Spirinchus thaleichthys	longfin smelt	AFCHB03010	Candidate	Threatened	SSC	-	3812144	Florin	Mapped	Animals - Fish - Osmeridae - Spirinchus thaleichthys
Animals - Fish	Spirinchus thaleichthys	longfin smelt	AFCHB03010	Candidate	Threatened	SSC	-	3812155	Sacramento West	Mapped	Animals - Fish - Osmeridae - Spirinchus thaleichthys
Animals - Fish	Entosphenus tridentatus	Pacific lamprey	AFBAA02100	None	None	-	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Petromyzontidae - Entosphenus tridentatus
Animals - Fish	Entosphenus tridentatus	Pacific lamprey	AFBAA02100	None	None	-	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Petromyzontidae - Entosphenus tridentatus
Animals - Fish	Entosphenus tridentatus	Pacific lamprey	AFBAA02100	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Fish - Petromyzontidae - Entosphenus tridentatus
Animals - Fish	Lampetra ayresii	river lamprey	AFBAA02030	None	None	SSC	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Petromyzontidae - Lampetra ayresii
Animals - Fish	Lampetra ayresii	river lamprey	AFBAA02030	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Petromyzontidae - Lampetra ayresii
Animals - Fish	Lampetra ayresii	river lamprey	AFBAA02030	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Petromyzontidae - Lampetra ayresii
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - central California coast DPS	AFCHA0209G	Threatened	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812145	Clarksburg	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus

Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812144	Florin	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - central California coast DPS	AFCHA0209G	Threatened	None	-	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812154	Sacramento East	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812153	Carmichael	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812133	Galt	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812134	Bruceville	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812135	Courtland	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812143	Elk Grove	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - central California coast DPS	AFCHA0209G	Threatened	None	-	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812155	Sacramento West	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - spring-run Klamath-Trinity Rivers pop.	AFCHA02056	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley spring-run ESU	AFCHA0205A	Threatened	Threatened	-	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Sacramento River winter-run ESU	AFCHA0205B	Endangered	Endangered	-	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley fall / late fall-run ESU	AFCHA0205N	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - spring-run Klamath-Trinity Rivers pop.	AFCHA02056	None	None	SSC	-	3812135	Courtland	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley spring-run ESU	AFCHA0205A	Threatened	Threatened	-	-	3812135	Courtland	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha

Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Sacramento River winter-run ESU	AFCHA0205B	Endangered	Endangered	-	-	3812135	Courtland	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley fall / late fall-run ESU	AFCHA0205N	None	None	SSC	-	3812135	Courtland	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley fall / late fall-run ESU	AFCHA0205N	None	None	SSC	-	3812134	Bruceville	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley spring-run ESU	AFCHA0205A	Threatened	Threatened	-	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Sacramento River winter-run ESU	AFCHA0205B	Endangered	Endangered	-	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley fall / late fall-run ESU	AFCHA0205N	None	None	SSC	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - spring-run Klamath-Trinity Rivers pop.	AFCHA02056	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley spring-run ESU	AFCHA0205A	Threatened	Threatened	-	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Sacramento River winter-run ESU	AFCHA0205B	Endangered	Endangered	-	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley fall / late fall-run ESU	AFCHA0205N	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Insects	Cicindela hirticollis abrupta	Sacramento Valley tiger beetle	IICOL02106	None	None	-	-	3812155	Sacramento West	Mapped	Animals - Insects - Carabidae - Cicindela hirticollis abrupta
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3812154	Sacramento East	Mapped and Unprocessed	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus

Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3812133	Galt	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3812134	Bruceville	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3812135	Courtland	Unprocessed	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3812143	Elk Grove	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Hydrochara rickseckeri	Ricksecker's water scavenger beetle	IICOL5V010	None	None	-	-	3812134	Bruceville	Mapped	Animals - Insects - Hydrophilidae - Hydrochara rickseckeri
Animals - Insects	Hydrochara rickseckeri	Ricksecker's water scavenger beetle	IICOL5V010	None	None	-	-	3812153	Carmichael	Mapped	Animals - Insects - Hydrophilidae - Hydrochara rickseckeri
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3812153	Carmichael	Mapped	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3812154	Sacramento East	Mapped	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3812145	Clarksburg	Mapped	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3812144	Florin	Mapped and Unprocessed	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3812134	Bruceville	Mapped	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3812135	Courtland	Mapped	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Lasiurus blossevillii	western red bat	AMACC05060	None	None	SSC	-	3812135	Courtland	Unprocessed	Animals - Mammals - Vespertilionidae - Lasiurus blossevillii
Animals - Mammals	Lasiurus blossevillii	western red bat	AMACC05060	None	None	SSC	-	3812144	Florin	Unprocessed	Animals - Mammals - Vespertilionidae - Lasiurus blossevillii
Animals - Mammals	Lasiurus blossevillii	western red bat	AMACC05060	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Mammals - Vespertilionidae - Lasiurus blossevillii
Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05030	None	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Mammals - Vespertilionidae - Lasiurus cinereus

Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05030	None	None	-	-	3812144	Florin	Unprocessed	Animals - Mammals - Vespertilionidae - Lasiurus cinereus
Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05030	None	None	-	-	3812135	Courtland	Unprocessed	Animals - Mammals - Vespertilionidae - Lasiurus cinereus
Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05030	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Mammals - Vespertilionidae - Lasiurus cinereus
Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05030	None	None	-	-	3812155	Sacramento West	Mapped	Animals - Mammals - Vespertilionidae - Lasiurus cinereus
Animals - Mammals	Myotis ciliolabrum	western small-footed myotis	AMACC01140	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis ciliolabrum
Animals - Mammals	Myotis lucifugus	little brown bat	AMACC01010	None	None	-	-	3812135	Courtland	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis lucifugus
Animals - Mammals	Myotis lucifugus	little brown bat	AMACC01010	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis lucifugus
Animals - Mammals	Myotis lucifugus	little brown bat	AMACC01010	None	None	-	-	3812144	Florin	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis lucifugus
Animals - Mammals	Myotis lucifugus	little brown bat	AMACC01010	None	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis lucifugus
Animals - Mammals	Myotis yumanensis	Yuma myotis	AMACC01020	None	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis yumanensis
Animals - Mammals	Myotis yumanensis	Yuma myotis	AMACC01020	None	None	-	-	3812144	Florin	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis yumanensis
Animals - Mammals	Myotis yumanensis	Yuma myotis	AMACC01020	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis yumanensis
Animals - Mammals	Myotis yumanensis	Yuma myotis	AMACC01020	None	None	-	-	3812135	Courtland	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis yumanensis
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812135	Courtland	Mapped	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812143	Elk Grove	Mapped	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812134	Bruceville	Mapped	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812133	Galt	Mapped	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812144	Florin	Mapped	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata

Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812154	Sacramento East	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812153	Carmichael	Mapped	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Thamnophis gigas	giant garter snake	ARADB36150	Threatened	Threatened	-	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant garter snake	ARADB36150	Threatened	Threatened	-	-	3812145	Clarksburg	Unprocessed	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant garter snake	ARADB36150	Threatened	Threatened	-	-	3812144	Florin	Mapped	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant garter snake	ARADB36150	Threatened	Threatened	-	-	3812133	Galt	Mapped and Unprocessed	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant garter snake	ARADB36150	Threatened	Threatened	-	-	3812134	Bruceville	Mapped	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant garter snake	ARADB36150	Threatened	Threatened	-	-	3812143	Elk Grove	Mapped	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant garter snake	ARADB36150	Threatened	Threatened	-	-	3812135	Courtland	Mapped	Animals - Reptiles - Natricidae - Thamnophis gigas
Community - Terrestrial	Coastal and Valley Freshwater Marsh	Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	-	-	3812135	Courtland	Mapped	Community - Terrestrial - Coastal and Valley Freshwater Marsh
Community - Terrestrial	Coastal and Valley Freshwater Marsh	Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	-	-	3812134	Bruceville	Mapped	Community - Terrestrial - Coastal and Valley Freshwater Marsh
Community - Terrestrial	Elderberry Savanna	Elderberry Savanna	CTT63440CA	None	None	-	-	3812154	Sacramento East	Mapped	Community - Terrestrial - Elderberry Savanna
Community - Terrestrial	Elderberry Savanna	Elderberry Savanna	CTT63440CA	None	None	-	-	3812155	Sacramento West	Mapped	Community - Terrestrial - Elderberry Savanna
Community - Terrestrial	Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	-	-	3812155	Sacramento West	Mapped	Community - Terrestrial - Great Valley Cottonwood Riparian Forest
Community - Terrestrial	Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	CTT61420CA	None	None	-	-	3812134	Bruceville	Mapped	Community - Terrestrial - Great Valley Mixed Riparian Forest
Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3812134	Bruceville	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest
Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3812133	Galt	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest
Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3812143	Elk Grove	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest
Community - Terrestrial	Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	CTT44110CA	None	None	-	-	3812143	Elk Grove	Mapped	Community - Terrestrial - Northern Hardpan Vernal Pool
Community - Terrestrial	Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	CTT44110CA	None	None	-	-	3812133	Galt	Mapped	Community - Terrestrial - Northern Hardpan Vernal Pool

Community - Terrestrial	Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	CTT44110CA	None	None	-	-	3812134	Bruceville	Mapped	Community - Terrestrial - Northern Hardpan Vernal Pool
Community - Terrestrial	Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	CTT44110CA	None	None	-	-	3812153	Carmichael	Mapped	Community - Terrestrial - Northern Hardpan Vernal Pool
Community - Terrestrial	Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	CTT44110CA	None	None	-	-	3812144	Florin	Mapped	Community - Terrestrial - Northern Hardpan Vernal Pool
Community - Terrestrial	Valley Oak Woodland	Valley Oak Woodland	CTT71130CA	None	None	-	-	3812134	Bruceville	Mapped	Community - Terrestrial - Valley Oak Woodland
Community - Terrestrial	Valley Oak Woodland	Valley Oak Woodland	CTT71130CA	None	None	-	-	3812133	Galt	Mapped	Community - Terrestrial - Valley Oak Woodland
Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	None	None	-	1B.2	3812133	Galt	Mapped	Plants - Vascular - Alismataceae - Sagittaria sanfordii
Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	None	None	-	1B.2	3812135	Courtland	Mapped	Plants - Vascular - Alismataceae - Sagittaria sanfordii
Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	None	None	-	1B.2	3812143	Elk Grove	Mapped	Plants - Vascular - Alismataceae - Sagittaria sanfordii
Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	None	None	-	1B.2	3812134	Bruceville	Mapped	Plants - Vascular - Alismataceae - Sagittaria sanfordii
Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	None	None	-	1B.2	3812144	Florin	Mapped	Plants - Vascular - Alismataceae - Sagittaria sanfordii
Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	None	None	-	1B.2	3812153	Carmichael	Mapped	Plants - Vascular - Alismataceae - Sagittaria sanfordii
Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	None	None	-	1B.2	3812154	Sacramento East	Mapped	Plants - Vascular - Alismataceae - Sagittaria sanfordii
Plants - Vascular	Cicuta maculata var. bolanderi	Bolander's water-hemlock	PDAPI0M051	None	None	-	2B.1	3812135	Courtland	Mapped	Plants - Vascular - Apiaceae - Cicuta maculata var. bolanderi
Plants - Vascular	Cicuta maculata var. bolanderi	Bolander's water-hemlock	PDAPI0M051	None	None	-	2B.1	3812134	Bruceville	Mapped	Plants - Vascular - Apiaceae - Cicuta maculata var. bolanderi
Plants - Vascular	Lilaeopsis masonii	Mason's lilaeopsis	PDAPI19030	None	Rare	-	1B.1	3812134	Bruceville	Mapped	Plants - Vascular - Apiaceae - Lilaeopsis masonii
Plants - Vascular	Lilaeopsis masonii	Mason's lilaeopsis	PDAPI19030	None	Rare	-	1B.1	3812145	Clarksburg	Mapped	Plants - Vascular - Apiaceae - Lilaeopsis masonii
Plants - Vascular	Centromadia parryi ssp. rudis	Parry's rough tarplant	PDAST4R0P3	None	None	-	4.2	3812145	Clarksburg	Unprocessed	Plants - Vascular - Asteraceae - Centromadia parryi ssp. rudis
Plants - Vascular	Centromadia parryi ssp. rudis	Parry's rough tarplant	PDAST4R0P3	None	None	-	4.2	3812144	Florin	Unprocessed	Plants - Vascular - Asteraceae - Centromadia parryi ssp. rudis
Plants - Vascular	Centromadia parryi ssp. rudis	Parry's rough tarplant	PDAST4R0P3	None	None	-	4.2	3812134	Bruceville	Unprocessed	Plants - Vascular - Asteraceae - Centromadia parryi ssp. rudis
Plants - Vascular	Centromadia parryi ssp. rudis	Parry's rough tarplant	PDAST4R0P3	None	None	-	4.2	3812135	Courtland	Unprocessed	Plants - Vascular - Asteraceae - Centromadia parryi ssp. rudis
Plants - Vascular	Centromadia parryi ssp. rudis	Parry's rough tarplant	PDAST4R0P3	None	None	-	4.2	3812155	Sacramento West	Unprocessed	Plants - Vascular - Asteraceae - Centromadia parryi ssp. rudis

Plants - Vascular	Hesperivax caulescens	hogwallow starfish	PDASTE5020	None	None	-	4.2	3812144	Florin	Unprocessed	Plants - Vascular - Asteraceae - Hesperivax caulescens
Plants - Vascular	Lasthenia ferrisiae	Ferris' goldfields	PDAST5L070	None	None	-	4.2	3812134	Bruceville	Unprocessed	Plants - Vascular - Asteraceae - Lasthenia ferrisiae
Plants - Vascular	Symphotrichum lentum	Suisun Marsh aster	PDASTE8470	None	None	-	1B.2	3812155	Sacramento West	Mapped	Plants - Vascular - Asteraceae - Symphotrichum lentum
Plants - Vascular	Lepidium latipes var. heckardii	Heckard's peppergrass	PDBRA1M0K1	None	None	-	1B.2	3812144	Florin	Mapped	Plants - Vascular - Brassicaceae - Lepidium latipes var. heckardii
Plants - Vascular	Lepidium latipes var. heckardii	Heckard's peppergrass	PDBRA1M0K1	None	None	-	1B.2	3812145	Clarksburg	Mapped	Plants - Vascular - Brassicaceae - Lepidium latipes var. heckardii
Plants - Vascular	Brasenia schreberi	watershield	PDCAB01010	None	None	-	2B.3	3812134	Bruceville	Mapped	Plants - Vascular - Cabombaceae - Brasenia schreberi
Plants - Vascular	Brasenia schreberi	watershield	PDCAB01010	None	None	-	2B.3	3812135	Courtland	Mapped	Plants - Vascular - Cabombaceae - Brasenia schreberi
Plants - Vascular	Downingia pusilla	dwarf downingia	PDCAM060C0	None	None	-	2B.2	3812143	Elk Grove	Mapped	Plants - Vascular - Campanulaceae - Downingia pusilla
Plants - Vascular	Downingia pusilla	dwarf downingia	PDCAM060C0	None	None	-	2B.2	3812133	Galt	Mapped	Plants - Vascular - Campanulaceae - Downingia pusilla
Plants - Vascular	Downingia pusilla	dwarf downingia	PDCAM060C0	None	None	-	2B.2	3812144	Florin	Mapped	Plants - Vascular - Campanulaceae - Downingia pusilla
Plants - Vascular	Legenere limosa	legenere	PDCAM0C010	None	None	-	1B.1	3812144	Florin	Mapped	Plants - Vascular - Campanulaceae - Legenere limosa
Plants - Vascular	Legenere limosa	legenere	PDCAM0C010	None	None	-	1B.1	3812153	Carmichael	Mapped	Plants - Vascular - Campanulaceae - Legenere limosa
Plants - Vascular	Legenere limosa	legenere	PDCAM0C010	None	None	-	1B.1	3812133	Galt	Mapped	Plants - Vascular - Campanulaceae - Legenere limosa
Plants - Vascular	Legenere limosa	legenere	PDCAM0C010	None	None	-	1B.1	3812134	Bruceville	Mapped	Plants - Vascular - Campanulaceae - Legenere limosa
Plants - Vascular	Legenere limosa	legenere	PDCAM0C010	None	None	-	1B.1	3812143	Elk Grove	Mapped	Plants - Vascular - Campanulaceae - Legenere limosa
Plants - Vascular	Cuscuta obtusiflora var. glandulosa	Peruvian dodder	PDCUS01111	None	None	-	2B.2	3812144	Florin	Mapped	Plants - Vascular - Cuscutaceae - Cuscuta obtusiflora var. glandulosa
Plants - Vascular	Carex comosa	bristly sedge	PMCYP032Y0	None	None	-	2B.1	3812145	Clarksburg	Mapped	Plants - Vascular - Cyperaceae - Carex comosa
Plants - Vascular	Carex comosa	bristly sedge	PMCYP032Y0	None	None	-	2B.1	3812135	Courtland	Mapped	Plants - Vascular - Cyperaceae - Carex comosa
Plants - Vascular	Carex comosa	bristly sedge	PMCYP032Y0	None	None	-	2B.1	3812134	Bruceville	Mapped	Plants - Vascular - Cyperaceae - Carex comosa
Plants - Vascular	Astragalus tener var. ferrisiae	Ferris' milk-vetch	PDFAB0F8R3	None	None	-	1B.1	3812155	Sacramento West	Mapped	Plants - Vascular - Fabaceae - Astragalus tener var. ferrisiae
Plants - Vascular	Lathyrus jepsonii var. jepsonii	Delta tule pea	PDFAB250D2	None	None	-	1B.2	3812135	Courtland	Mapped	Plants - Vascular - Fabaceae - Lathyrus jepsonii var. jepsonii

Plants - Vascular	Lathyrus jepsonii var. jepsonii	Delta tule pea	PDFAB250D2	None	None	-	1B.2	3812134	Bruceville	Mapped	Plants - Vascular - Fabaceae - Lathyrus jepsonii var. jepsonii
Plants - Vascular	Trifolium hydrophilum	saline clover	PDFAB400R5	None	None	-	1B.2	3812134	Bruceville	Mapped	Plants - Vascular - Fabaceae - Trifolium hydrophilum
Plants - Vascular	Trifolium hydrophilum	saline clover	PDFAB400R5	None	None	-	1B.2	3812145	Clarksburg	Mapped	Plants - Vascular - Fabaceae - Trifolium hydrophilum
Plants - Vascular	Trifolium hydrophilum	saline clover	PDFAB400R5	None	None	-	1B.2	3812144	Florin	Mapped	Plants - Vascular - Fabaceae - Trifolium hydrophilum
Plants - Vascular	Juglans hindsii	Northern California black walnut	PDJUG02040	None	None	-	1B.1	3812144	Florin	Mapped	Plants - Vascular - Juglandaceae - Juglans hindsii
Plants - Vascular	Juglans hindsii	Northern California black walnut	PDJUG02040	None	None	-	1B.1	3812145	Clarksburg	Mapped	Plants - Vascular - Juglandaceae - Juglans hindsii
Plants - Vascular	Juglans hindsii	Northern California black walnut	PDJUG02040	None	None	-	1B.1	3812135	Courtland	Mapped	Plants - Vascular - Juglandaceae - Juglans hindsii
Plants - Vascular	Juncus leiospermus var. ahartii	Ahart's dwarf rush	PMJUN011L1	None	None	-	1B.2	3812153	Carmichael	Mapped	Plants - Vascular - Juncaceae - Juncus leiospermus var. ahartii
Plants - Vascular	Scutellaria galericulata	marsh skullcap	PDLAM1U0J0	None	None	-	2B.2	3812134	Bruceville	Mapped	Plants - Vascular - Lamiaceae - Scutellaria galericulata
Plants - Vascular	Scutellaria lateriflora	side-flowering skullcap	PDLAM1U0Q0	None	None	-	2B.2	3812134	Bruceville	Mapped	Plants - Vascular - Lamiaceae - Scutellaria lateriflora
Plants - Vascular	Scutellaria lateriflora	side-flowering skullcap	PDLAM1U0Q0	None	None	-	2B.2	3812135	Courtland	Mapped	Plants - Vascular - Lamiaceae - Scutellaria lateriflora
Plants - Vascular	Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3812135	Courtland	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpus var. occidentalis
Plants - Vascular	Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3812134	Bruceville	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpus var. occidentalis
Plants - Vascular	Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3812145	Clarksburg	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpus var. occidentalis
Plants - Vascular	Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3812144	Florin	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpus var. occidentalis
Plants - Vascular	Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3812155	Sacramento West	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpus var. occidentalis
Plants - Vascular	Gratiola heterosepala	Boggs Lake hedge-hyssop	PDSCR0R060	None	Endangered	-	1B.2	3812153	Carmichael	Mapped	Plants - Vascular - Plantaginaceae - Gratiola heterosepala
Plants - Vascular	Gratiola heterosepala	Boggs Lake hedge-hyssop	PDSCR0R060	None	Endangered	-	1B.2	3812143	Elk Grove	Mapped	Plants - Vascular - Plantaginaceae - Gratiola heterosepala

Plants - Vascular	Orcuttia tenuis	slender Orcutt grass	PMPOA4G050	Threatened	Endangered	-	1B.1	3812143	Elk Grove	Mapped	Plants - Vascular - Poaceae - Orcuttia tenuis
Plants - Vascular	Orcuttia viscida	Sacramento Orcutt grass	PMPOA4G070	Endangered	Endangered	-	1B.1	3812143	Elk Grove	Mapped	Plants - Vascular - Poaceae - Orcuttia viscida
Plants - Vascular	Orcuttia viscida	Sacramento Orcutt grass	PMPOA4G070	Endangered	Endangered	-	1B.1	3812153	Carmichael	Mapped	Plants - Vascular - Poaceae - Orcuttia viscida
Plants - Vascular	Navarretia eriocephala	hoary navarretia	PDPLM0C060	None	None	-	4.3	3812143	Elk Grove	Unprocessed	Plants - Vascular - Polemoniaceae - Navarretia eriocephala
Plants - Vascular	Limosella australis	Delta mudwort	PDSCR10050	None	None	-	2B.1	3812135	Courtland	Mapped	Plants - Vascular - Scrophulariaceae - Limosella australis
Plants - Vascular	Limosella australis	Delta mudwort	PDSCR10050	None	None	-	2B.1	3812134	Bruceville	Mapped	Plants - Vascular - Scrophulariaceae - Limosella australis

Plant List

26 matches found. *Click on scientific name for details*

Search Criteria

Found in 9 Quads around 38121D4

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
<u>Astragalus tener var. ferrisiae</u>	Ferris' milk-vetch	Fabaceae	annual herb	1B.1	S1	G2T1
<u>Brasenia schreberi</u>	watershield	Cabombaceae	perennial rhizomatous herb	2B.3	S2	G5
<u>Carex comosa</u>	bristly sedge	Cyperaceae	perennial rhizomatous herb	2B.1	S2	G5
<u>Centromadia parryi ssp. rudis</u>	Parry's rough tarplant	Asteraceae	annual herb	4.2	S3.2	G3T3
<u>Cicuta maculata var. bolanderi</u>	Bolander's water-hemlock	Apiaceae	perennial herb	2B.1	S2	G5T3T4
<u>Cuscuta obtusiflora var. glandulosa</u>	Peruvian dodder	Convolvulaceae	annual vine (parasitic)	2B.2	SH	G5T4T5
<u>Downingia pusilla</u>	dwarf downingia	Campanulaceae	annual herb	2B.2	S2	GU
<u>Gratiola heterosepala</u>	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	1B.2	S2	G2
<u>Hesperervax caulescens</u>	hogwallow starfish	Asteraceae	annual herb	4.2	S3.2	G3
<u>Hibiscus lasiocarpus var. occidentalis</u>	woolly rose-mallow	Malvaceae	perennial rhizomatous herb	1B.2	S2	G5T2
<u>Juglans hindsii</u>	Northern California black walnut	Juglandaceae	perennial deciduous tree	1B.1	S1	G1
<u>Juncus leiospermus var. ahartii</u>	Ahart's dwarf rush	Juncaceae	annual herb	1B.2	S1	G2T1
<u>Lasthenia ferrisiae</u>	Ferris' goldfields	Asteraceae	annual herb	4.2	S3.2	G3
<u>Lathyrus jepsonii var. jepsonii</u>	Delta tule pea	Fabaceae	perennial herb	1B.2	S2.2	G5T2
<u>Legenere limosa</u>	legenere	Campanulaceae	annual herb	1B.1	S2	G2
<u>Lepidium latipes var. heckardii</u>	Heckard's pepper-grass	Brassicaceae	annual herb	1B.2	S2	G4T2
<u>Lilaeopsis masonii</u>	Mason's lilaeopsis	Apiaceae	perennial rhizomatous herb	1B.1	S2	G2
<u>Limosella australis</u>	Delta mudwort	Scrophulariaceae	perennial stoloniferous herb	2B.1	S2	G4G5
<u>Navarretia eriocephala</u>	hoary navarretia	Polemoniaceae	annual herb	4.3	S3.3	G3
<u>Orcuttia tenuis</u>	slender Orcutt grass	Poaceae	annual herb	1B.1	S2	G2
<u>Orcuttia viscida</u>		Poaceae	annual herb	1B.1	S1	G1

	Sacramento Orcutt grass					
<u>Sagittaria sanfordii</u>	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb	1B.2	S3	G3
<u>Scutellaria galericulata</u>	marsh skullcap	Lamiaceae	perennial rhizomatous herb	2B.2	S2	G5
<u>Scutellaria lateriflora</u>	side-flowering skullcap	Lamiaceae	perennial rhizomatous herb	2B.2	S1	G5
<u>Symphotrichum lentum</u>	Suisun Marsh aster	Asteraceae	perennial rhizomatous herb	1B.2	S2	G2
<u>Trifolium hydrophilum</u>	saline clover	Fabaceae	annual herb	1B.2	S2	G2

Suggested Citation

CNPS, Rare Plant Program. 2014. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> [accessed 25 June 2014].

Search the Inventory

[Simple Search](#)

[Advanced Search](#)

[Glossary](#)

Information

[About the Inventory](#)

[About the Rare Plant Program](#)

[CNPS Home Page](#)

[About CNPS](#)

[Join CNPS](#)

Contributors

[The Calflora Database](#)

[The California Lichen Society](#)

Appendix B – Wetland Delineation



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

RECEIVED

MAY 01 2014

CITY OF ELK GROVE
PUBLIC WORKS

REPLY TO
ATTENTION OF

April 28, 2014

Regulatory Division SPK-2014-00230

City of Elk Grove
Attn: Mr. Michael Karoly
8401 Laguna Palms Drive
Elk Grove, California 95758

Dear Mr. Karoly:

We are responding to your request for a preliminary jurisdictional determination (JD), in accordance with our Regulatory Guidance Letter (RGL) 08-02, for the Laguna Creek Trail, Camden Spur site. The approximately 23-acre site is located north of Bond Road, south of Sheldon Road, east of State Route 99, and west of Elk Grove-Florin Road, in Section 25, Township 7 North, Range 5 East, Mount Diablo Meridian, Latitude 38.4292° North, Longitude 121.3859° West, in the City of Elk Grove, Sacramento County, California.

Based on available information, we concur with the amount and location of wetlands and other water bodies on the site as depicted on the enclosed December 11-12 *Figure 4, Delineation of Wetlands and Waters of the U.S.* drawing prepared by the PMC. The approximately 2.048 acres of wetlands and/or other water bodies present within the survey area are potential waters of the United States regulated under Section 404 of the Clean Water Act.

We have enclosed a copy of the *Preliminary Jurisdictional Determination Form* for this site. Please sign and return a copy of the completed form to this office. Once we receive a copy of the form with your signature we can accept and process a Pre-Construction Notification or permit application for your proposed project.

You should not start any work in potentially jurisdictional waters of the United States unless you have Department of the Army permit authorization for the activity. You may request an approved JD for this site at any time prior to starting work within waters. In certain circumstances, as described in RGL 08-02, an approved JD may later be necessary.

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 preliminary determination has been conducted to identify the potential limits of wetlands and other water bodies which may be subject to Corps of Engineers' jurisdiction for the particular site identified in this request. A Notification of Appeal Process and Request for Appeal form is enclosed to notify you of your options with this determination. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are U.S. Department of Agriculture (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.

We appreciate your feedback. At your earliest convenience, please tell us how we are doing by completing the customer survey on our website under *Customer Service Survey*.

Please refer to identification number SPK-2014-00230 in any correspondence concerning this project. If you have any questions, please contact Lisa Gibson at 1325 J Street, Room 1350, Sacramento, California 95814, by email at Lisa.M.Gibson2@usace.army.mil, or telephone at 916-557-5288. For more information regarding our program, please visit our website at www.spk.usace.army.mil/Missions/Regulatory.aspx.

Sincerely,



Kathleen A. Dadey, PhD
Chief, CA South Branch
Regulatory Division

Enclosures

cc: (w/o encls)

Ms. Summer Pardo, PMC, spardo@PMCWorld.com

Ms. Leana Rosetti, U.S. Environmental Protection Agency, Region IX, Wetlands Regulatory Office (WTR-8), 75 Hawthorne Street, San Francisco, California 94105-3901

Ms. Tina Bartlett, California Department of Fish and Wildlife, Region 2, 1701 Nimbus Road, Rancho Cordova, California 95670-4599

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

Ms. Kellie Berry, Sacramento Valley Branch, Endangered Species Division, U.S. Fish and Wildlife Service, 2800 Cottage Way, Suite W2605, Sacramento, California 95825-3901

**PRELIMINARY JURISDICTIONAL DETERMINATION FORM
Sacramento District**

This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

Regulatory Branch: **California South** File/ORM #: **SPK-2014-00230** PJD Date: **April 25, 2014**

State: **CA** City/County: **Elk Grove, Sacramento County**
 Nearest Waterbody: **Laguna Creek and Whitehouse Creek**
 Location (Lat/Long): **38.4292° North, 121.3859° West**
 Size of Review Area: **23 acres**

Name/Address **City of Elk Grove**
 Of Property **Attn: Mr. Michael Karoly**
 Owner/ **8401 Laguna Palms Drive**
 Potential **Elk Grove, California 95758**
 Applicant

Identify (Estimate) Amount of Waters in the Review Area

Non-Wetland Waters:
 linear feet ft wide **2.026 acre(s)**
 Stream Flow: **Perennial and Intermittent**

Name of any Water Bodies Tidal:
 on the site identified as
 Section 10 Waters: **Non-Tidal:**

Office (Desk) Determination
 Field Determination:
 Date(s) of Site Visit(s): **April 7, 2014**

Wetlands: 0.022 acre(s)
 Cowardin Class: **Palustrine, emergent**

SUPPORTING DATA: Data reviewed for preliminary JD (check all that apply – checked items should be included in case file and, where checked and requested, appropriately reference sources below)

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: **Figure 4, Delineation of Wetlands and Waters of the U.S.**
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
- Data sheets prepared by the Corps.
- Corps navigable waters' study.
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data.
 - USGS HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: **1:24K; CA-FLORIN**
- USDA Natural Resources Conservation Service Soil Survey.
- National wetlands inventory map(s).
- State/Local wetland inventory map(s).
- FEMA/FIRM maps.
- 100-year Floodplain Elevation (if known):
- Photographs: Aerial
 Other
- Previous determination(s). File no. and date of response letter: **SPK-2011-00034, February 11, 2011**
- Other information (please specify):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Niam Gilman 4/28/14
 Signature and Date of Regulatory Project Manager
 (REQUIRED)

Michael Karoly 5/1/14
 Signature and Date of Person Requesting Preliminary JD
 (REQUIRED, unless obtaining the signature is impracticable)

EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DETERMINATIONS:

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: City of Elk Grove	File No.: SPK-2014-00230	Date: April 28, 2014
------------------------------	--------------------------	----------------------

Attached is:	See Section below
--------------	-------------------

	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
	APPROVED JURISDICTIONAL DETERMINATION	D
X	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/cecw/pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

- A: INITIAL PROFFERED PERMIT:** You may accept or object to the permit.
- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
 - **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.
- B: PROFFERED PERMIT:** You may accept or appeal the permit
- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
 - **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.
- C: PERMIT DENIAL:** You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.
- D: APPROVED JURISDICTIONAL DETERMINATION:** You may accept or appeal the approved JD or provide new information.
- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
 - **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.
- E: PRELIMINARY JURISDICTIONAL DETERMINATION:** You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Lisa M. Gibson
Senior Project Manager
California South Branch
U.S. Army Corps of Engineers
1325 J Street, Room 1350
Sacramento, California 95814-2922
Phone: 916-557-5288, FAX 916-557-7803
Email: Lisa.M.Gibson2@usace.army.mil

If you only have questions regarding the appeal process you may also contact:

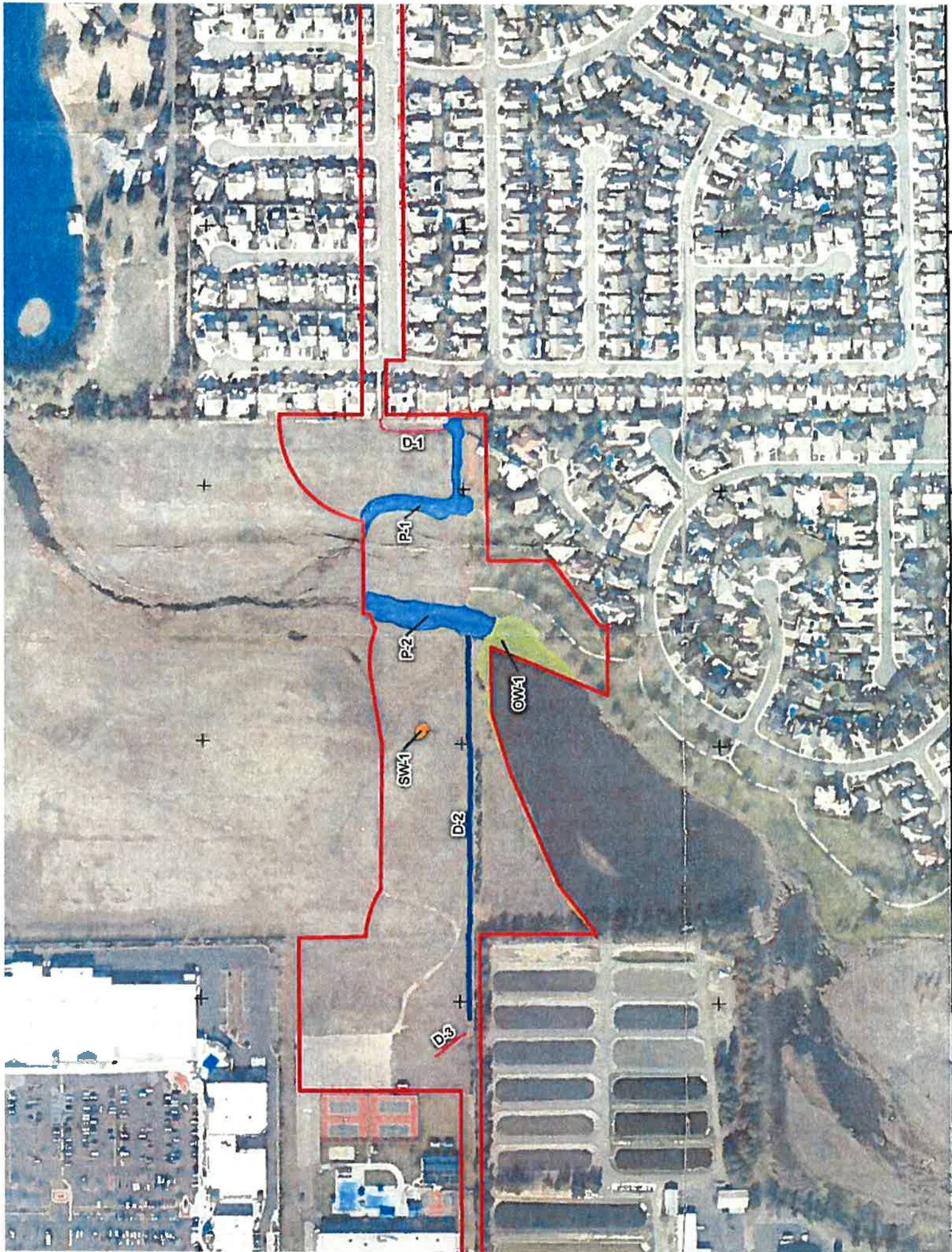
Thomas J. Cavanaugh
Administrative Appeal Review Officer
U.S. Army Corps of Engineers
South Pacific Division
1455 Market Street, 2052B
San Francisco, California 94103-1399
Phone: 415-503-6574, FAX 415-503-6646
Email: Thomas.J.Cavanaugh@usace.army.mil

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.

Date:

Telephone number:





4254984

4254784

4254584

4254384

Appendix C – Rare Plant Survey



Interoffice Memorandum

May 11, 2011

James McLaughlin

Date

To

Rare Plant Surveys for the Laguna Creek Trail –
Camden Spur Project

Angela Calderaro

Subject

From

Introduction

The purpose of this technical memorandum is to describe the results of the survey for rare plant species that may occur within the project study area (PSA). At nearly three miles, the Laguna Creek Trail is one of the longest trails aligning through the City of Elk Grove and connecting to several regional trails. The Laguna Creek Bike Trail Connector Project -Camden Spur Project is part of a citywide effort to provide alternative transportation options, close trail gaps, improve regional and local bicycle/pedestrian routes, and increase safety along busy traffic corridors. Connectivity and access is limited for pedestrians and bicyclists traveling west on the longest part (nearly three miles) of the Laguna Creek Trail. The trail currently ends leaving a large gap between Bond Road and the Camden Passage neighborhood. The proposed project proposes to close this gap and improve safety.

Methods

City of Elk Grove biologist, Angela Calderaro, conducted focused rare plant surveys in suitable habitat within the PSA on May 6, 2011. The rare plant surveys were conducted in accordance with the *General Rare Plant Guidelines* (USFWS 2002) and the *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities* (CDFG 2000). Transects of the PSA were systematically walked to detect presence of rare plant species. When rare plants were observed, their presence was recorded on a Trimble Geo XT with submeter accuracy. If the species was growing in a large clump, the number of individual plants were estimated. Locations of rare plants recorded in the field were then overlaid on an aerial photograph of the PSA. According to the California Environmental Quality Act (CEQA) document (City of Elk Grove 2011) for this report, the rare plant species listed in **Table 1** have the potential to occur in the PSA.

TABLE 1 – RARE PLANT SPECIES

Scientific Name Common Name	CNPS Status	General Habitat
<i>Downingia pusilla</i> Dwarf Downingia	List 2.2	This annual herb is restricted to vernal pools and similar seasonal wetlands, including mesic grassland and the margins of small lakes or stock ponds. Blooms: March - May
<i>Gratiola heterosepala</i> Bogg's Lake hedge-hyssop	List 1B.2	This annual herb is found in marshes, swamps, lake margins, and vernal pools with clay soils. Blooms: April - June
<i>Legenere limosa</i> Legenere	List 1B.1	This annual herb grows in moist or wet ground or with the plant's base submerged in the shallow water of vernal pools. Blooms: April - June
<i>Sagittaria sanfordii</i> Sanford's arrowhead	List 1B.2	This perennial herb occurs in assorted shallow freshwater marshes and swamps and artificial ponds and lakes. Blooms: May - October

Source: CNPS 2011

Code Designations

List 1B = Plant species that are rare, threatened, or endangered in California and elsewhere.

List 2 = Plant species that are rare, threatened, or endangered in California, but more common elsewhere.

Threat Ranks - 0.1-Seriously threatened in California (high degree/immediacy of threat), 0.2-Fairly threatened in California (moderate degree/immediacy of threat)

Results

Sanford's arrowhead may occur within Laguna Creek within the PSA. Two small plants with one to three leaves and approximately five to ten inches tall were located along the water's edge. Since the plant was not flowering, identification could not be confirmed (see Photo 1). Plants were found adjacent to the water's edge with common cattail (*Typha latifolia*) and bulrush (*Scirpus californicus*). Even so, if these plants are Sanford's arrowhead, the proposed project would avoid the low-water channel where these plants occur. As a part of Mitigation Measure 4a-2c, the Worker Environmental Awareness Program (WEAP) will be implemented to educate construction workers about the presence of special-status species or other sensitive resources in and near the PSA, and to instruct them on proper avoidance, required measures and practices for protecting biological resources and contacts and procedures in case species are injured or encountered during construction. As a part of the avoidance and minimization measures to the creek (a water of the U.S.), the plants will be avoided during construction. No additional mitigation measures are necessary.



Photo 1 – Possible Sanford's arrowhead within Elk Grove Creek.

The vernal pool within the PSA was also checked for the presence of rare plant species. The dry pool contained turkey mullein (*Eremocarpus setigerus*), coyote thistle (*Eryngium vaseyi*), vernal pool buttercup (*Ranunculus bonariensis* var. *triseptus*), rayless goldfields (*R. glaberrima*), popcorn flower (*Plagiobothrys stipitatus*), curly dock (*Rumex crispus*), Italian wildrye (*Lolium multiflorum*), and pale spikerush (*Eleocharis macrostachya*).

Although rare plant surveys were not conducted in the blooming period for Bolander's water-hemlock (*Cicuta maculata* var. *bolanderi*) and wooly rose mallow (*Hibiscus lasiocarpus*), these species are not expected to occur in the PSA due to the lack of suitable habitat. There are no previously recorded occurrences of these species within a five-mile radius of the PSA (CDFG 2011). No other rare plants were observed in the PSA.

The survey described in this report fulfills the survey requirement described under Mitigation Measure 4a-1a of the Initial Study/Mitigated Negative Declaration (IS/MND) (City of Elk Grove 2011).

References

- United States Fish and Wildlife Service (USFWS). 2002. *General Rare Plant Survey Guidelines*. July 2002. Ellen A. Cypher, California State University, Stanislaus, Endangered Species Recovery Program. Bakersfield, CA.
- California Department of Fish and Game. 2000. *Guidelines for assessing the effects of proposed projects on rare, threatened, and endangered plants and natural communities*. (Revision of 1983 guidelines.) Sacramento, CA, 2 pp.
- California Department of Fish and Game (CDFG). 2011. California Natural Diversity Database (CNDDB), Wildlife and Habitat Data Analysis Branch, Rarefind Version 3.1.1. Commercial Version -- Dated April 02, 2011.
- City of Elk Grove. 2011. Initial Study/Mitigated Negative Declaration for the Laguna Creek Trail – Camden Spur Project. City of Elk Grove, CA.

Appendix D – Tree Survey



MEMO

To: Michael Karoly, PE, Senior Project Manager, City of Elk Grove
From: Kelly McGlothlin, ISA Certified Arborist #8324
Date: June 21, 2013 (Revised)
Re: Laguna Creek Trail, Elk Grove, CA:
Camden South Spur, Project #PT0121 (Trees #1-131)
Camden North Spur, Project #WTL005 (Trees #132-144)

Assignment

Tree Associates was asked to evaluate trees located adjacent to the Laguna Creek Trail, Camden South Spur Project site in Elk Grove. The number of trees to be evaluated was estimated at 180, however, the final count that met the criteria for evaluation was 144. I evaluated trees #1-131 between April 24, 2013 and April 26, 2013. I returned to the site on June 19, 2013 to evaluate trees #132-144.

Limits of the Assignment

This evaluation reports on the condition of the subject trees at the time of my site visit. Tree conditions change over time and, as they change, the evaluations, comments and recommendations in this report may need to be revised.

Tree Evaluation

All trees adjacent to the proposed trail with trunk diameters greater than six inches were evaluated, with the following exceptions:

1. For multiple-trunked species not protected within the City of Elk Grove Tree Ordinance, only those with at least one of the trunks greater than or equal to six inches were evaluated;
2. From Bond Road north to the edge of the playground area, only trees with canopies overhanging the western property boundary fence were evaluated.

For each of the 144 trees that were evaluated, the following data were provided:

- Tree Number – corresponds to a tag number found on a round aluminum tag affixed to each.
- Species – common and Latin name of tree.
- Trunk Diameter – the diameter of the tree (in inches) at 4.5' above grade, unless measurement

between 1-5 feet above grade provided a more accurate reflection of the size of the tree.

- Maximum Drip Line Radius – the measured maximum distance from the trunk to the edge of the branches, in feet.
- Tree Protection Zone – the radius (in feet) of a circular area centered at the tree trunk which, if left undisturbed, will result in a low impact to the tree.
- Health Rating – rating of poor to excellent regarding tree health. A rating of fair/good or greater indicated no significant health concerns.
- Structural Rating – rating of poor to excellent regarding tree structure. A rating of fair/good or greater generally indicated no acute structural concerns.
- Comments – comments regarding tree features significant to tree condition.
- Recommendations – recommendations for tree work, treatments, or further evaluation necessary to improve tree structure or health.

Results of this assessment are presented in the attached table 1, titled “Tree Evaluation and Recommendations.”

Tree Preservation Recommendations

When more detailed construction plans are available, we recommend consulting with us to evaluate potential construction impacts to the on-site trees. The general guidelines presented below should be followed for all trees to be preserved to ensure the least impact considering the proposed construction.

- Wherever possible the project should avoid grading, compaction, trenching or any other disturbance within the tree protection zones. This may require the use of retaining walls, boring trenches under tree root zones or other construction techniques.
- Where construction is necessary within the protection zones of trees, consult with Consulting Arborist to develop designs/techniques which minimize injury to subject trees.
- Conduct a meeting to discuss these tree preservation guidelines with all contractors, subcontractors and project managers prior to the initiation of construction.
- Prior to any demolition activity on site, identify (tagged) trees to be preserved and install tree protection fencing in a circle centered at the tree trunk with a radius equal to the defined tree protection zone (see table). Where this is not feasible, install fence as far from the trunk as possible. Tree protection fences should be made of chain link with posts sunk into the ground. These fences should not be removed or moved until construction is complete.
- Avoid soil or above ground disturbances within the fenced area.
- Do not deposit soil, construction material, spoil, waste or washout water within the fenced areas.
- Any work that is to occur within the protection zones of the trees should be monitored by the Consulting Arborist.
- If roots larger than 1” diameter or limbs larger than 3 inches in diameter are cut or damaged during construction, the Consulting Arborist should be contacted as soon as possible to inspect and recommend appropriate treatments.
- Any pruning required for construction or recommended in this report should be performed by an ISA Certified Arborist or Tree Worker following ANSI A300 Pruning Standards and ISA Best Management Practices for pruning.
- All trees to be preserved should be irrigated once every three weeks during the summer months to wet the soil to a depth of at least 18 inches under and beyond their canopies.

We recommend utilizing the following specifications for demolition, pruning and construction to provide the greatest likelihood that the trees will survive the development.

SPECIFICATIONS FOR DEMOLITION, SITE CLEARING, PRUNING AND CONSTRUCTION¹

Definitions

1. "Consulting Arborist" is defined as an A.S.C.A. Registered Consulting Arborist or other qualified Consulting Arborist.
2. "I.S.A. Certified Arborists or Tree Workers" are certified as such by the International Society of Arboriculture.

Specifications for Demolition and Site Clearing

The following work must be accomplished before any demolition or site-clearing activity occurs within 100 feet of any trees or within tree protection zones or under tree canopies established by the Consulting Arborist in this report.

1. The demolition contractor and all subcontractors are required to meet with the Consulting Arborist, Project Manager and Project Inspector at the site prior to beginning work to review all work procedures, access and haul routes, and tree protection measures. Note that prior to or during this meeting, changes or additions to these specifications may need to be made by the Consulting Arborist.
2. The limits of all tree protection zones shall be staked in the field. Tree protection fences shall be made of six foot high chain link fence with posts pounded into the ground unless otherwise approved by the Consulting Arborist. The fences are not to be opened, relocated or removed and no traffic, material storage or any other disturbance within the fenced area is permitted without the prior written approval of the Consulting Arborist. The location of tree protection fences will be outside of the tree protection zone (or where demolition is to occur within the protection zone, as far away from the trunk as possible) which is defined in the Arborist Report.
3. Structures and underground features to be removed within the tree protection zone shall use the smallest equipment possible and operate from outside the tree protection zone. The Consulting Arborist shall be on site during all operations within the tree protection zone to monitor and direct demolition activity.
4. All trees shall be pruned in accordance with the provided Pruning Specifications or in accordance with the recommendations of the Consulting Arborist.
5. Any damage to trees due to demolition activities shall be reported to the Consulting Arborist within six hours so that remedial action can take place.
6. Temporary haul or access roads shall pass outside of the tree protection zones unless this is not possible. If temporary haul or access roads must pass over the protection zone of trees to be retained, a roadbed of six inches of woodchip mulch or gravel shall be created to protect the soil. The roadbed shall be installed under the supervision of the Consulting Arborist from outside of the tree protection zone and while the soil is in a dry condition. The roadbed material shall be replenished as necessary to maintain a six-inch depth.

Pruning Specifications

1. All trees located within the project area under or near where equipment will operate shall be either tied back (preferable) or pruned to provide a minimum amount of clearance to avoid limb breakage from construction activity.
2. Pruning shall not be performed during periods of flight of adult boring insects because fresh wounds attract pests. Pruning shall be performed only when the danger of infestation is past.

¹ (adapted from Matheny and Clark, Trees and Development, ©1998, International Society of Arboriculture, Champaign, IL. 183 pp.)

3. An I.S.A. Certified Arborist or Tree Worker shall perform all pruning under the direction of the Consulting Arborist.
4. All pruning shall be in accordance with the Tree Pruning Guidelines (International Society of Arboriculture) and/or the ANSI A300 Pruning Standard (American National Standard for Tree Care Operations) and adhere to the most recent edition of ANSI Z133.1.
5. Interior branches shall not be stripped out during pruning.
6. Pruning cuts larger than four inches in diameter shall be avoided.
7. No more than 20% of the live foliage (or expected live foliage if dormant) shall be removed within any tree unless recommended by the Consulting Arborist.
8. While in the tree, the Arborist shall perform an aerial inspection to identify defects that require treatment. Any additional work needed shall be reported to the Consulting Arborist.
9. Brush shall be chipped and chips shall be spread underneath trees within the tree protection zone to a maximum depth of six inches leaving the trunk clear of mulch.

Construction Specifications

Note: The following specifications should be included on all construction plans.

1. The Consulting Arborist shall be notified when staking is complete in the field to field verify locations of pads, limits of grading, and other construction features.
2. Before beginning work, the contractor and all subcontractors are required to meet with the Consulting Arborist, Project Manager and Project Inspector at the site to review all work procedures, access routes, storage areas and tree protection measures.
3. Fences shall have been erected as specified to protect trees to be preserved. Fences define a specific protection zone for each tree or group of trees. The location of tree protection fences will be outside of the tree protection zone (defined in the Arborist Report) or as indicated on final plans. In the absence of the report or indication on plans, the tree protection zone is a circular area centered at each trunk with a radius equal to 1.5 feet for every inch in trunk diameter measured at 4.5 feet above ground. Fences are to remain until all site work has been completed. Fences may not be opened, relocated or removed without the written permission of the Consulting Arborist. No traffic, construction trailers, equipment, material storage spoil or waste or washout water are permitted within the tree protection zone (fenced area).
4. Any soil disturbance (scraping, grading, trenching, and excavation) is to be avoided in the tree protection zone. Where this is necessary, the Consulting Arborist, Project Manager and Inspector will be notified at least two weeks prior to construction. The Consulting Arborist will provide specifications for this work, including methods for root pruning, backfill specifications and irrigation management guidelines.
5. All underground utilities and drain or irrigation lines shall be routed outside the tree protection zone. If lines must traverse the protection area, they shall be tunneled or bored under the tree.
6. Additional tree pruning required for clearance during construction must be performed by an I.S.A. Certified Arborist or Tree Worker or by construction personnel who have been trained by and under the supervision of the Consulting Arborist.
7. Any herbicides placed under paving materials must be safe for use around trees and labeled for that use. Any pesticides used on site must be tree-safe and not easily transported by water.
8. If injury should occur to any tree during construction, the Contractor shall notify the Consulting Arborist immediately so that appropriate treatments can be applied as soon as possible.

9. Any grading, construction, demolition, or other work that is expected to encounter tree roots must be monitored by the Consulting Arborist (the Consulting Arborist must be contacted to schedule this monitoring at least one week prior to the date of this construction).
10. All trees shall be irrigated on a schedule and in a manner to be determined by the Consulting Arborist.
11. Erosion control devices such as silt fencing, debris basins, and water diversion structures shall be installed to prevent siltation and/or erosion within the tree protection zone.
12. Before grading, pad preparation, or excavation for foundations, footings, walls, or trenching within five feet outside of the protection zone of any tree root pruning shall be required at the limits of grading or excavation to cut roots cleanly to a depth of the excavation or 36 inches (whichever is less). Roots shall be cut by manually digging a trench and cutting exposed roots with a saw, vibrating knife, rock saw, narrow trencher with sharp blades or other approved root-pruning equipment under the supervision of the Consulting Arborist.
13. Any roots damaged during grading or construction shall be exposed to sound tissue and cut cleanly with a saw.
14. If temporary haul or access roads must pass over the root area of trees to be retained, a roadbed of six inches of mulch or gravel shall be created to protect the soil. The roadbed shall be installed from outside of the tree protection zone and while the soil is in a dry condition, if possible. The roadbed material shall be replenished as necessary to maintain a six-inch depth.
15. Spoil from trenches, basements, or other excavations shall not be placed within the tree protection zone, either temporarily or permanently.
16. No burn piles or debris pits shall be placed within the tree protection zone. No ashes, debris, or garbage may be dumped or buried within the tree protection zone.
17. Maintain fire-safe areas around fenced areas. Also, no heat sources, flames, ignition sources, or smoking is allowed near mulch or trees if fire danger is present.

Please do not hesitate to contact me if you have questions about this memorandum.

Arborist Disclosure Statement

The following statement concerns my work on this project.

Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the Arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

Treatment, pruning and removal of trees may involve considerations beyond the scope of the Arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the Arborist. An Arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

ASSUMPTIONS AND LIMITING CONDITIONS: John M. Lichter dba TREE ASSOCIATES

1. Any legal description provided to the consultant/appraiser is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management.
2. It is assumed that any property is not in violation of any applicable codes, ordinances, statutes or other governmental regulations.
3. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant/appraiser can neither guarantee nor be responsible for the accuracy of information provided by others.
4. The consultant/appraiser shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule and contract of engagement.
5. Unless required by law otherwise, possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior expressed written or verbal consent of the consultant/appraiser.
6. Unless required by law otherwise, neither all nor any part of the contents of this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales or other media, without the prior expressed written or verbal consent of the consultant/appraiser -- particularly as to value conclusions, identity of the consultant/appraiser, or any reference to any professional society or institute or to any initialed designation conferred upon the consultant/appraiser as stated in his qualifications.
7. This report and any values expressed herein represent the opinion of the consultant/appraiser, and the consultant's/appraiser's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
8. Sketches, drawings, and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys unless expressed otherwise. The reproduction of any information generated by architects, engineers, or other consultants on any sketches, drawings, or photographs is for the express purpose of coordination and ease of reference only. Inclusion of said information on any drawings or other documents does not constitute a representation by John M. Lichter or TREE ASSOCIATES as to the sufficiency or accuracy of said information.
9. Unless expressed otherwise: 1) information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection; and 2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.
10. Loss or alteration of any part of this report invalidates the entire report.

Laguna Creek Trail, City of Elk Grove
 Camden South Spur Project #PT0121
 Camden North Spur Project #WTL005
 Tree Evaluation and Recommendations

To Accompany
 Revised Tree Associates Report
 Dated June 21, 2013

Tree #	Species	Diameter (inches)	Dripline* (radius, feet)	Tree Protection Zone (radius, feet)	Health	Structure	Comments	Recommendations
1	river she-oak <i>Casuarina cunninghamiana</i>	23	24	24	Fair to Good	Fair to Good		
2	coast live oak <i>Quercus agrifolia</i>	14	14	14	Good	Good		
3	coast live oak <i>Quercus agrifolia</i>	15	20 est	20	Good	Good		
4	coast live oak <i>Quercus agrifolia</i>	10	17 est	17	Good	Fair	Growth suppressed by adjacent trees.	
5	coast live oak <i>Quercus agrifolia</i>	15	18 est	18	Good	Fair to Good	Large diameter W-facing primary limb with included bark.	Use reduction cuts to reduce amount of foliage by 25% on W-facing primary limb.
6	river she-oak <i>Casuarina cunninghamiana</i>	9,10	18 est	18	Fair to Good	Fair	Codominant trunks with included bark.	
7	coast live oak <i>Quercus agrifolia</i>	20	24 est	24	Good	Good		
8	Canary Island pine <i>Pinus canariensis</i>	17	21	21	Good	Good		
9	Canary Island pine <i>Pinus canariensis</i>	10	15	15	Good	Good		
10	Canary Island pine <i>Pinus canariensis</i>	19	17	17	Good	Fair to Good	Asymmetrical canopy.	
11	Canary Island pine <i>Pinus canariensis</i>	8	13	13	Good	Fair	Asymmetrical canopy.	

* Driplines were estimated in some cases where fence prevented obtaining an accurate measurement.

Laguna Creek Trail, City of Elk Grove
 Camden South Spur Project #PT0121
 Camden North Spur Project #WTL005
 Tree Evaluation and Recommendations

To Accompany
 Revised Tree Associates Report
 Dated June 21, 2013

Tree #	Species	Diameter (inches)	Dripline* (radius, feet)	Tree Protection Zone (radius, feet)	Health	Structure	Comments	Recommendations
12	Canary Island pine <i>Pinus canariensis</i>	9,5	11	11	Good	Poor to Fair	Codominant trunks with included bark. One of trunks bowed.	
13	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	12,14	17	18	Good	Fair	Codominant trunks at base. One of trunks removed at base. Remaining trunk slightly bowed.	
14	Canary Island pine <i>Pinus canariensis</i>	14	27	27	Good	Fair to Good		
15	Canary Island pine <i>Pinus canariensis</i>	10	15	15	Good	Good		
16	eucalyptus <i>Eucalyptus</i> sp.	59@18"	26	26	Good	Fair	Multiple trunks. A few trunks previously cut and have mature stump-sprouts.	
17	Canary Island pine <i>Pinus canariensis</i>	5,5,7	10	10	Good	Fair	Multiple trunks.	
18	eucalyptus <i>Eucalyptus</i> sp.	25	20	25	Fair to Good	Fair		
19	common hackberry <i>Celtis occidentalis</i>	6	10	10	Good	Fair	Growth suppressed by adjacent trees.	
20	Canary Island pine <i>Pinus canariensis</i>	17	27	27	Good	Fair	One of trunks removed at base. Remaining trunk with pronounced bow.	

* Driplines were estimated in some cases where fence prevented obtaining an accurate measurement.

Laguna Creek Trail, City of Elk Grove
 Camden South Spur Project #PT0121
 Camden North Spur Project #WTL005
 Tree Evaluation and Recommendations

To Accompany
 Revised Tree Associates Report
 Dated June 21, 2013

Tree #	Species	Diameter (inches)	Dripline* (radius, feet)	Tree Protection Zone (radius, feet)	Health	Structure	Comments	Recommendations
21	eucalyptus <i>Eucalyptus</i> sp.	6,7,11	19	19	Good	Fair	Multiple trunks.	
22	eucalyptus <i>Eucalyptus</i> sp.	38@1'	16	16	Fair to Good	Poor to Fair	Multiple trunks. All of trunks previously cut and stump-sprouting with weak attachments. Some portions of old trunks decaying.	Remove tree.
23	Canary Island pine <i>Pinus canariensis</i>	16	24	24	Good	Fair to Good	Asymmetrical canopy.	
24	eucalyptus <i>Eucalyptus</i> sp.	10,13	17	17	Good	Fair	Codominant trunks.	
25	aleppo pine <i>Pinus halepensis</i>	9	8	9	Good	Fair		
26	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	14	23 est	23	Fair to Good	Poor to Fair	Tree was topped. Watersprouts with weak attachments sprouting from cuts.	Either maintain tree at current height, aerially inspect watersprouts at attachment points and remove or shorten as necessary, or remove tree.
27	eucalyptus <i>Eucalyptus</i> sp.	13	18 est	18	Good	Fair	Codominant trunks with included bark.	
28	Canary Island pine <i>Pinus canariensis</i>	11	17	17	Good	Good		

* Driplines were estimated in some cases where fence prevented obtaining an accurate measurement.

Laguna Creek Trail, City of Elk Grove
 Camden South Spur Project #PT0121
 Camden North Spur Project #WTL005
 Tree Evaluation and Recommendations

To Accompany
 Revised Tree Associates Report
 Dated June 21, 2013

Tree #	Species	Diameter (inches)	Dripline* (radius, feet)	Tree Protection Zone (radius, feet)	Health	Structure	Comments	Recommendations
29	eucalyptus <i>Eucalyptus</i> sp.	11	15	15	Poor to Fair	Poor to Fair	One trunk dead. Other with trunk wounds, bowed. Growth suppressed by adjacent trees.	Remove tree.
30	eucalyptus <i>Eucalyptus</i> sp.	44@1'	22 est	22	Good	Fair	Multiple trunks. All of trunks previously cut and mature sprouts at pruning locations.	Either maintain tree at current height, or aerially inspect watersprouts at attachment points and remove or shorten as necessary.
31	eucalyptus <i>Eucalyptus</i> sp.	8,8,9,4	18 est	18	Good	Poor to Fair	Multiple trunks at base with included bark.	
32	Canary Island pine <i>Pinus canariensis</i>	22	37	37	Good	Fair	Trunk previously removed at base. Asymmetrical canopy.	
33	Canary Island pine <i>Pinus canariensis</i>	6,6	9	9	Good	Fair	Codominant trunks.	
34	coast live oak <i>Quercus agrifolia</i>	14	18 est	18	Good	Fair	Trunk bowed.	
35	Canary Island pine <i>Pinus canariensis</i>	15	27	27	Good	Fair	Asymmetrical canopy.	
36	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	19	15	19	Good	Fair to Good		

* Driplines were estimated in some cases where fence prevented obtaining an accurate measurement.

Laguna Creek Trail, City of Elk Grove
 Camden South Spur Project #PT0121
 Camden North Spur Project #WTL005
 Tree Evaluation and Recommendations

To Accompany
 Revised Tree Associates Report
 Dated June 21, 2013

Tree #	Species	Diameter (inches)	Dripline* (radius, feet)	Tree Protection Zone (radius, feet)	Health	Structure	Comments	Recommendations
37	eucalyptus <i>Eucalyptus</i> sp.	28@1'	10	10	Good	Poor to Fair	Multiple trunks at base. Probably stump sprouts.	Maintain tree under 15' in height or consider removal in presence of target to avoid future structural problems.
38	Canary Island pine <i>Pinus canariensis</i>	6	10	10	Good	Good		
39	Canary Island pine <i>Pinus canariensis</i>	15	14	14	Good	Good		
40	eucalyptus <i>Eucalyptus</i> sp.	17	14	17	Good	Fair to Good		
41	eucalyptus <i>Eucalyptus</i> sp.	35	18 est	35	Fair	Poor to Fair	Multiple trunks. All of trunks previously cut and mature watersprouts at pruning location. Older trunks with dead portions and decay.	Either maintain tree at current height, or aerially inspect watersprouts at attachment points and remove or shorten.
42	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	14	15	15	Good	Fair	Previously topped. Watersprouts with weak attachments sprouting from cuts.	Either maintain tree at current height, or aerially inspect watersprouts at attachment points and remove or shorten as necessary.

* Driplines were estimated in some cases where fence prevented obtaining an accurate measurement.

Laguna Creek Trail, City of Elk Grove
 Camden South Spur Project #PT0121
 Camden North Spur Project #WTL005
 Tree Evaluation and Recommendations

To Accompany
 Revised Tree Associates Report
 Dated June 21, 2013

Tree #	Species	Diameter (inches)	Dripline* (radius, feet)	Tree Protection Zone (radius, feet)	Health	Structure	Comments	Recommendations
43	eucalyptus <i>Eucalyptus</i> sp.	13@2'	10	11	Good	Fair	Previously topped.	
44	eucalyptus <i>Eucalyptus</i> sp.	7,7,8,8	16 est	16	Good	Fair	Multiple trunks.	
45	eucalyptus <i>Eucalyptus</i> sp.	18@3.5'	15	17	Good	Fair		
46	Canary Island pine <i>Pinus canariensis</i>	18	21	21	Good	Good		
47	eucalyptus <i>Eucalyptus</i> sp.	17@3'	18 est	18	Good	Fair	Trunk coming out of ground at slight angle.	
48	aleppo pine <i>Pinus halepensis</i>	18	24	24	Good	Fair		
49	eucalyptus <i>Eucalyptus</i> sp.	23@3.5'	18	22	Good	Fair	Previously topped. Watersprouts with weak attachments sprouting from cuts.	Either maintain tree at current height, or aerially inspect watersprouts at attachment points and remove or shorten as necessary.
50	eucalyptus <i>Eucalyptus</i> sp.	27@4'	17 est	27	Good	Fair	Previously topped. Watersprouts with weak attachments sprouting from cuts.	Either maintain tree at current height, or aerially inspect watersprouts at attachment points and remove or shorten as necessary.

* Driplines were estimated in some cases where fence prevented obtaining an accurate measurement.

Laguna Creek Trail, City of Elk Grove
 Camden South Spur Project #PT0121
 Camden North Spur Project #WTL005
 Tree Evaluation and Recommendations

To Accompany
 Revised Tree Associates Report
 Dated June 21, 2013

Tree #	Species	Diameter (inches)	Dripline* (radius, feet)	Tree Protection Zone (radius, feet)	Health	Structure	Comments	Recommendations
51	eucalyptus <i>Eucalyptus</i> sp.	12	14	14	Good	Fair to Good		
52	eucalyptus <i>Eucalyptus</i> sp.	25@4'	14	25	Good	Fair	Previously topped. Watersprouts with weak attachments sprouting from cuts.	Either maintain tree at current height, or aerially inspect watersprouts at attachment points and remove or shorten as necessary.
53	aleppo pine <i>Pinus halepensis</i>	15	19	19	Good	Fair	Asymmetric canopy due to adjacent tree.	
54	eucalyptus <i>Eucalyptus</i> sp.	19	14	19	Good	Good		
55	eucalyptus <i>Eucalyptus</i> sp.	4,4,4,4,6	13	13	Good	Poor to Fair	Stump sprouts with weak attachments.	Prune to reduce height to 15' and maintain height, or consider removal.
56	coast redwood <i>Sequoia sempervirens</i>	8	9	9	Good	Good		
57	aleppo pine <i>Pinus halepensis</i>	17	25	25	Good	Fair	Trunk coming out of ground at an angle.	

* Driplines were estimated in some cases where fence prevented obtaining an accurate measurement.

Laguna Creek Trail, City of Elk Grove
 Camden South Spur Project #PT0121
 Camden North Spur Project #WTL005
 Tree Evaluation and Recommendations

To Accompany
 Revised Tree Associates Report
 Dated June 21, 2013

Tree #	Species	Diameter (inches)	Dripline* (radius, feet)	Tree Protection Zone (radius, feet)	Health	Structure	Comments	Recommendations
58	eucalyptus <i>Eucalyptus</i> sp.	13,18	15	22	Good	Fair	Previously topped. Watersprouts with weak attachments sprouting from cuts.	Either maintain tree at current height, or aerially inspect watersprouts at attachment points and remove or shorten as necessary.
59	eucalyptus <i>Eucalyptus</i> sp.	18	16	18	Good	Fair	Previously topped. Watersprouts with weak attachments sprouting from cuts.	Either maintain tree at current height, or aerially inspect watersprouts at attachment points and remove or shorten as necessary.
60	eucalyptus <i>Eucalyptus</i> sp.	17,27	15	32	Good	Fair	Previously topped. Watersprouts with weak attachments sprouting from cuts. Codominant trunks with included bark.	Either maintain tree at current height, or aerially inspect watersprouts at attachment points and remove or shorten as necessary.

* Driplines were estimated in some cases where fence prevented obtaining an accurate measurement.

Laguna Creek Trail, City of Elk Grove
 Camden South Spur Project #PT0121
 Camden North Spur Project #WTL005
 Tree Evaluation and Recommendations

To Accompany
 Revised Tree Associates Report
 Dated June 21, 2013

Tree #	Species	Diameter (inches)	Dripline* (radius, feet)	Tree Protection Zone (radius, feet)	Health	Structure	Comments	Recommendations
61	eucalyptus <i>Eucalyptus</i> sp.	14,3	15 est	15	Good	Fair	Previously topped. Watersprouts with weak attachments sprouting from cuts. Codominant trunks with included bark. Smaller trunk at base with weak attachment.	Either maintain tree at current height, or aerially inspect watersprouts at attachment points and remove or shorten as necessary. Maintain epicormic limbs at smaller size. Subdue or remove smaller trunk.
62	eucalyptus <i>Eucalyptus</i> sp.	8,3	10	10	Fair	Poor to Fair	Shrubby structure. Growth suppressed by adjacent trees. Twig dieback.	
63	eucalyptus <i>Eucalyptus</i> sp.	28@3'	16 est	26	Good	Fair	Codominant trunks. Previously topped. Watersprouts originating at pruning cuts.	Either maintain tree at current height, or aerially inspect watersprouts at attachment points and remove or shorten as necessary. Subdue or remove smaller trunk.

* Driplines were estimated in some cases where fence prevented obtaining an accurate measurement.

Laguna Creek Trail, City of Elk Grove
 Camden South Spur Project #PT0121
 Camden North Spur Project #WTL005
 Tree Evaluation and Recommendations

To Accompany
 Revised Tree Associates Report
 Dated June 21, 2013

Tree #	Species	Diameter (inches)	Dripline* (radius, feet)	Tree Protection Zone (radius, feet)	Health	Structure	Comments	Recommendations
64	eucalyptus <i>Eucalyptus</i> sp.	37@3'	23 est	35	Good	Poor to Fair	Multiple trunks with included bark. Previously topped with epicormic limbwatersprouts originating at pruning wounds.	Either maintain tree at current height, or aerially inspect watersprouts at attachment points and remove or shorten as necessary.
65	aleppo pine <i>Pinus halepensis</i>	24	22	24	Good	Fair to Good	Large diameter trunk previously removed.	
66	coast redwood <i>Sequoia sempervirens</i>	8	7	7	Good	Good	Growth competing with adjacent pine.	
67	aleppo pine <i>Pinus halepensis</i>	18	23	23	Good	Fair to Good	Large diameter trunk previously removed.	
68	eucalyptus <i>Eucalyptus</i> sp.	16@2'	14	15	Good	Fair	Multiple trunks with included bark.	Use reduction cuts to reduce amount of foliage on W-facing limb by 25%.
69	coast redwood <i>Sequoia sempervirens</i>	7	7	7	Fair	Fair	Top dead.	Remove dead wood at top.
70	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	19	18	19	Good	Fair to Good		

* Driplines were estimated in some cases where fence prevented obtaining an accurate measurement.

Laguna Creek Trail, City of Elk Grove
 Camden South Spur Project #PT0121
 Camden North Spur Project #WTL005
 Tree Evaluation and Recommendations

To Accompany
 Revised Tree Associates Report
 Dated June 21, 2013

Tree #	Species	Diameter (inches)	Dripline* (radius, feet)	Tree Protection Zone (radius, feet)	Health	Structure	Comments	Recommendations
71	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	23@3'	24 est	24	Good	Fair	Previously topped. Watersprouts with weak attachments sprouting from pruning cuts.	Either maintain tree at current height, or aerially inspect watersprouts at attachment points and remove or shorten as necessary.
72	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	20	17 est	20	Good	Fair	Previously topped. Watersprouts with weak attachments sprouting from pruning cuts.	Either maintain tree at current height, or aerially inspect watersprouts at attachment points and remove or shorten as necessary.
73	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	8,17	20 est	20	Good	Fair	Previously topped. Watersprouts with weak attachments sprouting from pruning cuts. Codominant trunks with included bark.	Either maintain tree at current height, or aerially inspect watersprouts at attachment points and remove or shorten as necessary.

* Driplines were estimated in some cases where fence prevented obtaining an accurate measurement.

Laguna Creek Trail, City of Elk Grove
 Camden South Spur Project #PT0121
 Camden North Spur Project #WTL005
 Tree Evaluation and Recommendations

To Accompany
 Revised Tree Associates Report
 Dated June 21, 2013

Tree #	Species	Diameter (inches)	Dripline* (radius, feet)	Tree Protection Zone (radius, feet)	Health	Structure	Comments	Recommendations
74	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	20	24 est	24	Good	Fair	Previously topped. Watersprouts with weak attachments sprouting from pruning cuts.	Either maintain tree at current height, or aerially inspect watersprouts at attachment points and remove or shorten as necessary.
75	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	7,11	11	13	Good	Fair	Codominant trunks with included bark.	
76	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	22	24 est	24	Good	Fair	Previously topped. Watersprouts with weak attachments sprouting from pruning cuts. Codominant trunks.	Either maintain tree at current height, or aerially inspect watersprouts at attachment points and remove or shorten as necessary.
77	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	18	28 est	28	Good	Fair	Previously topped. Watersprouts with weak attachments sprouting from pruning cuts.	Either maintain tree at current height, or aerially inspect watersprouts at attachment points and remove or shorten as necessary.

* Driplines were estimated in some cases where fence prevented obtaining an accurate measurement.

Laguna Creek Trail, City of Elk Grove
 Camden South Spur Project #PT0121
 Camden North Spur Project #WTL005
 Tree Evaluation and Recommendations

To Accompany
 Revised Tree Associates Report
 Dated June 21, 2013

Tree #	Species	Diameter (inches)	Dripline* (radius, feet)	Tree Protection Zone (radius, feet)	Health	Structure	Comments	Recommendations
78	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	18	24 est	24	Good	Fair	Previously topped. Watersprouts with weak attachments sprouting from pruning cuts.	Either maintain tree at current height, or aerially inspect watersprouts at attachment points and remove or shorten as necessary.
79	eucalyptus <i>Eucalyptus</i> sp.	5,7,10,8,6,4,4,4	14	18	Good	Poor	All of trunks previously cut at approximately 4'. Stump sprouting with weak attachments.	Remove tree to prevent future structural problems.
80	aleppo pine <i>Pinus halepensis</i>	20	21	21	Good	Good	One of trunks previously removed.	
81	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	8,6,7	12	12	Good	Poor to Fair	Multiple trunks with weak attachments.	
82	aleppo pine <i>Pinus halepensis</i>	21	23	23	Good	Fair	Codominant trunks with included bark. Large trunk previously removed.	Use reduction cuts to reduce amount of foliage on SW-facing trunk by 25%.
83	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	15	11	15	Good	Good		
84	aleppo pine <i>Pinus halepensis</i>	11	17	17	Good	Fair to Good	One of trunks previously removed.	

* Driplines were estimated in some cases where fence prevented obtaining an accurate measurement.

Laguna Creek Trail, City of Elk Grove
 Camden South Spur Project #PT0121
 Camden North Spur Project #WTL005
 Tree Evaluation and Recommendations

To Accompany
 Revised Tree Associates Report
 Dated June 21, 2013

Tree #	Species	Diameter (inches)	Dripline* (radius, feet)	Tree Protection Zone (radius, feet)	Health	Structure	Comments	Recommendations
85	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	22	15	22	Good	Fair	Previously topped. Watersprouts with weak attachments sprouting from pruning cuts.	Either maintain tree at current height, or aerially inspect watersprouts at attachment points and remove or shorten as necessary.
86	aleppo pine <i>Pinus halepensis</i>	16	17	17	Good	Poor to Fair	Previously topped at 15'. Trunk bowed.	
87	aleppo pine <i>Pinus halepensis</i>	14,15	22	22	Good	Fair	Codominant trunks with included bark.	
88	eucalyptus <i>Eucalyptus</i> sp.	5,13,16	12	21	Good	Fair	Multiple trunks. One of trunks previously removed. Previous limb failure.	
89	aleppo pine <i>Pinus halepensis</i>	14	24	24	Good	Fair to Good	Two of trunks previously removed.	
90	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	4,5,9	13	13	Good	Fair	Codominant trunks at base. One of trunks previously removed, stump-sprouts remain.	
91	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	15@3',5,3	12	15	Good	Fair	Multiple trunks.	

* Driplines were estimated in some cases where fence prevented obtaining an accurate measurement.

Laguna Creek Trail, City of Elk Grove
 Camden South Spur Project #PT0121
 Camden North Spur Project #WTL005
 Tree Evaluation and Recommendations

To Accompany
 Revised Tree Associates Report
 Dated June 21, 2013

Tree #	Species	Diameter (inches)	Dripline* (radius, feet)	Tree Protection Zone (radius, feet)	Health	Structure	Comments	Recommendations
92	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	19	14	19	Good	Fair	Previously topped. Watersprouts with weak attachments sprouting from pruning cuts.	Either maintain tree at current height, or aerially inspect watersprouts at attachment points and remove or shorten as necessary.
93	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	9,3,3	14	14	Good	Fair		
94	aleppo pine <i>Pinus halepensis</i>	10,11	22	22	Good	Fair	Codominant trunks.	
95	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	20	18 est	20	Good	Fair	Previously topped. Watersprouts with weak attachments sprouting from pruning cuts. Codominant trunks.	Either maintain tree at current height, or aerially inspect watersprouts at attachment points and remove or shorten as necessary.
96	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	14@4'	14	14	Good	Fair to Good		
97	aleppo pine <i>Pinus halepensis</i>	11	22	22	Fair to Good	Fair	Lower trunk previously removed. Trunk growing at angle. Injury 4' up trunk E-side. Asymmetrical canopy.	

* Driplines were estimated in some cases where fence prevented obtaining an accurate measurement.

Laguna Creek Trail, City of Elk Grove
 Camden South Spur Project #PT0121
 Camden North Spur Project #WTL005
 Tree Evaluation and Recommendations

To Accompany
 Revised Tree Associates Report
 Dated June 21, 2013

Tree #	Species	Diameter (inches)	Dripline* (radius, feet)	Tree Protection Zone (radius, feet)	Health	Structure	Comments	Recommendations
98	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	18@4'	24	24	Good	Fair	Previously topped. Watersprouts with weak attachments sprouting from pruning cuts. Codominant trunks.	Either maintain tree at current height, or aerially inspect watersprouts at attachment points and remove or shorten as necessary.
99	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	17	16	17	Good	Fair	Previously topped. Watersprouts with weak attachments sprouting from pruning cuts.	Either maintain tree at current height, or aerially inspect watersprouts at attachment points and remove or shorten as necessary.
100	aleppo pine <i>Pinus halepensis</i>	8,9	20	20	Good	Fair	Codominant trunks.	
101	red ironbark eucalyptus <i>Eucalyptus sideroxylon</i>	15	20	20	Good	Good		
102	coast redwood <i>Sequoia sempervirens</i>	8	8	8	Good	Good		Remove stakes. Provide irrigation ASAP or replace with more suitable species.

* Driplines were estimated in some cases where fence prevented obtaining an accurate measurement.

Laguna Creek Trail, City of Elk Grove
 Camden South Spur Project #PT0121
 Camden North Spur Project #WTL005
 Tree Evaluation and Recommendations

To Accompany
 Revised Tree Associates Report
 Dated June 21, 2013

Tree #	Species	Diameter (inches)	Dripline* (radius, feet)	Tree Protection Zone (radius, feet)	Health	Structure	Comments	Recommendations
103	coast redwood <i>Sequoia sempervirens</i>	6	8	8	Good	Good		Remove stakes. Provide irrigation ASAP or replace with more suitable species.
104	Mount Atlas pistache <i>Pistacia atlantica</i>	6,4	12	12	Good	Fair	Codominant trunks.	
105	oak <i>Quercus</i> sp.	9	18	18	Good	Good		Provide irrigation
106	oak <i>Quercus</i> sp.	9	15	15	Good	Good	Mulberry growing 2' away from trunk.	Remove mulberry. Provide irrigation.
107	oak <i>Quercus</i> sp.	5	11	11	Poor	Poor to Fair	Asymmetrical canopy due to dieback on side adjacent to neighboring trees.	Remove tree to allow 2 adjacent oaks sufficient room for growth.
108	oak <i>Quercus</i> sp.	14	22	22	Fair to Good	Good	Branch and twig dieback. Tallow and privet sprouting adjacent to trunk.	Crown clean. Provide irrigation. Remove privet and tallow.
109	oak <i>Quercus</i> sp.	8	16	16	Fair	Fair	Tallow abutting base of trunk. Branch and twig dieback.	Crown clean. Remove tallow, leave stump in place. Provide irrigation.

* Driplines were estimated in some cases where fence prevented obtaining an accurate measurement.

Laguna Creek Trail, City of Elk Grove
 Camden South Spur Project #PT0121
 Camden North Spur Project #WTL005
 Tree Evaluation and Recommendations

To Accompany
 Revised Tree Associates Report
 Dated June 21, 2013

Tree #	Species	Diameter (inches)	Dripline* (radius, feet)	Tree Protection Zone (radius, feet)	Health	Structure	Comments	Recommendations
110	coast redwood <i>Sequoia sempervirens</i>	11	8	8	Poor to Fair	Good	Some branches dead.	Remove dead branches. Provide irrigation ASAP or replace with more suitable species.
111	coast redwood <i>Sequoia sempervirens</i>	10	9	9	Poor to Fair	Good	Some branches dead.	Remove dead branches. Provide irrigation ASAP or replace with more suitable species.
112	arroyo willow <i>Salix lasiolepis</i>	14@2'	11	13	Poor	Poor	Center of tree dead. Boring insect activity at base of center primary limbs.	Replace tree.
113	arroyo willow <i>Salix lasiolepis</i>	6,5,7@3'	13	13	Poor to Fair	Fair	Multiple trunks. Branch and twig dieback.	Crown clean.
114	western cottonwood <i>Populus fremontii</i>	7	8	8	Good	Good		Remove stakes.
115	western cottonwood <i>Populus fremontii</i>	6	8	8	Good	Good		Remove stakes.
116	arroyo willow <i>Salix lasiolepis</i>	12@3'	15	15	Poor to Fair	Poor to Fair	Multiple trunks. Extensive branch and twig dieback.	Crown clean or replace tree.
117	arroyo willow <i>Salix lasiolepis</i>	12@1'	12	12	Fair	Fair	Some twig dieback. Tall tree growing through middle of canopy.	Remove tall, leave stump in place.

* Driplines were estimated in some cases where fence prevented obtaining an accurate measurement.

Laguna Creek Trail, City of Elk Grove
 Camden South Spur Project #PT0121
 Camden North Spur Project #WTL005
 Tree Evaluation and Recommendations

To Accompany
 Revised Tree Associates Report
 Dated June 21, 2013

Tree #	Species	Diameter (inches)	Dripline* (radius, feet)	Tree Protection Zone (radius, feet)	Health	Structure	Comments	Recommendations
118	western cottonwood <i>Populus fremontii</i>	7	9	9	Good	Good		Remove stakes.
119	arroyo willow <i>Salix lasiolepis</i>	7	9	9	Poor to Fair	Fair	Extensive branch and twig dieback.	Crown clean or replace tree. Remove stakes.
120	arroyo willow <i>Salix lasiolepis</i>	7,7,4,5	17	17	Fair	Fair	Multiple trunks. Some twig dieback.	Remove stakes.
121	western cottonwood <i>Populus fremontii</i>	8	9	9	Good	Good		Remove stake tie.
122	white mulberry <i>Morus alba</i>	10@18"	12	12	Fair	Fair	Multiple trunks. Twig dieback.	Crown clean.
123	western cottonwood <i>Populus fremontii</i>	15,6	16	16	Fair	Fair	Branch and twig dieback.	Crown clean. Remove smaller trunk.
124	western cottonwood <i>Populus fremontii</i>	15,6	15	16	Fair	Fair	Twig dieback.	Crown clean.
125	trident maple <i>Acer buergerianum</i>	3	7	7	Good	Good		Remove stakes.
126	scarlet oak <i>Quercus coccinea</i>	22	29	29	Good	Good	Standing water around base of tree.	Repair irrigation, irrigate no more than 3x week.
127	<i>Koelreuteria</i> sp.	9	16	16	Poor to Fair	Poor	Half of canopy dead. Mushrooms growing near base of trunk.	Replace tree.

* Driplines were estimated in some cases where fence prevented obtaining an accurate measurement.

Laguna Creek Trail, City of Elk Grove
 Camden South Spur Project #PT0121
 Camden North Spur Project #WTL005
 Tree Evaluation and Recommendations

To Accompany
 Revised Tree Associates Report
 Dated June 21, 2013

Tree #	Species	Diameter (inches)	Dripline* (radius, feet)	Tree Protection Zone (radius, feet)	Health	Structure	Comments	Recommendations
128	maple <i>Acer</i> sp.	18@3.5'	29	29	Good	Good	Codominant trunks with included bark. Trunk engulfing beaver fence. Standing water around trunk.	Move beaver fence back. Repair irrigation, irrigate no more frequently than 3x week.
129	maple <i>Acer</i> sp.	17	27	27	Good	Good		
130	trident maple <i>Acer buergerianum</i>	8	13	13	Good	Good	Large diameter primary limb with included bark.	Use reduction cuts to reduce amount of foliage on lowermost primary limb by 25%.
131	scarlet oak <i>Quercus coccinea</i>	17	27	27	Good	Good		
132	Goodding's black willow <i>Salix gooddingii</i>	25@2.5'	27	27	Fair to Good	Fair	Codominant trunks. Branch dieback.	Crown clean.
133	silver maple <i>Acer saccharinum</i>	8	16	16	Good	Fair	Codominant leaders. Root damage likely from mower equipment.	Subdue north-facing leader.
134	silver maple <i>Acer saccharinum</i>	8	13	13	Good	Fair	Codominant leaders. Root damage likely from mower equipment.	Subdue north-facing leader.
135	silver maple <i>Acer saccharinum</i>	9	16	16	Good	Fair	North-facing primary limb with narrow attachment and included bark.	Use reduction cuts to reduce length of north-facing primary limb by 25%.

* Driplines were estimated in some cases where fence prevented obtaining an accurate measurement.

Laguna Creek Trail, City of Elk Grove
 Camden South Spur Project #PT0121
 Camden North Spur Project #WTL005
 Tree Evaluation and Recommendations

To Accompany
 Revised Tree Associates Report
 Dated June 21, 2013

Tree #	Species	Diameter (inches)	Dripline* (radius, feet)	Tree Protection Zone (radius, feet)	Health	Structure	Comments	Recommendations
136	silver maple <i>Acer saccharinum</i>	11	20	20	Good	Fair	Multiple trunks at 10'. Surface root wounds likely from mowing equipment.	
137	silver maple <i>Acer saccharinum</i>	10	17	17	Good	Fair	Multiple trunks at 6'.	
138	scarlet oak <i>Quercus coccinea</i>	14	22	22	Good	Good		
139	scarlet oak <i>Quercus coccinea</i>	8	21	21	Good	Good		
140	scarlet oak <i>Quercus coccinea</i>	10	17	17	Good	Good		
141	arroyo willow <i>Salix lasiolepis</i>	6,4,6,5,4,4,4,3,3	26	26	Fair to Good	Fair	Multiple trunks at base.	
142	arroyo willow <i>Salix lasiolepis</i>	6,6,4,5,5,4	21	21	Good	Fair	Multiple trunks at base.	
143	Goodding's black willow <i>Salix gooddingii</i>	4,8,5,7,5,3	18	18	Fair to Good	Poor to Fair pending further inspection	Appears limbs may originate from prostrate trunk. Multiple trunks.	Root crown inspection to ensure adequate anchorage or remove tree if target will be near.
144	Goodding's black willow <i>Salix gooddingii</i>	14,16@3.5'	22 est.	22	Fair	Fair	Codominant trunks. Branch dieback.	Crown clean.

* Driplines were estimated in some cases where fence prevented obtaining an accurate measurement.



tagged and evaluated in this section.

A majority of these coast redwoods dead and therefore not evaluated. However, there were two live trees tagged and evaluated (#110 and 111)

Trees #104-109 were tagged and evaluated in this section.

Coast redwoods #102 and 103 were tagged and evaluated on W-side of fence.

Trees measuring > 6" in diameter were tagged and evaluated in this section. (#8-101)

EXHIBIT A-B

**Laguna Creek Trail
North Camden Spur**

BA



Biological Assessment

Multi-Use Trail from Camden Park North to MacDonald Park

City of Elk Grove, Sacramento County, California

District 3

Federal Project Number: CML-5479(040)

January 2015



For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Maureen Doyle, Branch M-1, 703 B Street, Marysville, CA 95991, (530) 741-4470, or use the California Relay Service TTY number, (530) 741-4509.

Biological Assessment

*Multi-Use Trail from Camden Park North to MacDonald Park
City of Elk Grove, Sacramento County, California*

District 3


Federal Project Number: CML-5479(040)

January 2015

STATE OF CALIFORNIA
Department of Transportation
City of Elk Grove

Prepared By: _____

Date: 1/7/15


Summer Pardo, Senior Biologist
(916) 517-4496

2729 Prospect Park Drive, Suite 220, Rancho Cordova, CA 95670
PMC

Approved By: _____


Date: 1-9-15


Maureen Doyle, Associate Biologist/Botanist
(530) 741-4470

Environmental Management Branch, M-1
Caltrans/District 3

Approved By: _____

Date: 1/9/15


For
K Susan D. Bauer, Branch Chief
(530) 741-7113

Environmental Management Branch, M-1
Caltrans/District 3

Summary of Findings, Conclusions and Determinations

The City of Elk Grove (City) proposes to extend the multi-use trail from the west end of the existing Laguna Creek Trail at the northern tip of Camden Park North to MacDonald Park via Beckington Drive. Laguna Creek Trail offers access to Old Town Elk Grove, Camden Lake, residential neighborhoods, and many retail centers and restaurants. Camden Park's main feature is Laguna Creek Trail, which is used as a scenic horse and jogging trail. MacDonald Park features a soccer field, open play area, and playground equipment.

Currently, Laguna Creek Trail is split into three stretches – the longest extending for 2.25 miles from south of the Bond Road/Waterman Road intersection along Laguna Creek to the northern tip of Camden Park, the next longest extending for approximately 1 mile from east of Mix Park along Whitehouse Creek to just north of MacDonald Park, and the shortest extending for approximately one-third mile from Camden Lake to Whitehouse Creek. The proposed project would connect the two longest segments of Laguna Creek Trail from the existing path at the northern tip of Camden Park for approximately 700 feet of Class 1 facility to south of White Peacock Court/Beckington Drive, then along an approximately 1,050-foot-long Class 2 facility on Beckington Drive, and from White Peacock Court/Beckington Drive for approximately 200 feet of Class 1 facility to the existing path at MacDonald Park.

This document identifies and quantifies resources that may be affected by project implementation. Various studies were undertaken to identify and map biological resources within the project vicinity. The following impacts on biological resources may result from the proposed project.

Federally Listed Species Impacts and Mitigation

Valley Elderberry Longhorn Beetle (*Desmocercus californicus dimorphus*)

The project will result in direct impacts to one elderberry shrub. Direct impacts were calculated by identifying all elderberry shrubs within the limits of construction and a 20-foot buffer of the limits of construction. Minimization ratios provided by the U.S. Fish and Wildlife Service (USFWS 1999a) are based on the number of stems potentially impacted by a project, presence of exit holes, and association with riparian or non-riparian habitat. The one shrub identified contained one stem, measuring 1 inch in diameter at ground level. No exit holes were observed, and the shrub is associated with the Whitehouse Creek riparian corridor.

Due to a lack of exit holes, the shrub proposed for removal does not have the potential to promote colonization through transplantation; therefore, transplanting the shrub has not been incorporated into this mitigation strategy. The mitigation strategy includes the following proposed conservation measures:

- CM-1:** Replace the loss of one elderberry shrub/stem at a 2:1 ratio through the dedication of mitigation credit(s) within a USFWS-approved mitigation bank, or through the payment of in-lieu fees to an approved valley elderberry longhorn beetle conservation bank that results in two conservation plantings of elderberry seedlings.
- CM-2:** Associated native species plantings shall be offset at 1:1 ratio through the dedication of mitigation credit(s) within a USFWS-approved mitigation bank, or through the payment of in-lieu fees to an approved valley elderberry longhorn beetle conservation bank that results in two conservation plantings of native associates.

This mitigation strategy is in accordance with the USFWS guidelines (1999a). Implementation of the proposed mitigation strategy will ensure that all project-related impacts to valley elderberry longhorn beetle will be fully mitigated; therefore, the proposed project *may affect, and is likely to adversely affect* this species.

Giant Garter Snake (*Thamnophis gigas*)

Potentially suitable aquatic habitat for giant garter snake is present within Laguna Creek and Whitehouse Creek. All undeveloped communities within 200 feet of aquatic habitat are considered potentially suitable upland habitat (USFWS 1999b). The closest occurrence (#169) of giant garter snake is ±3.4 miles southeast of the action area (CDFW 2014e) and east of State Route 99 (SR 99). This occurrence is located near Elk Grove Creek, which is separated from the Laguna Creek and Whitehouse Creek by extensive development. No aquatic features containing the essential habitat components connect Laguna Creek and Whitehouse Creek with Elk Grove Creek, east of SR 99.

The closest extant occurrence (#198) on Laguna Creek is located approximately 5.4 river miles west of the action area, near the Sacramento County Wastewater Treatment Plant (**Figure 9**). There are two possibly extirpated occurrences (#14 and #84) on Laguna Creek just west of the action area and SR 99. Due to the distance between the extant occurrence on Laguna Creek to the west and the presence of potential dispersal

barriers (e.g., roads) between this occurrence and the action area, as well as the lack of suitable dispersal habitat between the action area and the extant occurrence near Elk Grove Creek, the presence of this species within the action area is considered unlikely. Therefore, the proposed project *may affect, but is not likely to adversely affect* giant garter snakes.

No critical habitat has been designated in the action area; therefore, no impact to critical habitat is expected.

Table of Contents

Chapter 1.	Introduction	1
1.1.	Consultation History	1
1.2.	Project Purpose and Need	1
1.2.1.	Purpose	1
1.2.2.	Need	1
1.3.	Description of the Proposed Action	2
1.3.1.	Project Location	2
1.3.2.	Construction Schedule.....	3
1.3.3.	Operations and Maintenance	4
1.3.4.	Proposed Avoidance, Minimization, and Conservation Measures.....	4
1.3.4.1.	Avoidance and Minimization Measures.....	4
1.3.4.2.	Conservation Measures	4
1.3.5.	Interrelated and Interdependent Actions	5
1.3.6.	Action Area	5
1.4.	Document Preparation History.....	5
Chapter 2.	Study Methods.....	17
2.1.	Studies Required	17
2.1.1.	Literature Review	17
2.1.2.	Habitat Assessment	17
2.1.3.	Wetland Delineation.....	18
2.1.4.	Rare Plant Surveys	18
2.1.5.	Impact Assessment.....	18
2.2.	Personnel and Survey Dates	19
2.3.	Agency Coordination and Professional Contacts	19
2.4.	Limitations That May Influence Results	20
Chapter 3.	Environmental Baseline	21
3.1.	Description of Existing Biological and Physical Conditions	21
3.1.1.	Physical Conditions.....	21
3.1.1.1.	Topography	21
3.1.1.2.	Hydrology.....	21
3.1.1.3.	Soils.....	21
3.1.2.	Vegetative Communities	22
3.1.2.1.	Urban.....	22
3.1.2.2.	Annual Grassland	23
3.1.2.3.	Man-made Ditch.....	23
3.1.2.4.	Fresh Emergent Wetland	24
3.1.2.5.	Open Water	24
3.1.2.6.	Valley Foothill Riparian	25
3.1.3.	Habitat Connectivity	25
3.2.	Listed and Proposed Species Potentially in the Biological Study Area	25
Chapter 4.	Effects of the Action	43
4.1.	Federally Listed/Proposed Plant Species	43
4.2.	Federally Listed or Proposed Animal Species Occurrences.....	43
4.2.1.	Discussion of "Valley Elderberry Longhorn Beetle"	43
4.2.1.1.	Survey Results.....	43
4.2.1.2.	Critical Habitat	44
4.2.1.3.	Project Effects	44

4.2.1.4.	Avoidance and Minimization Measures	44
4.2.1.5.	Conservation Measures	44
4.2.1.6.	Cumulative Effects	44
4.2.2.	Discussion of "Giant Garter Snake"	44
4.2.2.1.	Survey Results	44
4.2.2.2.	Critical Habitat	45
4.2.2.3.	Project Effects	45
4.2.2.4.	Avoidance and Minimization Measures	45
4.2.2.5.	Conservation Measures	45
4.2.2.6.	Cumulative Effects	46
Chapter 5.	Conclusions and Determination.....	49
5.1.	Conclusions	49
5.2.	Determination	49
5.2.1.	Valley Elderberry Longhorn Beetle	49
5.2.2.	Giant Garter Snake	50
Chapter 6.	Literature Cited.....	51
Appendix A	Database Search Results	A-1
Appendix B	Wetland Delineation	B-1
Appendix C	Rare Plant Survey	C-1

List of Figures

Figure 1. Regional Vicinity Map.....	7
Figure 2. Project Location Map	9
Figure 3. Action Area.....	11
Figure 4. Action Area and Project Impact Map.....	13
Figure 5. Laguna Creek Trail – North and South Camden Spurs	15
Figure 6. NRCS Soils Map	27
Figure 7. Vegetative Communities	29
Figure 8. CNDDDB Occurrences within 5 Miles of the Action Area	31
Figure 9. CNDDDB Giant Garter Snake Occurrences in the Vicinity of the Action Area	47

List of Tables

Table 1: Listed, Proposed Species and Critical Habitat Potentially Occurring or Known to Occur in the Project Area.....	33
--	----

List of Abbreviated Terms

amsl	above mean sea level
BA	biological assessment
BMP	best management practice
CDFW	California Department of Fish and Wildlife
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
FGC	Fish and Game Code
NMFS	National Marine Fisheries Service
NRCS	Natural Resources Conservation Service
OHWM	ordinary high water mark
TCZ	temporary construction zone
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WEAP	Worker Environmental Awareness Program
WoUS	waters of the U.S.

Chapter 1. Introduction

The purpose of this biological assessment (BA) is to provide technical information and to review the proposed project in sufficient detail to determine to what extent the proposed project may affect federally threatened, endangered, or proposed species. The BA is prepared in accordance with legal requirements found in Section 7(a)(2) of the Endangered Species Act (16 U.S. Code (USC) 1536(c)) and with Federal Highway Administration and California Department of Transportation regulation, policy, and guidance. The document presents technical information upon which later decisions regarding project impacts are developed.

1.1. Consultation History

No consultation with the U.S. Fish and Wildlife Service (USFWS) has occurred to date for the current proposed project.

1.2. Project Purpose and Need

1.2.1. Purpose

The purpose of this project is to provide bicycle-pedestrian trail connectivity between the Camden Point and Camden Estates residential areas (north of Laguna Creek) to schools and commercial retail-shopping-dining uses along or south of Bond Road. There is currently no trail crossing of Laguna Creek between East Stockton Boulevard to the west and Elk Grove Florin Road to the east. This project is the north half of two projects to improve this trail system in Elk Grove.

1.2.2. Need

The project will enhance pedestrian safety for schoolchildren commuting to four schools: Ellen Feickert and James A. McKee elementary schools, Joseph Kerr Middle School, and Sheldon High School. It will link with the existing trail system as well as with bike routes and other pedestrian paths. It provides an alternative mode of travel and encourages safer pedestrian and bicycle (non-motorized) transportation and allows access along natural environmental features such as Laguna Creek and Whitehouse Creek. It also provides for use of alternative transportation means to access park and ride lots adjacent to State Route 99 via the connection to Bond Road.

1.3. Description of the Proposed Action

The City of Elk Grove (City) proposes to extend a multi-use trail from the west end of the existing Laguna Creek Trail at the northern tip of Camden Park to MacDonald Park via Beckington Drive. Laguna Creek Trail offers access to Old Town Elk Grove, Camden Lake, residential neighborhoods, and many retail centers and restaurants. Camden Park's main feature is Laguna Creek Trail, which is used as a scenic horse and jogging trail. MacDonald Park features a soccer field, open play area, and playground equipment. A trail along Whitehouse Creek is found just north of MacDonald Park. Currently, Laguna Creek Trail is split into three stretches – the longest extending for 2.25 miles from south of the Bond Road/Waterman Road intersection along Laguna Creek to the northern tip of Camden Park, the next longest extending for approximately 1 mile from east of Mix Park along Whitehouse Creek to just north of MacDonald Park, and the shortest extending for approximately one-third mile from Camden Lake to Whitehouse Creek.

The proposed project would connect the two longest segments of Laguna Creek Trail from the existing path at the northern tip of Camden Park for approximately 700 feet of Class 1 facility to south of White Peacock Court/Beckington Drive, then along an approximately 1,050-foot-long Class 2 facility on Beckington Drive, and from White Peacock Court/Beckington Drive for approximately 200 feet of Class 1 facility to the existing path at MacDonald Park. Approximately 115 feet of existing Class 1 facility between homes facing White Peacock Court will require minor improvements and striping and the approximately 1,050-foot-long Class 2 facility on Beckington Drive will require only striping. The proposed project will be constructed generally within existing public right of ways and streets; however, minor acquisition and construction easements will be required. The project is consistent with the Elk Grove General Plan and the Elk Grove Bicycle, Pedestrian, and Trails Master Plan. Each plan identifies the need for an off-street multi-use trail system providing connections throughout the city and the Sacramento region.

1.3.1. Project Location

The proposed project is located in the City of Elk Grove, Sacramento County, California (**Figures 1 and 2**). More specifically the project is located in Section 25, Township 7 North, and Range 5 East. Land uses within the action area are designated as public open space, public park, and low-density residential according to the City of Elk Grove General Plan Land Use Policy Map (City of Elk Grove 2009). The action

area is generally bounded by Laguna Creek to the south and Whitehouse Creek to the north.

1.3.2. Construction Schedule

- Pre-construction work includes setting up water pollution control features to prevent silt laden materials or runoff from entering Laguna Creek. Water pollution control features will be based on Caltrans and/or California Storm Water Quality Association standard best management practices (BMPs).
- Construction work includes clearing away existing vegetative growth along the trail route, clearing trees, earthmoving work – including excavation and fill placement, import of aggregate materials and hot mix asphalt pavement or concrete, placement of new storm drain pipe – including excavation and backfill, construction of a reinforced concrete headwall, placement of rock slope protection and pavement striping activities. Work includes trenching in new irrigation lines and heads and replacement of any damaged landscaping within existing landscaped areas of Camden Park.
- Typical equipment includes combination front-end loaders/backhoes, tracked backhoes, motor grader, asphalt paving equipment, earth/pavement roller/compactors, concrete delivery trucks, pickup trucks, dump trucks, trenchers, and other miscellaneous equipment such as air compressors, small generators, and other portable power tools.
- All work will be performed during daylight hours. Work will start in the spring upon conclusion of the rainy season, typically in May or June and be completed by the end of October.
- Temporary construction access will use the existing concrete path in Camden Park and the route of the new path.
- Excess earth and other deleterious materials (rubble, vegetative debris, trash, etc.) will be hauled away and disposed of at an appropriate disposal facility.
- Preliminary Design Plans are attached. The new path footprint will be 14' wide; with 2' decomposed granite shoulders on either side of a 10' wide asphalt or concrete path. The finish surface of most of the new path will be placed such that it matches existing ground elevations. Work includes adding

bike lane stripes, traffic signs and constructing curb ramps along Beckington Drive.

- Total fill to be placed on the project is estimated at 1,000 cubic yards. About 50 lineal feet of the storm drain outfall channel (jurisdictional wetlands) from Sheldon Estates area will be filled in with about 200 cubic yards of earth. A new storm drain pipe will be placed within the filled area to convey storm runoff. A reinforced concrete headwall will be construction along with about 200 square feet of rock slope protection immediately adjacent to the headwall.

1.3.3. Operations and Maintenance

It is anticipated that weekly (\pm) visits will be conducted by Cosumnes Community Services District parks staff to empty waste and recycle bins and conduct miscellaneous clean-up, etc. In addition, minor repair work will likely start several years after completion of construction and/or after any major storm event where the water level overtops the southern portion of the trail.

1.3.4. Proposed Avoidance, Minimization, and Conservation Measures

1.3.4.1. AVOIDANCE AND MINIMIZATION MEASURES

Only one elderberry shrub was identified in the BSA, which will be removed during project construction. No elderberry shrubs will be indirectly affected (i.e., remain during project construction). Additionally, giant garter snakes are unlikely to occur in the action area; therefore, no avoidance and minimization measures are proposed.

1.3.4.2. CONSERVATION MEASURES

CM-1: Replace the loss of one elderberry shrub/stem at a 2:1 ratio through the dedication of mitigation credit(s) within a USFWS-approved mitigation bank, or through the payment of in-lieu fees to an approved valley elderberry longhorn beetle conservation bank that results in two conservation plantings of elderberry seedlings.

CM-2: Associated native species plantings shall be offset at 1:1 ratio through the dedication of mitigation credit(s) within a USFWS-approved mitigation bank, or through the payment of in-lieu fees to an approved valley elderberry longhorn beetle conservation bank that results in two conservation plantings of native associates.

1.3.5. Interrelated and Interdependent Actions

Section 7 of the Endangered Species Act requires a federal agency to examine the effects of a proposed federal action on federally listed species including direct, indirect, and other effects from activities that are interrelated and interdependent with the action. Interrelated actions are defined as those that are part of a larger action and depend upon the proposed action for their justification. Interdependent actions are defined as those that would not occur but for the proposed action.

The proposed action/project is not interrelated or interdependent on any other actions; therefore, no further analysis of interrelated or interdependent effects is provided.

1.3.6. Action Area

The action area for this project was defined using a 250-foot buffer off the project footprint (**Figure 3**). This boundary was chosen due to the presence of vernal pool features in proximity to the project footprint. The USFWS typically considers all vernal pool features within 250 feet of the proposed development indirectly affected. In addition, this boundary includes all areas that could be impacted by the project, plus a buffer to accommodate any changes to project limits and project design that may occur during project development. **Figure 4** depicts the action area limits along with the project impact area (footprint TCZ).

The proposed project directly abuts a concurrent project to the south, Laguna Creek Trail-South Camden Spur (**Figure 5**). In order to avoid overlap in evaluation of species impacts associated with each project, both project footprints were joined, a 250-foot buffer applied, and the action area was split between the two projects. As a result, the 250-foot buffer does not apply to the southern project boundary.

1.4. Document Preparation History

The initial draft of this document was prepared by PMC senior biologist Summer Pardo and reviewed by City of Elk Grove senior project manager Michael Karoly for technical content.



City of Elk Grove
Development Services

Figure 1
Regional Vicinity

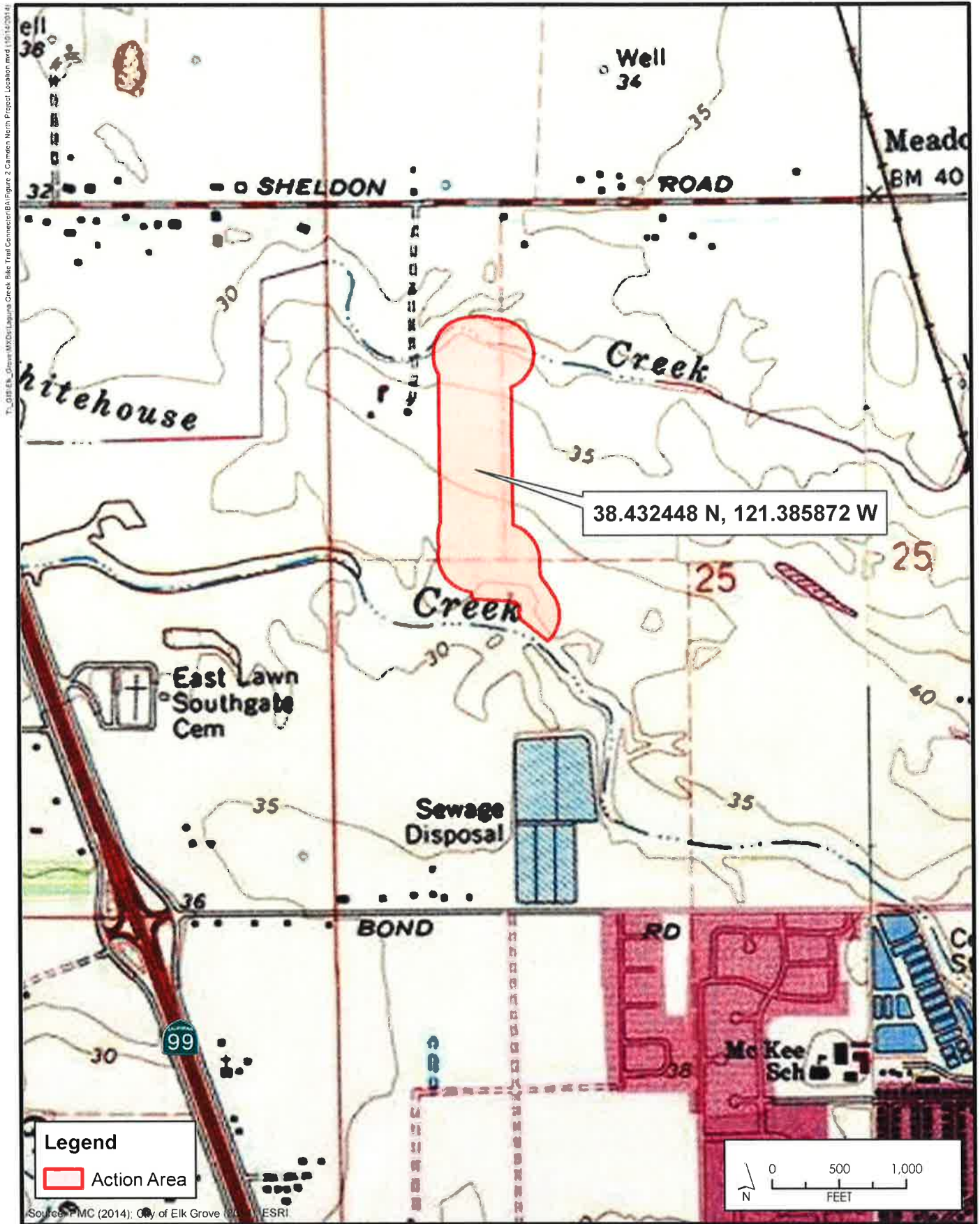


Figure 2
Project Location

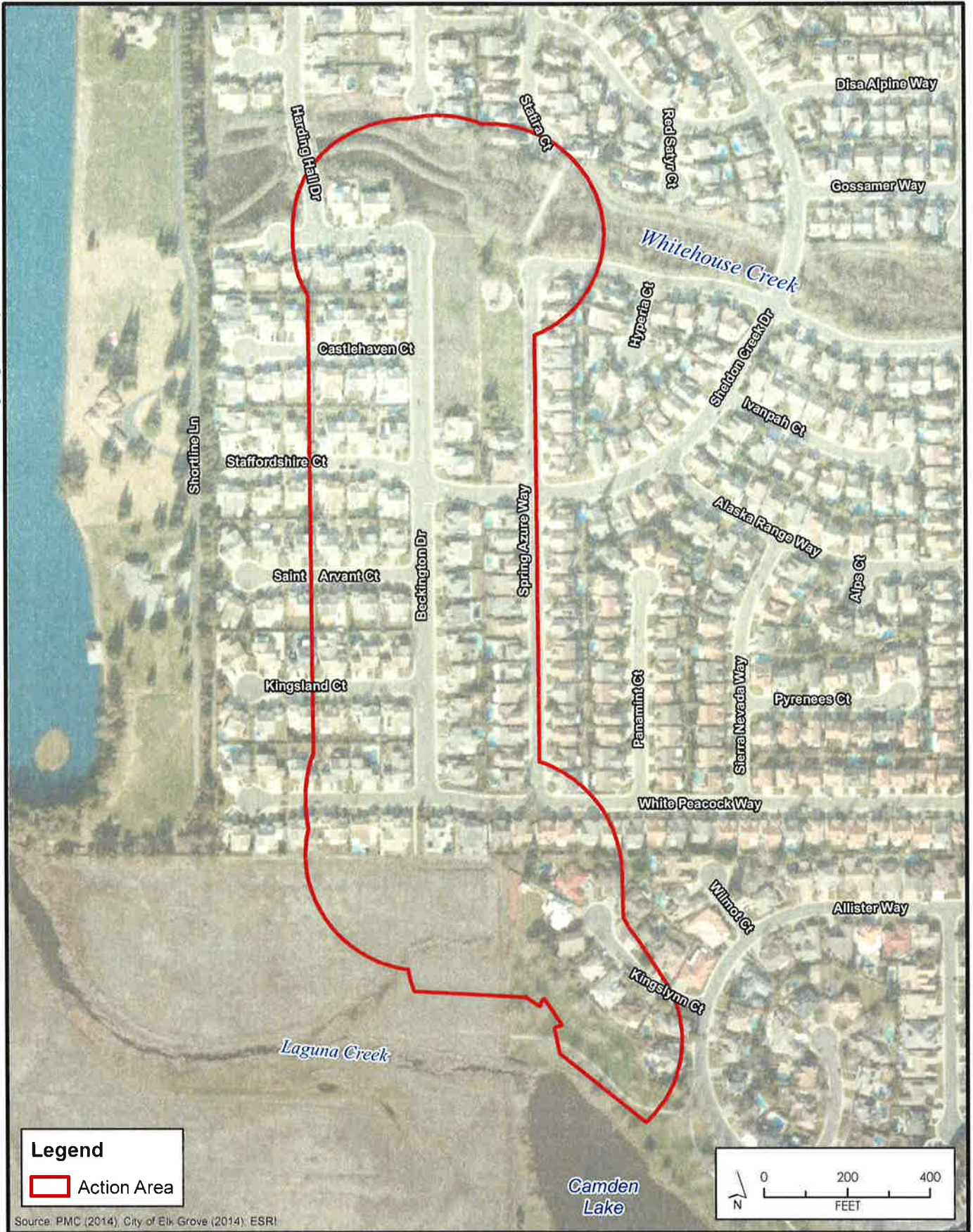
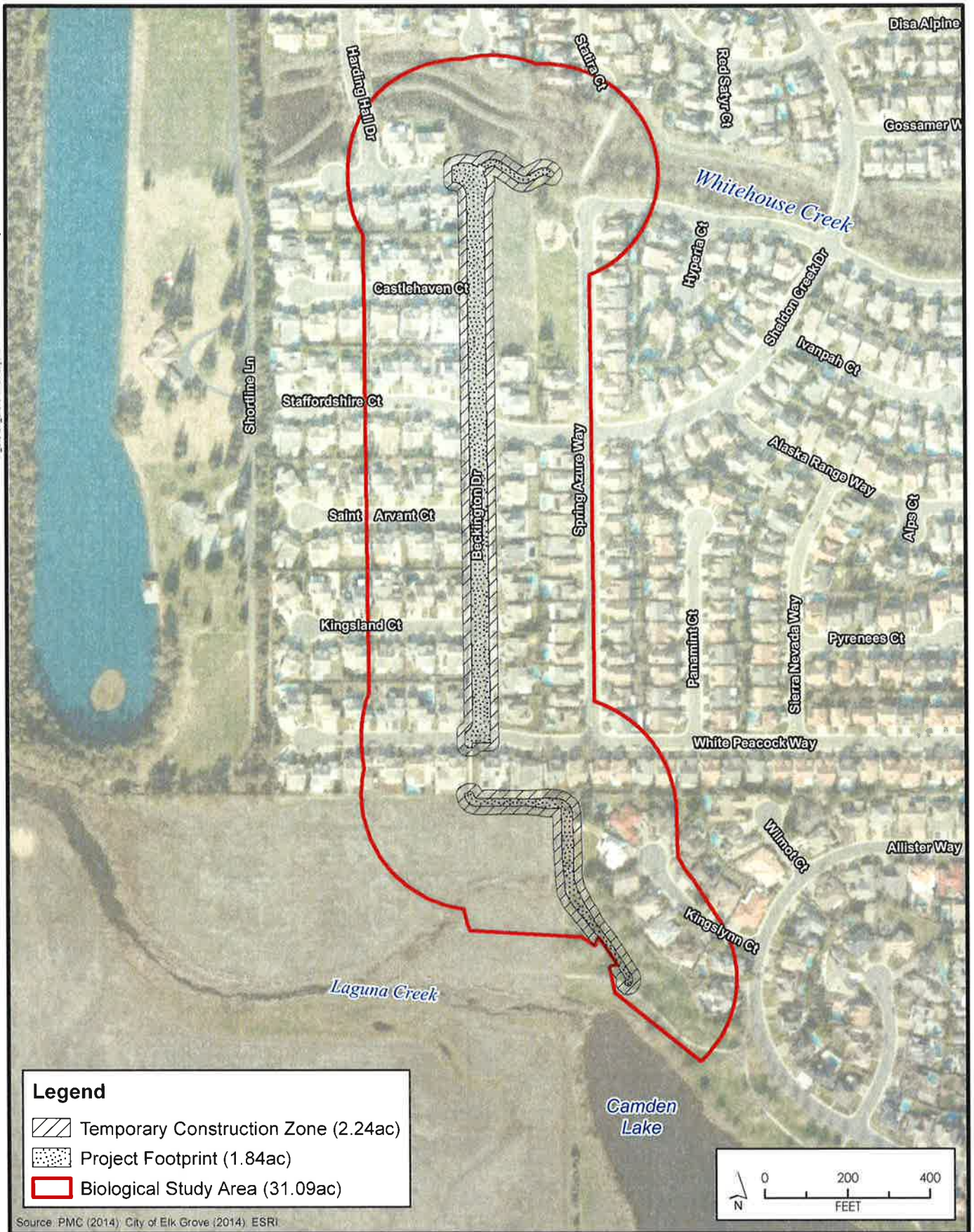


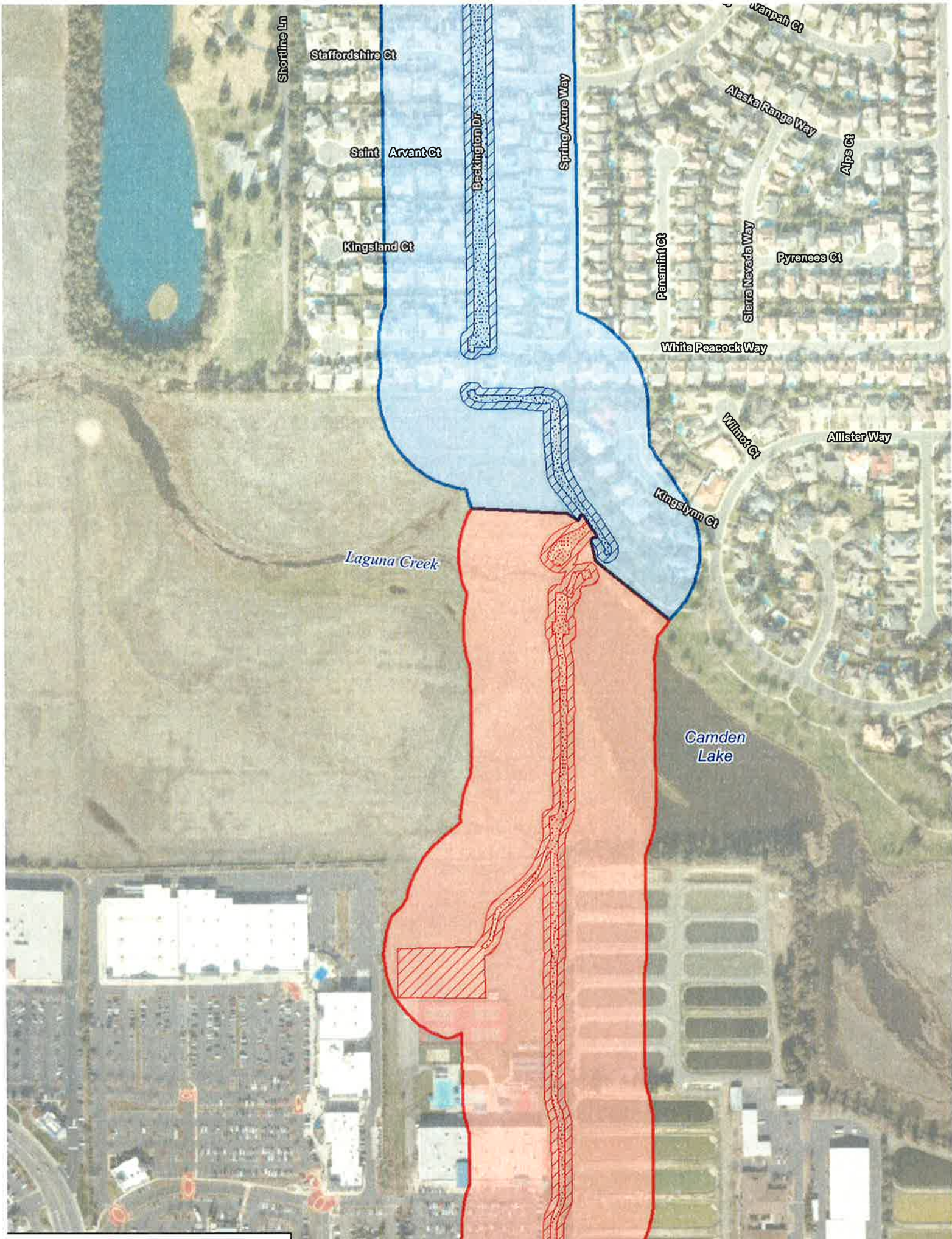
Figure 3
Action Area

T:\GIS\EL_Grove\MXD\Laguna Creek Bike Trail Connection\BA\Figure 4 Camden North Action Area & Project Impact.mxd (10/14/2014)



City of Elk Grove
Development Services

Figure 4
Action Area and Project Impact Map



Shortline Ln

Staffordshire Ct

Saint Arvant Ct

Kingsland Ct

Beckington Dr

Spring Azure Way

Wanhah Ct

Alaska Range Way

Alps Ct

Panamint Ct

Sierra Nevada Way

Pyrenees Ct

White Peacock Way

Wilnot Ct

Allister Way

Kingslynn Ct

Laguna Creek

Camden Lake

Chapter 2. Study Methods

This chapter summarizes the technical studies performed to date.

2.1. Studies Required

Biologists reviewed the project description and conceptual design plans, performed literature reviews and database searches, and conducted reconnaissance-level biological surveys to obtain information regarding habitat quality and the potential presence of federally listed plant and wildlife species within the action area.

2.1.1. Literature Review

A list of federally listed species and critical habitats that have the potential to occur within the action area or project vicinity was prepared using information obtained from the USFWS (2014a) Sacramento office's Species Lists, the USFWS (2014b) Critical Habitat Portal, the California Department of Fish and Wildlife (CDFW) (2014a) California Natural Diversity Database (CNDDDB), and the California Native Plant Society (CNPS) (2014) Inventory of Rare and Endangered Plants of California.

A search of the USFWS Sacramento office's Species Lists database was performed for the Elk Grove, Florin, Bruceville, Galt, Courtland, Clarksville, Sacramento East, Carmichael, and Sacramento West, California, U.S. Geological Survey (USGS) 7.5-minute quadrangles (quads) to identify federally listed species under USFWS jurisdiction that may be affected by the proposed project. In addition, a query of the USFWS's Critical Habitat Portal was conducted to identify any designated critical habitat on or in the vicinity of the action area. The CNDDDB provided a list of processed and unprocessed occurrences of federally listed species identified within the aforementioned USGS quads. The CNPS database was also queried to identify federally listed plant species with the potential to occur in the aforementioned USGS quads. Please see **Appendix A** for the raw data returned from the database queries.

2.1.2. Habitat Assessment

A habitat assessment of the action area was performed by PMC biologists on October 27, 2010, and again on December 11, 2013, to assess the biological resources that may be impacted as part of the proposed project, map vegetative communities on and adjacent to the action area, and evaluate the potential suitability of those communities for federally listed species returned in the literature review. A habitat layer was created for vegetative communities and land uses within the action area using the

geographic information system ArcView program based on aerial photo-interpretation and data collected during reconnaissance-level surveys. Habitat classifications were assigned using A Guide to Wildlife Habitats of California (CDFW 2014b).

2.1.3. Wetland Delineation

A PMC biologist conducted a delineation of WoUS within the action area. A portion of the action area was previously delineated in 2010 and verified by the U.S. Army Corps of Engineers (USACE) (**Appendix B**). The project extent has been expanded since the 2010 delineation; therefore, the purpose of this delineation was to reverify the work done in 2010 and to map the aquatic features in the remaining portions of the action area. The delineation and reverification were conducted on December 11, 2013, in accordance with the methodologies outlined in the USACE regulatory guidance letter regarding OHWM identification (2005), the Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987), and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008).

A field review of the delineation as conducted with USACE representative Lisa Gibson on April 7, 2014, and a preliminary jurisdictional determination was issued by the USACE on April 28, 2014 (**Appendix B**).

2.1.4. Rare Plant Surveys

A rare plant survey was conducted on May 6, 2011, by a PMC biologist in accordance with the General Rare Plant Survey Guidelines (USFWS 2002) and the Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (CDFW 2000) to evaluate the presence or absence of federally listed plants within the action area. A summary memo presenting the findings of this survey is provided in **Appendix C**.

Transects were systematically walked across the action area to detect the presence of rare plant species. When potential special-status plant species were observed, their presence was recorded on a Trimble Geo XT. If the species were growing in a large clump, the numbers of individual plants were estimated. No federally listed plants were documented within the action area.

2.1.5. Impact Assessment

The impact assessment is based on information provided in the project description, environmental setting, and conceptual plans; federal, state, and local regulatory requirements regarding impacts to biological resources; and data collected from the

literature review, habitat assessment, and wetland delineation. When information about the presence of a particular federally listed species is unknown, but suitable habitat is present, the impact analysis takes a conservative approach and presence is inferred. This impact assessment considers permanent and temporary impacts in addition to cumulative and indirect impacts of each federally listed species being analyzed. Impacts to each species are identified and appropriate avoidance, minimization, and conservation measures are discussed further in Chapter 4.

2.2. Personnel and Survey Dates

A delineation and habitat assessment was conducted by a PMC biologist on October 27, 2010.

A PMC biologist conducted a site visit on March 11, 2011, to analyze the potential of adjacent seasonal wetlands to support listed vernal pool crustaceans.

A PMC biologist conducted a rare plant survey on May 6, 2011.

A delineation and habitat assessment was performed by a PMC biologist on December 11, 2013.

PMC biologists conducted a site visit on April 9, 2014, to evaluate and take measurements of one elderberry bush located in MacDonald Park at the northern end of the action area.

2.3. Agency Coordination and Professional Contacts

On April 7, 2014, PMC biologists met with USACE representative Lisa Gibson to review the delineation.

On April 14, 2014, City of Elk Grove staff met with staff from Caltrans at the project site to discuss project impacts, including impacts to biological resources associated with the project.

2.4. Limitations That May Influence Results

No limitations to the assessment efforts or information collected to date have been identified. Standard protocols were used for biological surveys that were conducted; surveys were conducted during appropriate seasons and under appropriate weather conditions. The presence of potentially occurring federally listed species is inferred in suitable habitat within and adjacent to the action area until protocol-level and/or preconstruction surveys are completed, as necessary.

Chapter 3. Environmental Baseline

This chapter describes the region in which the project will occur, including a concise description of the area's topography, soils, vegetation, aquatic resources, and level of human or natural disturbance.

3.1. Description of Existing Biological and Physical Conditions

The following descriptions of the existing biological and physical conditions are described in relation to the action area boundaries. The action area was used as the limit for biological studies conducted in support of the project and will be used when determining potential impacts to federally listed species as described in Chapter 4.

3.1.1. Physical Conditions

3.1.1.1. TOPOGRAPHY

The action area is located in the Sacramento Valley, which is primarily flat land with no hills or valleys. The action area elevation is between 38 and 47 feet above mean sea level (amsl). The elevation is relatively flat through the Camden Passage neighborhood. In the southern portion of the action area, the topography slopes from the edge of residential development south toward Laguna Creek.

3.1.1.2. HYDROLOGY

Hydrologic features in the action area include Laguna Creek, Whitehouse Creek, Camden Lake, and man-made ditches. Precipitation and other surface water in the southern portion of the action area sheet flows to either Laguna Creek or Camden Lake. Within the Camden Passage and Sheldon Estates neighborhoods, surface water sheet flows into the storm drain system; however, in the northern portion of the action area some surface water outfalls into Whitehouse Creek.

3.1.1.3. SOILS

The Natural Resources Conservation Service's (NRCS) Web Soil Survey identifies four soil types within the action area (**Figure 6**). Each soil type is described below based on descriptions obtained from the Web Soil Survey (U.S. Department of Agriculture (USDA) (2014). Hydric soils ratings describe the proportion of map units that meet the hydric soils criteria (USDA 2014). Hydric means that 100% of the components listed for a given map unit are rated as being hydric. Predominantly hydric means that 66% to 99% of the components listed for a given map unit meet the hydric soils criteria. Partially hydric means that 33% to 65% of the map unit

components are hydric; predominantly nonhydric means that 1% to 32% of the map unit components are hydric; and nonhydric means that none of the map unit components meet hydric soil criteria.

- **Bruella sandy loam, 0 to 2 percent slopes (111).** This is a well drained soil that occurs on terraces between 30 and 150 amsl. The depth to the restrictive feature is more than 80 inches, and the soil is composed of alluvium derived from granite. The hydric rating for this soil type is **nonhydric**.
- **San Joaquin silt loam (213 and 214).** This is a moderately well drained soil that occurs on terraces between 20 and 500 amsl. The depth to the duripan is 28 to 54 inches, and the soil is composed of alluvium derived from granite. The hydric rating for this soil type is **predominantly nonhydric**.

3.1.2. Vegetative Communities

Vegetative communities are assemblages of plant species that occur in the same area and are defined by species composition and relative abundance. The action area consists of urban land uses, annual grassland, man-made ditch, fresh emergent wetland, open water, and vernal pool habitats (**Figure 7**). Each community is described below and is based on descriptions obtained from the CDFW's A Guide to Wildlife Habitats of California (2014b).

3.1.2.1. URBAN

Urban habitat is characterized by the presence of both native and exotic species maintained in a relatively static composition within a downtown, residential, or suburban setting. Species richness in these areas depends greatly on community design (i.e., open space considerations) and proximity to the natural environment.

The California Wildlife Habitat Relationships system classifies urban habitat into five different vegetation types: tree grove, street strip, shade tree/lawn, lawn, and shrub cover. Tree groves refer to conditions typically found in city parks, greenbelts, and cemeteries. These areas vary in tree height, spacing, crown shape, and understory conditions; however, they have a continuous canopy. Street strip vegetation, located roadside, varies with species type but typically includes a ground cover of grass. Shade trees and lawns refer to characteristic residential landscape, which is reminiscent of natural savannas. Lawns are composed of a variety of grasses, maintained at a uniform height with continuous ground cover through irrigation and fertilization. Shrub cover refers to areas commonly landscaped and maintained with hedges, as typically found in commercial districts. All five types of urban habitat are

generally found in combination, creating considerable edge effect, which can be more valuable to wildlife than any one individual unit. All five types of urban habitat are present in the action area and include all the residential development and associated infrastructure, as well as all landscaped areas, including Camden Park.

3.1.2.2. ANNUAL GRASSLAND

The dominant species found within the annual grassland community includes introduced grasses such as Italian ryegrass (*Lolium multiflorum*), barnyard grass (*Echinochloa cure-all*), wild oat (*Avena fatua*), Mediterranean barley (*Hordeum marinum*), foxtail barley (*Hordeum murinum*), Bermuda grass (*Cynodon dactylon*), and soft-chess brome (*Bromus hordeaceus*). Common forbs observed within these grasslands include mustards (*Brassica* spp.), spring vetch (*Vicia sativa*), field bindweed (*Convolvulus arvensis*), turkey mullein (*Eremocarpus setigerus*), Italian thistle (*Carduus pycnocephalus*), yellow star-thistle (*Centaurea solstitialis*) and dove's-foot geranium (*Geranium molle*).

Many wildlife species use annual grasslands for foraging, but some require special habitat features such as cliffs, caves, ponds, or habitats with woody plants for breeding, resting, and cover. Characteristic reptiles that breed in annual grasslands include the western fence lizard (*Sceloporus occidentalis*), common garter snake (*Thamnophis sirtalis*), and western rattlesnake (*Crotalus viridis helleri*). Mammals typically found in this habitat include the black-tailed jackrabbit (*Lepus californicus*), California ground squirrel (*Spermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), western harvest mouse (*Reithrodontomys megalotis*), California vole (*Microtus californicus*), and coyote (*Canis latrans*). Birds known to breed in annual grasslands include the western burrowing owl (*Athene cunicularia hypugaea*), horned lark (*Eremophila alpestris*), and western meadowlark (*Sturnella neglecta*). This habitat also provides important foraging habitat for turkey vulture (*Cathartes aura*), northern harrier (*Circus cyaneus*), and American kestrel (*Falco sparverius*).

3.1.2.3. MAN-MADE DITCH

One man-made drainage ditch conveys runoff from the urban development in the southern portion of the action area into Laguna Creek. Man-made drainage ditches are highly modified channels that vary in species composition and persistence of water. Some areas of native vegetation include broad-leaved cattail (*Typha latifolia*), Pacific rush (*Juncus effusus* var. *pacificus*), fringed willowherb (*Epilobium ciliatum* ssp. *ciliatum*), and tall flatsedge (*Cyperus eragrostis*).

3.1.2.4. FRESH EMERGENT WETLAND

Freshwater emergent wetlands are characterized by erect, rooted herbaceous hydrophytes such as common cattail. Emergent wetlands are flooded frequently enough so that the roots of the vegetation are in an anaerobic environment. On the upper margins of this habitat, saturated or periodically flooded soils support several moist soil plant species including big-leaf sedge (*Carex amplifolia*), Baltic rush (*Juncus balticus*), tall flatsedge, and on more alkali sites, saltgrass (*Distichlis spicata*). The upland limit of freshwater emergent wetlands and deep water habitats is the deep water edge of the emergent vegetation. Within the action area, freshwater emergent wetlands are associated with Laguna Creek and Whitehouse Creek.

Freshwater emergent wetlands are among the most productive wildlife habitats in California. Many species rely on freshwater emergent wetlands for their entire life cycle. The rare giant garter snake uses these wetlands as its primary habitat. Slow-moving waters provide important resting and foraging habitats for migratory water birds such as the mallard (*Anas platyrhynchos*) and cinnamon teal (*A. cyanoptera*). Wetlands also provide habitat for the American coot (*Fulica americana*), great blue heron (*Ardea herodias*), great egret (*Ardea alba*), and black phoebe (*Sayornis nigricans*). Beaver (*Castor canadensis*) is commonly found within the waterways in the city and may be found along Laguna Creek.

3.1.2.5. OPEN WATER

Open water or lacustrine habitats are inland depressions or dammed riverine channels containing standing water. Depth can vary from a few centimeters to hundreds of meters. Typical lacustrine habitats include permanently flooded lakes and reservoirs, intermittent lakes, and ponds. Most permanent lacustrine systems support fish life; intermittent types usually do not. As sedimentation and accumulation of organic matter increases toward the shore, floating rooted aquatics such as water lilies (*Nymphaea* spp.) and smartweed (*Polygonum amphibium* var. *stipulaceum*) often appear. Open water habitat within the action area is associated with Whitehouse Creek.

Suspended organisms such as plankton are found in the open water of lacustrine habitats. Submerged plants such as algae and pondweeds serve as supports for smaller algae and as cover for swarms of minute aquatic animals. Floating plants offer food and support for numerous herbivorous animals that feed both on plankton and floating plants. Wading ducks often frequent ponded areas. Aquatic species include mosquito fish (*Gambusia affinis*) and Louisiana red swamp crayfish (*Procambarus clarkii*).

3.1.2.6. VALLEY FOOTHILL RIPARIAN

Valley foothill riparian habitats are found in valleys bordered by sloping alluvial fans, slightly dissected terraces, lower foothills, and coastal plains. They are generally associated with low velocity flows, floodplains, and gentle topography. Typically, this habitat consists of an overstory tree layer, subcanopy tree layer, understory shrub layer, and herbaceous layer; however, the riparian habitat in the BSA consists mainly of willows (*Salix* spp.) and has not reached late successional stages of this habitat type. The willows within Whitehouse Creek and Laguna Creek are small (approximately 8 to 15 feet). The herbaceous layer consists of sedges (*Cyperus* spp.), rushes (*Juncus* spp.), poison hemlock (*Conium maculatum*), and various grasses.

Riparian habitats provide food, water, migration, and dispersal corridors, as well as escape, nesting, and thermal cover for an abundance of wildlife. Since the riparian habitat in the BSA is limited both in size and species composition, wildlife species found in the adjoining habitats are expected to occur here as well. Mammal species may include opossum (*Didelphis virginiana*), western gray squirrel (*Sciurus griseus*), beaver, coyote, raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*).

3.1.3. Habitat Connectivity

The CDFW Biogeographic Information & Observation System (2014c) was reviewed to determine if the action area is located within an Essential Connectivity Area. The action area does not occur within an Essential Connectivity Area; therefore, the project is not likely to adversely affect migratory corridors.

3.2. Listed and Proposed Species Potentially in the Biological Study Area

The results of the database queries identified several federally listed species and critical habitats with the potential to be impacted by the proposed project. **Figure 8** depicts CNDDDB occurrence data for federally listed species within 5 miles of the action area. **Table 1** provides a summary of all species identified in the search results, a description of the habitat requirements for each species, and conclusions regarding the potential for each species to be impacted by the proposed project.



Figure 6
NRCS Soils Map

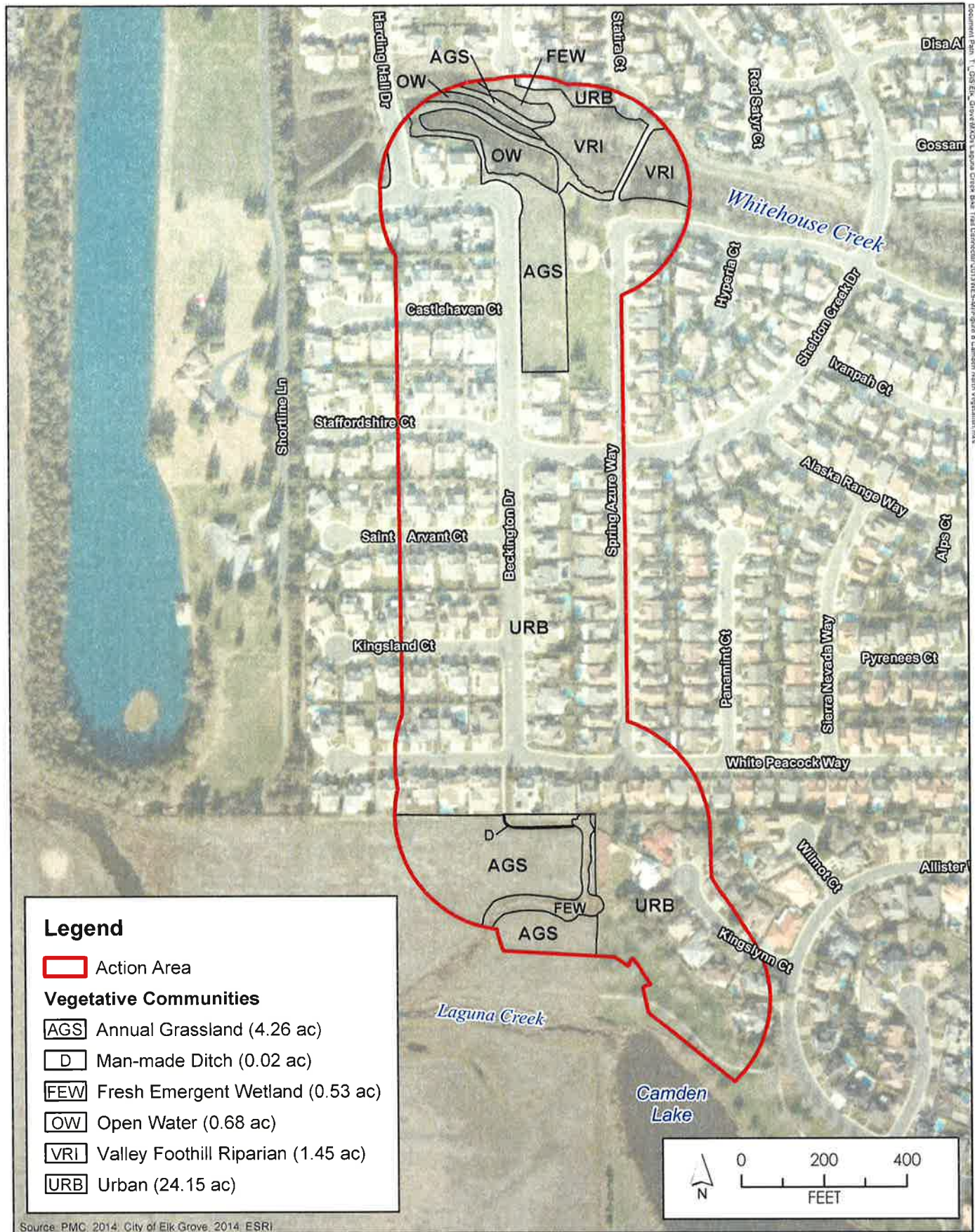
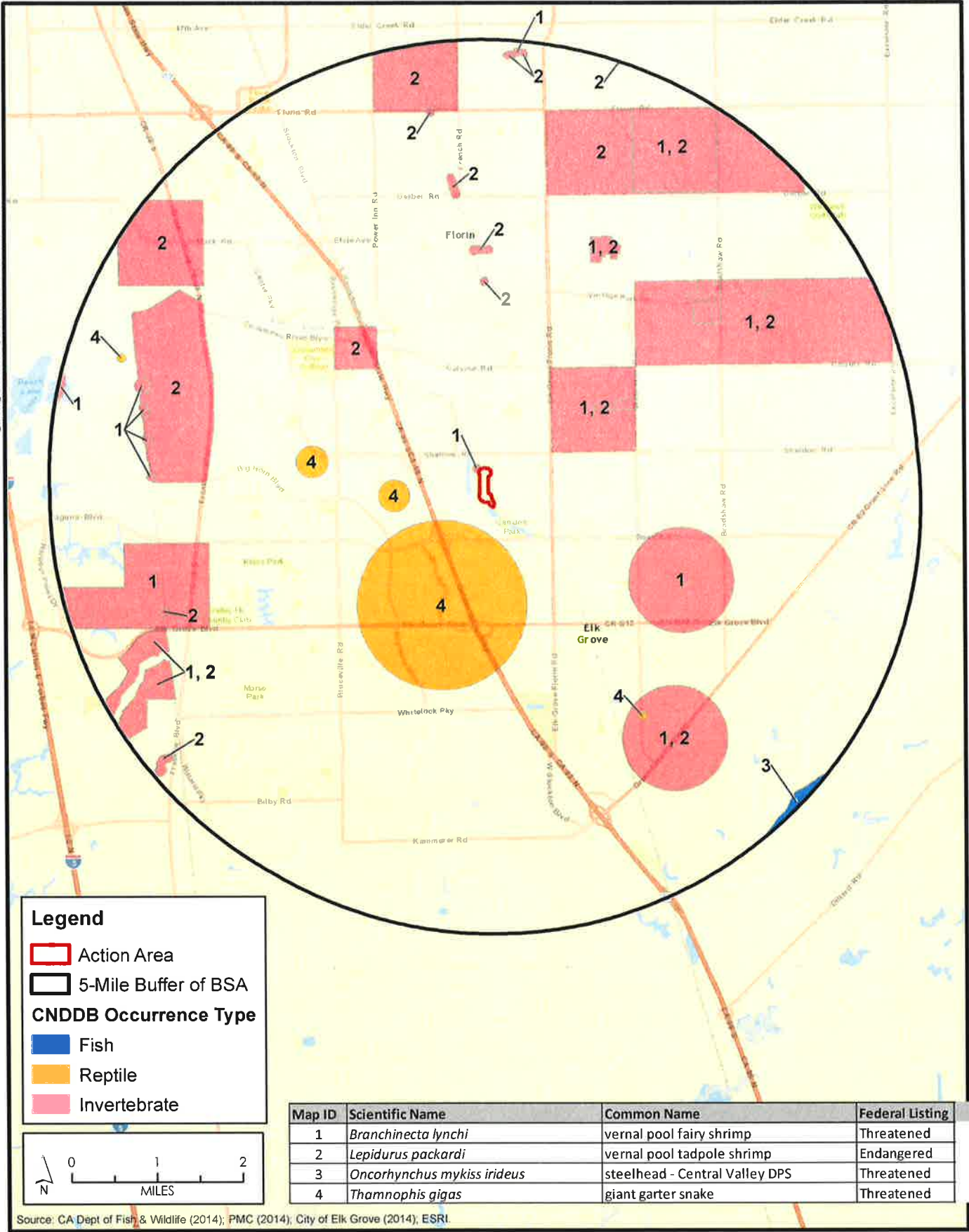


Figure 7
Vegetative Communities Map

T:\GIS\Elk_Grove\MXD\Elk Grove Creek Blue Trail Connector\BA\Figure 8 Camden North CNDDB Federal 5-Mile.mxd (10/14/2014)



Source: CA Dept of Fish & Wildlife (2014); PMC (2014); City of Elk Grove (2014); ESRI.



City of Elk Grove
Development Services

Figure 8
Previously Recorded Occurrences of
Federal Special-Status Species Within
5 Miles of Biological Study Area

Table 1: Listed, Proposed Species and Critical Habitat Potentially Occurring or Known to Occur in the Project Area.

Scientific Name	Common Name	Federal Status	Habitat	Habitat Present/Absent	Potential to Occur
Plants					
<i>Calystegia stebbinsii</i>	Stebbins' morning glory	FE	Cismontane woodland and openings in chaparral. Associated with gabbroic or serpentinite soil. Elevation: 607–3,576 feet (185–1,090 m). Blooms: April–July (CNPS 2014).	A	No effect. Suitable habitat not present.
	succulent owl's-clover	FT	Acidic vernal pools. Elev: 164–2,461 feet (50–750 m). Blooms: April–May (CNPS 2014).	A	No effect. Action area below elevation range.
<i>Castilleja campestris</i> ssp. <i>succulenta</i>	Critical Habitat, succulent owl's-clover	X	Serpentinite or gabbroic soil in chaparral and cismontane woodland. Elev: 804–2,067 feet (245–630 m). Blooms: April–June (CNPS 2014).	A	No effect. Action area not located within Critical Habitat Unit.
	Pine Hill ceanothus	FE	Gabbroic, serpentinite, rocky soils in chaparral and cismontane woodlands. Elev: 1,394–2,493 feet (425–760 m). Blooms: April–July (CNPS 2014).	A	No effect. Suitable habitat not present.
<i>Fremontodendron californicum</i> ssp. <i>decumbens</i>	Pine Hill flannelbush	FE		A	No effect. Suitable habitat not present.

Scientific Name	Common Name	Federal Status	Habitat	Habitat Present/Absent	Potential to Occur
<i>Galium californicum</i> ssp. <i>sierrae</i>	El Dorado bedstraw	FE	Gabbroic soils in chaparral, cismontane woodland and lower montane coniferous forest. Elev: 328–1,919 feet (100–585 m). Blooms: May–June (CNPS 2014).	A	No effect. Suitable habitat not present.
	slender Orcutt grass	FT	Vernal pools. Elev: 115–5,774 feet (35–1,760 m). Blooms: May–Oct (CNPS 2014).	A	No effect. Action area below elevation range.
	Critical Habitat, slender Orcutt grass	X		A	No effect. Action area not located within Critical Habitat Unit.
<i>Orcuttia tenuis</i>	Sacramento Orcutt grass	FE	Vernal pools. Elev: 98–328 feet (30–100 m). Blooms: April–Sept (CNPS 2014).	A	No effect. Action area below elevation range.
	Critical Habitat, Sacramento Orcutt grass	X		A	No effect. Action area not located within Critical Habitat Unit.
	<i>Orcuttia viscida</i>				
<i>Packera layneae</i> (= <i>Senecio layneae</i>)	Layne's ragwort	FT	Serpentine or gabbroic, rocky soils in chaparral and cismontane woodland. Elev: 660–3,300 feet (200–1,000 m). Blooms: April–Aug (CNPS 2014).	A	No effect. Suitable habitat not present.

Invertebrates					
Scientific Name	Common Name	Federal Status	Habitat	Habitat Present/Absent	Potential to Occur
<i>Branchinecta conservatio</i>	conservancy fairy shrimp	FE	Vernal pools, often large and turbid pools (USFWS 2005b).	A	No effect. Species not known to occur in this part of the Central Valley.
	vernal pool fairy shrimp	FT	Found in vernal pools and ephemeral wetlands. Distributed throughout the Central Valley, including Sacramento County (USFWS 2005b).	A	No effect. Suitable not habitat present.
<i>Branchinecta lynchi</i>	Critical Habitat, vernal pool fairy shrimp	X		A	No effect. Action area not located within Critical Habitat Unit.
	valley elderberry longhorn beetle	FT	Dependent on hostplant, elderberry (<i>Sambucus</i> spp.), which generally grows in riparian woodlands and upland habitats of the Central Valley. Current distribution in the Central Valley from Shasta County to Fresno County (USFWS 1999a).	HP	May affect. Hostplant present within action area.
<i>Desmocerus californicus dimorphus</i>	Critical Habitat, valley elderberry longhorn beetle	X		A	No effect. Action area not located within Critical Habitat Unit.
	vernal pool tadpole shrimp	FE	Wide variety of ephemeral wetland habitats, including vernal pools. Distributed throughout Central Valley and San Francisco Bay Area	A	No effect. Suitable habitat not present.

Scientific Name	Common Name	Federal Status	Habitat	Habitat Present/Absent	Potential to Occur
	Critical Habitat, vernal pool tadpole shrimp	X	(USFWS 2005b).	A	No effect. Action area not located within Critical Habitat Unit.
Fish					
<i>Acipenser medirostris</i>	green sturgeon	FT	Entire coast of California. Spawning occurs in Sacramento River and Klamath River (USFWS 1996). Oceanic waters, bays, and estuaries during non-spawning season. Spawning habitat = deep pools in large, turbulent, freshwater mainstems (National Marine Fisheries Service (NMFS) 2005).	A	No effect. Segment of Laguna Creek within action area inaccessible to anadromous fish species due to fish passage barriers.
	delta smelt	FT	Distribution includes the Sacramento River below Isleton, San Joaquin River below Mossdale, and Suisun Bay. Spawning areas include the Sacramento River below Sacramento, Mokelumne River system, Cache Slough, the delta, and Montezuma Slough (USFWS 1996).	A	No effect. Segment of Laguna Creek within action area inaccessible to anadromous fish species due to fish passage barriers.
<i>Hypomesus transpacificus</i>	Critical Habitat, delta smelt	X			A

Scientific Name	Common Name	Federal Status	Habitat	Habitat Present/Absent	Potential to Occur
<i>Oncorhynchus mykiss</i>	Central Valley steelhead	FT	Spawning habitat = gravel-bottomed, fast-flowing, well-oxygenated rivers and streams. Non-spawning = estuarine, marine waters (Busby et al. 1996).	A	No effect. Segment of Laguna Creek within action area inaccessible to anadromous fish species due to fish passage barriers.
	Critical Habitat, Central Valley steelhead	X		A	No effect. Action area not located within Critical Habitat Unit.
<i>Oncorhynchus tshawytscha</i>	Central Valley spring-run chinook salmon	FT	Spawning habitat = fast moving, freshwater streams and rivers. Juvenile habitat = brackish estuaries. Non-spawning = marine waters (Myers et al. 1998).	A	No effect. Segment of Laguna Creek within action area inaccessible to anadromous fish species due to fish passage barriers.
	Critical Habitat, Central Valley spring-run chinook salmon	X		A	No effect. Action area not located within Critical Habitat Unit.

Scientific Name	Common Name	Federal Status	Habitat	Habitat Present/Absent	Potential to Occur
	winter-run chinook salmon, Sacramento River	FE		A	No effect. Segment of Laguna Creek within action area inaccessible to anadromous fish species due to fish passage barriers.
<i>Spirinchnus thaleichthys</i>	longfin smelt	FC	Adults and juveniles require salt or brackish estuary waters. Spawning takes place in freshwater over sandy-gravel substrates, rocks, and aquatic plants (Moyle et al. 1995).	A	No effect. Suitable habitat not present.
Amphibians					
	California tiger salamander, central population	FT	Occurs in grasslands of the Central Valley and oak savannah communities in the Central Valley, the Sierra Nevada and Coast ranges, and the San Francisco Bay Area. Needs seasonal or semi-permanent wetlands to reproduce, and terrestrial habitat with active ground squirrel or gopher burrows (Bolster 2010).	A	No effect. Action area outside known range in Sacramento County.
	Critical Habitat, CA tiger salamander, central population	X		A	No effect. Action area not located within Critical Habitat Unit.
<i>Ambystoma californiense</i>					

Scientific Name	Common Name	Federal Status	Habitat	Habitat Present/ Absent	Potential to Occur
<i>Rana draytonii</i>	California red-legged frog	FT	Found mainly near ponds in humid forests, woodlands, grasslands, coastal scrub, and streambanks with plant cover. Most common in lowlands or foothills. Frequently found in woods adjacent to streams. Breeding habitat is in permanent or ephemeral water sources; lakes, ponds, reservoirs, slow streams, marshes, bogs, and swamps. Ephemeral wetland habitats require animal burrows or other moist refuges for aestivation when the wetlands are dry. From sea level to 5,000 feet (1,525 m) (Nafis 2014).	A	No effect. Suitable habitat not present.

Scientific Name	Common Name	Federal Status	Habitat	Habitat Present/Absent	Potential to Occur
Reptiles					
<i>Thamnophis gigas</i>	giant garter snake	FT	Marshes, sloughs, ponds, small lakes, low-gradient streams, irrigation and drainage canals, rice fields and their associated uplands. Upland habitat should have burrows or other soil crevices suitable for snakes to reside during their dormancy period (November–mid March). Ranges in the Central Valley from Butte County to Buena Vista Lake in Kern County. Endemic to valley floor wetlands (USFWS 2012).	HP	May affect. Suitable habitat present.
Birds					
<i>Coccyzus americanus occidentalis</i>	western yellow-billed cuckoo	PT	Requires large, dense tracts of riparian woodland with well-developed understories. Occurs in deciduous trees or shrubs. Prefers willow, but will also nest in orchards adjacent to streams in Sacramento Valley. Restricted to moist habitats along slow-moving waterways during breeding season (CDFW 2014d).	A	No effect. Suitable habitat not present. This species shows increased occupancy with increased patch size (>20 hectares) (Laymon 1998). Riparian habitat within action area <1 hectare.

Scientific Name	Common Name	Federal Status	Habitat	Habitat Present/Absent	Potential to Occur
<i>Sternula antillarum browni</i>	California least tern	FE	Nests and roosts in colonies on open beaches, forages near shore ocean waters and in shallow estuaries and lagoons (USFWS 2006).	A	No effect. Suitable habitat not present.

Key	
Federal Status	Habitat Present/Absent
(FC) Federal Candidate	(A) No habitat present and no further work needed.
(FD) Federally Delisted	(HP) Habitat is or may be present. The species may be present.
(FE) Federal Endangered	(P) Species is present.
(FP) Fully Protected	(CH) Project footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present.
(FT) Federal Threatened	
(PT) Proposed Threatened	
(X) Federally Designated Critical Habitat	

Chapter 4. Effects of the Action

This chapter of the BA discusses impacts to federally listed or candidate species that have the potential to occur in the action area. Potential effects to species are based on the current project description and conceptual design plans, likelihood of each species to occur within the action area, and each species' biological growth, reproduction, feeding, resting, and cover requirements as appropriate. Each species is discussed, including results of surveys for the species; designated critical habitat for the species within the action area (if applicable); expected or potential project-related effects to the species; avoidance, minimization, and conservation measures proposed to avoid or reduce project-related impacts to the species; and cumulative effects to the species when considered with other proposed, completed, or reasonably foreseeable projects in the vicinity of the action area. Project-related effects to plant and wildlife species can be direct, indirect, permanent, temporary, and/or cumulative. Direct impacts are those caused by the proposed project and occur at the time of project construction or implementation. Indirect effects are those that are caused by the proposed project and are reasonably certain to occur, but at a later time.

4.1. Federally Listed/Proposed Plant Species

No federally listed or proposed plant species have the potential to occur in the action area.

4.2. Federally Listed or Proposed Animal Species Occurrences

Based on the results of the database queries and habitat assessment, two federally listed animal species have the potential to occur in the action area or vicinity: valley elderberry longhorn beetle and giant garter snake. Individual discussions of these species are presented below. The following discussions detail the extent of known and/or potential habitat within the action area, potential impacts to these species from the construction of the proposed project, recommended measures to avoid, minimize, and mitigate for project-related impacts, and the cumulative effects the proposed project will have on the continued existence of these species. According to the results of the database searches, surveys, or historic records, no other federally listed animal species have potential to occur in the action area.

4.2.1. Discussion of "Valley Elderberry Longhorn Beetle"

4.2.1.1. SURVEY RESULTS

Protocol-level surveys for valley elderberry longhorn beetle were completed within a 100-foot buffer of the project footprint in April 9, 2014, in accordance with USFWS (1999a) Conservation Guidelines for the Valley Elderberry Longhorn Beetle. USFWS requires that

a minimum setback of 20 feet be maintained from the dripline of each elderberry plant. USFWS also requires that the area within 100 feet of the project footprint be restored and/or protected during and after construction. Therefore, all shrubs or clumps within the project footprint and within a 100-foot buffer of the project footprint were surveyed. The survey conducted by PMC biologists identified one elderberry shrub in the action area.

4.2.1.2. CRITICAL HABITAT

No critical habitat has been designated for this species within the action area; therefore, no impact to these species' critical habitat is expected.

4.2.1.3. PROJECT EFFECTS

The project will result in direct impacts to one elderberry shrub. Direct impacts were calculated by identifying all elderberry shrubs within the limits of construction limits and a 20-foot buffer of the limits of construction. Minimization ratios provided by the USFWS (1999a) are based on the number of stems potentially impacted by a project, presence of exit holes, and association with riparian or non-riparian habitat. The one shrub identified contained one stem, measuring 1 inch in diameter at ground level. No exit holes were observed, and the shrub is associated with the Whitehouse Creek riparian corridor.

4.2.1.4. AVOIDANCE AND MINIMIZATION MEASURES

Only one elderberry shrub was identified in the BSA, which will be removed during project construction. No elderberry shrubs will be indirectly affected (i.e., remain during project construction); therefore, no avoidance and minimization measures are proposed.

4.2.1.5. CONSERVATION MEASURES

Conservation measure **CM-1** and **CM-2** under Section 1.3.4.2 is proposed to offset impacts to one elderberry shrub.

4.2.1.6. CUMULATIVE EFFECTS

Implementation of the conservation measures outlined above will ensure that the loss of valley elderberry longhorn beetle habitat is fully compensated for; therefore, the project will not substantially contribute to cumulative impacts to this species.

4.2.2. Discussion of "Giant Garter Snake"

4.2.2.1. SURVEY RESULTS

Giant garter snake is federally listed as threatened. The giant garter snake inhabits marshes, sloughs, ponds, small lakes, low gradient streams, other waterways, agricultural wetlands, such as irrigation and drainage canals and rice fields, and the adjacent uplands (USFWS 1999b). Essential habitat components consist of:

- Adequate water during the snake's active period (i.e., early spring through mid-fall) to provide a prey base and cover;
- Emergent, herbaceous wetland vegetation, such as cattails and bulrushes, for escape cover and foraging habitat;
- Upland habitat for basking, cover, and retreat sites; and
- Higher elevation uplands for cover and refuge from floodwaters.

4.2.2.2. CRITICAL HABITAT

No critical habitat has been designated for this species within the action area; therefore, no impact to this species' critical habitat is expected.

4.2.2.3. PROJECT EFFECTS

Potentially suitable aquatic habitat for giant garter snake is present within Laguna Creek and Whitehouse Creek. All undeveloped communities within 200 feet of aquatic habitat are considered potentially suitable upland habitat (USFWS 1999b). The closest occurrence (#169) of giant garter snake is ± 3.4 miles southeast of the action area (CDFW 2014e) and east of State Route 99 (SR 99). This occurrence is located near Elk Grove Creek, which is separated from the Laguna Creek and Whitehouse Creek by extensive development. No aquatic features containing the essential habitat components connect Laguna Creek and Whitehouse Creek with Elk Grove Creek, east of SR 99.

The closest extant occurrence (#198) on Laguna Creek is located approximately 5.4 river miles west of the action area, near the Sacramento County Wastewater Treatment Plant (**Figure 9**). There are two possibly extirpated occurrences (#14 and #84) on Laguna Creek just west of the action area and SR 99. Due to the distance between the extant occurrence on Laguna Creek to the west and the presence of potential dispersal barriers (e.g., roads) between this occurrence and the action area, as well as the lack of suitable dispersal habitat between the action area and the extant occurrence near Elk Grove Creek, the presence of this species within the action area is considered unlikely.

4.2.2.4. AVOIDANCE AND MINIMIZATION MEASURES

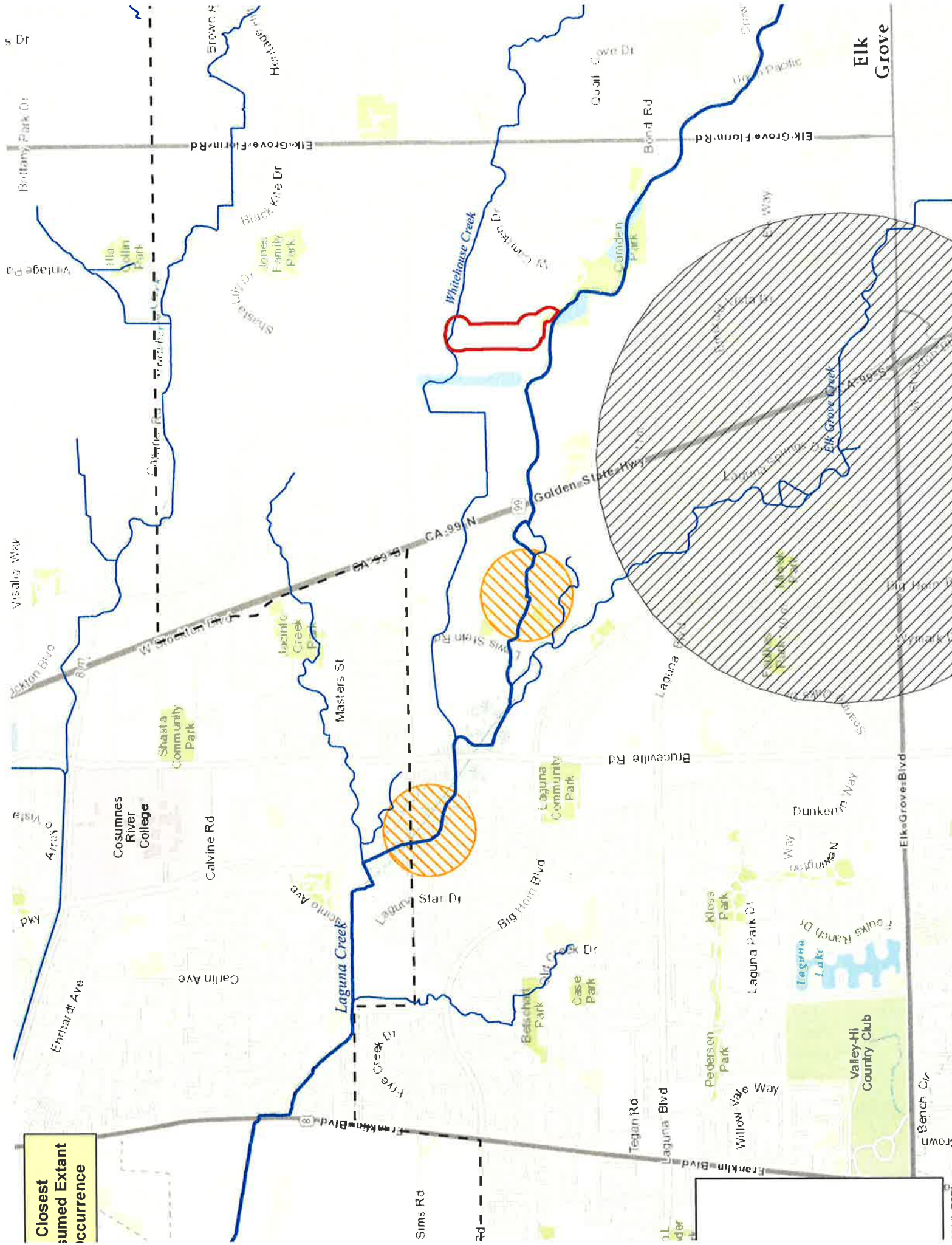
Giant garter snakes are unlikely to occur in the action area; therefore, no avoidance and minimization measures are proposed.

4.2.2.5. CONSERVATION MEASURES

Giant garter snakes are unlikely to occur in the action area; therefore, no conservation measures are proposed.

4.2.2.6. CUMULATIVE EFFECTS

Giant garter snakes are unlikely to occur in the action area; therefore, the project will not substantially contribute to cumulative impacts to this species.



Closest Extant presumed occurrence

Chapter 5. Conclusions and Determination

5.1. Conclusions

The proposed project *may affect, and is likely to adversely affect* valley elderberry longhorn beetle and is *may affect, but is not likely to adversely affect* giant garter snakes. All effects to potentially occurring species or their habitat will be minimized and conservation measures will be implemented according to established USFWS guidelines.

5.2. Determination

The determination of effect for each federally listed species that may occur in the action area is provided below. Determinations are based on potential for the species to occur; the potential impacts to the species as a result of project implementation; and proposed avoidance, minimization, and conservation measures for each species. The potential determination categories are as follows: no effect; may affect, not likely to adversely affect; or may affect, likely to adversely affect.

5.2.1. Valley Elderberry Longhorn Beetle

The project will result in direct impacts to one elderberry shrub. Direct impacts were calculated by identifying all elderberry shrubs within the limits of construction limits and a 20-foot buffer of the limits of construction. Minimization ratios provided by the USFWS (1999a) are based on the number of stems potentially impacted by a project, presence of exit holes, and association with riparian or non-riparian habitat. The one shrub identified contained one stem, measuring 1 inch in diameter at ground level. No exit holes were observed, and the shrub is associated with the Whitehouse Creek riparian corridor. The mitigation strategy proposed includes conservation measures **CM-1** and **CM-2**.

This mitigation strategy is in accordance with the USFWS guidelines (1999a). Implementation of the proposed mitigation strategy will ensure that all project-related impacts to valley elderberry longhorn beetle will be fully mitigated; therefore, the proposed project *may affect, and is likely to adversely affect* this species.

5.2.2. Giant Garter Snake

Due to the distance between the extant occurrence on Laguna Creek to the west and the presence of potential dispersal barriers (e.g., roads) between this occurrence and the action area, as well as the lack of suitable dispersal habitat between the action area and the extant occurrence near Elk Grove Creek, the presence of this species within the action area is considered unlikely. Therefore, the proposed project is *may affect, but is not likely to adversely affect* giant garter snakes.

Chapter 6. Literature Cited

Bolster, B.C. 2010. A Status Review of the California Tiger Salamander (*Ambystoma californiense*). Nongame Wildlife Program Report 210-4, Sacramento, CA.

Busby, P.J., T.C. Wainwright, G.J. Bryant, L.J. Lierheimer, R.S. Waples, F.W. Waknitz, and I.V. Lagomarsino. 1996. Status review of west coast steel head from Washington, Idaho, Oregon, and California. NOAA Technical Memorandum NMFS-NWFSC-27, Seattle, WA.

California Department of Fish and Wildlife (CDFW). 2000. Guidelines for Assessing the Effects of Projects on Rare, Threatened, and Endangered Plants and Natural Communities (revision of 1983 guidelines). Sacramento, CA.

———. 2014a. California Natural Diversity Database QuickView Tool in BIOS 5. Sacramento: CDFW Biogeographic Data Branch, Sacramento, CA. <https://map.dfg.ca.gov/bios/?tool=cnddbQuick>.

———. 2014b. A Guide to Wildlife Habitats of California (online edition). CDFW Biogeographic Data Branch, Sacramento, CA. http://www.dfg.ca.gov/biogeodata/cwhr/wildlife_habitats.asp.

———. 2014c. BIOS 5 Viewer. Sacramento: CDFW Biogeographic Data Branch; Sacramento, CA. <https://map.dfg.ca.gov/bios/?bookmark=327>.

———. 2014d. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch, Sacramento, CA. <http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx>.

———. 2014e. California Natural Diversity Database – September 2 monthly update. CDFW Biogeographic Data Branch, Sacramento, CA.

California Native Plant Society (CNPS). 2014. Inventory of Rare and Endangered Plants of California (online edition, v8-02). CNPS, Sacramento, CA. <http://www.rareplants.cnps.org>.

City of Elk Grove. 2009. Elk Grove General Plan. http://www.egplanning.org/gp_zoning/general_plan.

- Environmental Laboratory. 1987. Corps of Engineers Wetland Delineation Manual. Technical Report Y-87-1. Vicksburg, MS, USACE Waterways Experiment Station.
- Laymon, S.A. 1998. Yellow-billed Cuckoo (*Coccyzus americanus*). In The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight. http://www.prbo.org/calpif/htmldocs/riparian_v-2.html.
- Moyle, P.B., R.M. Yoshiyama, J.E. Williams, and E.D. Wikramamayake. 1995. Fish Species of Special Concern in California, 2nd ed. CDFG and UC Davis, Sacramento, CA.
- Myers, J.M, R.G. Kope, G.J. Bryant, D. Teel, L.J. Lierheimer, T.C Wainwright, W.S. Grant, F.W. Waknitz, K. Neely, S.T. Lindley, and R.S. Waples. 1998. Status review of Chinook salmon from Washington, Idaho, Oregon, and California. NOAA Technical Memorandum NMFS-NWFSC-35.
- Nafis, Gary. 2014. California Herps: A Guide to Reptiles and Amphibians of California. <http://www.californiaherps.com>.
- National Marine Fisheries Service (NMFS). 2005. Green Sturgeon (*Acipenser medirostris*) status review update. NMFS Southwest Fish Science Center, Santa Cruz, CA.
- U.S. Army Corps of Engineers (USACE). 2005. Ordinary High Water Mark Identification.
- . 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West (Version 2.0). Technical Report TR-08-28. USACE Research and Development Center, Vicksburg, MS.
- U.S. Department of Agriculture (USDA). 2014. Natural Resources Conservation Service (NRCS) Web Soil Survey 2.3. <http://websoilsurvey.nrcs.usda.gov/>.
- U.S. Fish and Wildlife Service (USFWS). 1996. Sacramento-San Joaquin Delta Native Fishes Recovery Plan. USFWS, Portland, OR.
- . 1999a. Conservation Guidelines for the Valley Elderberry Longhorn Beetle. USFWS, Sacramento, CA.

- . 1999b. Draft Recovery Plan for the Giant Garter Snake (*Thamnophis gigas*). USFWS, Sacramento, CA.
- . 2002. General Rare Plant Survey Guidelines. USFWS, Bakersfield, CA.
- . 2005a. Programmatic Biological Opinion on Effects of Small Highway Projects on the Threatened Giant Garter Snake in Butte, Colusa, Glenn, Sacramento, San Joaquin, Solano, Sutter, Yolo, and Yuba Counties, California.
- . 2005b. Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon. USFWS, Portland, OR.
- . 2006. California Least Tern 5-Year Review. USFWS, Carlsbad, CA.
- . 2012. Giant Garter Snake (*Thamnophis gigas*) 5-Year Review: Summary and Evaluation. USFWS, Sacramento, CA.
- . 2014a. Sacramento Fish & Wildlife Office Species Lists. http://www.fws.gov/sacramento/es_species/Lists/es_species_lists-form.cfm.
- . 2014b. Critical Habitat Portal. <http://ecos.fws.gov/>.

Appendix A Database Search Results

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office

**Federal Endangered and Threatened Species that Occur in
or may be Affected by Projects in the Counties and/or
U.S.G.S. 7 1/2 Minute Quads you requested**

Document Number: 140625123349

Current as of: June 25, 2014

Quad Lists

Listed Species

Invertebrates

- Branchinecta conservatio*
Conservancy fairy shrimp (E)
- Branchinecta lynchi*
Critical habitat, vernal pool fairy shrimp (X)
vernal pool fairy shrimp (T)
- Desmocerus californicus dimorphus*
Critical habitat, valley elderberry longhorn beetle (X)
valley elderberry longhorn beetle (T)
- Elaphrus viridis*
delta green ground beetle (T)
- Lepidurus packardii*
Critical habitat, vernal pool tadpole shrimp (X)
vernal pool tadpole shrimp (E)

Fish

- Acipenser medirostris*
green sturgeon (T) (NMFS)
- Hypomesus transpacificus*
Critical habitat, delta smelt (X)
delta smelt (T)
- Oncorhynchus mykiss*
Central Valley steelhead (T) (NMFS)
Critical habitat, Central Valley steelhead (X) (NMFS)
- Oncorhynchus tshawytscha*
Central Valley spring-run chinook salmon (T) (NMFS)
Critical Habitat, Central Valley spring-run chinook (X) (NMFS)
Critical habitat, winter-run chinook salmon (X) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

- Ambystoma californiense*
California tiger salamander, central population (T)
- Rana draytonii*
California red-legged frog (T)

Reptiles

- Thamnophis gigas*
giant garter snake (T)

Birds

- Vireo bellii pusillus*
Least Bell's vireo (E)

Plants

Calystegia stebbinsii
Stebbins's morning-glory (E)
Castilleja campestris ssp. succulenta
succulent (=fleshy) owl's-clover (T)
Ceanothus roderickii
Pine Hill ceanothus (E)
Fremontodendron californicum ssp. decumbens
Pine Hill flannelbush (E)
Galium californicum ssp. sierrae
El Dorado bedstraw (E)
Orcuttia tenuis
Critical habitat, slender Orcutt grass (X)
slender Orcutt grass (T)
Orcuttia viscida
Critical habitat, Sacramento Orcutt grass (X)
Sacramento Orcutt grass (E)
Senecio layneae
Layne's butterweed (=ragwort) (T)

Quads Containing Listed, Proposed or Candidate Species:

ELK GROVE (496A)
FLORIN (496B)
BRUCEVILLE (496C)
GALT (496D)
COURTLAND (497D)
CLARKSVILLE (511A)
SACRAMENTO EAST (512C)
CARMICHAEL (512D)
SACRAMENTO WEST (513D)

County Lists

Sacramento County

Listed Species

Invertebrates

Apodemia mormo langei
Lange's metalmark butterfly (E)

Branchinecta conservatio
Conservancy fairy shrimp (E)

Branchinecta lynchi
Critical habitat, vernal pool fairy shrimp (X)
vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
Critical habitat, valley elderberry longhorn beetle (X)
valley elderberry longhorn beetle (T)

Elaphrus viridis
delta green ground beetle (T)

Lepidurus packardi

Critical habitat, vernal pool tadpole shrimp (X)
vernal pool tadpole shrimp (E)

Fish

Acipenser medirostris
green sturgeon (T) (NMFS)

Hypomesus transpacificus
Critical habitat, delta smelt (X)
delta smelt (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)
Critical habitat, Central Valley steelhead (X) (NMFS)

Oncorhynchus tshawytscha
Central Valley spring-run chinook salmon (T) (NMFS)
Critical Habitat, Central Valley spring-run chinook (X) (NMFS)
Critical habitat, winter-run chinook salmon (X) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)
Critical habitat, CA tiger salamander, central population (X)

Rana draytonii
California red-legged frog (T)

Reptiles

Thamnophis gigas
giant garter snake (T)

Birds

Charadrius alexandrinus nivosus
western snowy plover (T)

Rallus longirostris obsoletus
California clapper rail (E)

Sternula antillarum (=Sterna, =albifrons) browni
California least tern (E)

Vireo bellii pusillus
Least Bell's vireo (E)

Mammals

Reithrodontomys raviventris
salt marsh harvest mouse (E)

Sylvilagus bachmani riparius
riparian brush rabbit (E)

Vulpes macrotis mutica
San Joaquin kit fox (E)

Plants

Arctostaphylos myrtifolia
Ione manzanita (T)

Calystegia stebbinsii
Stebbins's morning-glory (E)

Castilleja campestris ssp. succulenta
Critical habitat, succulent (=fleshy) owl's-clover (X)
succulent (=fleshy) owl's-clover (T)

Ceanothus roderickii
Pine Hill ceanothus (E)

Cordylanthus mollis ssp. mollis
soft bird's-beak (E)

Cordylanthus palmatus
palmate-bracted bird's-beak (E)

Eriogonum apricum var. apricum
Ione buckwheat (E)

Eriogonum apricum var. prostratum
Irish Hill buckwheat (E)

Erysimum capitatum ssp. angustatum
Contra Costa wallflower (E)
Critical Habitat, Contra Costa wallflower (X)

Fremontodendron californicum ssp. decumbens
Pine Hill flannelbush (E)

Galium californicum ssp. sierrae
El Dorado bedstraw (E)

Lasthenia conjugens
Contra Costa goldfields (E)

Neostapfia colusana
Colusa grass (T)

Oenothera deltoides ssp. howellii
Antioch Dunes evening-primrose (E)
Critical habitat, Antioch Dunes evening-primrose (X)

Orcuttia tenuis
Critical habitat, slender Orcutt grass (X)

slender Orcutt grass (T)

Orcuttia viscida

Critical habitat, Sacramento Orcutt grass (X)

Sacramento Orcutt grass (E)

Senecio layneae

Layne's butterweed (=ragwort) (T)

Sidalcea keckii

Keck's checker-mallow (=checkerbloom) (E)

Candidate Species

Birds

Coccyzus americanus occidentalis

Western yellow-billed cuckoo (C)

Key:

(E) *Endangered* - Listed as being in danger of extinction.

(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.

(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.

(NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.

Critical Habitat - Area essential to the conservation of a species.

(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.

(C) *Candidate* - Candidate to become a proposed species.

(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

(X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online Inventory of Rare and Endangered Plants.

Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our [Protocol](#) and [Recovery Permits](#) pages.

For plant surveys, we recommend using the [Guidelines for Conducting and Reporting Botanical Inventories](#). The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal [consultation](#) with the Service.

During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our [Map Room](#) page.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts.

[More info](#)

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6520.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be September 23, 2014.

CNDDDB 9-Quad Species List 328 records.

Element Type	Scientific Name	Common Name	Element Code	Federal Status	State Status	CDFW Status	CA Rare Plant Rank	Quad Code	Quad Name	Data Status	Taxonomic Sort
Animals - Amphibians	Ambystoma californiense	California tiger salamander	AAAAA01180	Threatened	Threatened	SSC	-	3812133	Galt	Mapped and Unprocessed	Animals - Amphibians - Ambystomatidae - Ambystoma californiense
Animals - Amphibians	Spea hammondi	western spadefoot	AAABF02020	None	None	SSC	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Amphibians - Scaphiopodidae - Spea hammondi
Animals - Birds	Accipiter cooperii	Cooper's hawk	ABNKC12040	None	None	WL	-	3812144	Florin	Mapped	Animals - Birds - Accipitridae - Accipiter cooperii
Animals - Birds	Accipiter cooperii	Cooper's hawk	ABNKC12040	None	None	WL	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Birds - Accipitridae - Accipiter cooperii
Animals - Birds	Accipiter cooperii	Cooper's hawk	ABNKC12040	None	None	WL	-	3812154	Sacramento East	Mapped	Animals - Birds - Accipitridae - Accipiter cooperii
Animals - Birds	Accipiter cooperii	Cooper's hawk	ABNKC12040	None	None	WL	-	3812143	Elk Grove	Mapped	Animals - Birds - Accipitridae - Accipiter cooperii
Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP, WL	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Birds - Accipitridae - Aquila chrysaetos
Animals - Birds	Buteo regalis	ferruginous hawk	ABNKC19120	None	None	WL	-	3812153	Carmichael	Mapped	Animals - Birds - Accipitridae - Buteo regalis
Animals - Birds	Buteo regalis	ferruginous hawk	ABNKC19120	None	None	WL	-	3812144	Florin	Mapped	Animals - Birds - Accipitridae - Buteo regalis
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812143	Elk Grove	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812135	Courtland	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812133	Galt	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812134	Bruceville	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812153	Carmichael	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812154	Sacramento East	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812144	Florin	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812145	Clarksburg	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Circus cyaneus	northern harrier	ABNKC11010	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Birds - Accipitridae - Circus cyaneus
Animals - Birds	Circus cyaneus	northern harrier	ABNKC11010	None	None	SSC	-	3812135	Courtland	Unprocessed	Animals - Birds - Accipitridae - Circus cyaneus
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812135	Courtland	Mapped and Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus

Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812144	Florin	Mapped and Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812143	Elk Grove	Mapped	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812133	Galt	Mapped	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812134	Bruceville	Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812154	Sacramento East	Mapped and Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3812153	Carmichael	Unprocessed	Animals - Birds - Accipitridae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3812134	Bruceville	Unprocessed	Animals - Birds - Accipitridae - Pandion haliaetus
Animals - Birds	Chaetura vauxi	Vaux's swift	ABNUA03020	None	None	SSC	-	3812153	Carmichael	Unprocessed	Animals - Birds - Apodidae - Chaetura vauxi
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3812133	Galt	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3812144	Florin	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3812135	Courtland	Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3812135	Courtland	Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3812144	Florin	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3812133	Galt	Mapped	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3812154	Sacramento East	Mapped	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Botaurus lentiginosus	American bittern	ABNGA01020	None	None	-	-	3812144	Florin	Unprocessed	Animals - Birds - Ardeidae - Botaurus lentiginosus

Animals - Birds	Egretta thula	snowy egret	ABNGA06030	None	None	-	-	3812144	Florin	Unprocessed	Animals - Birds - Ardeidae - Egretta thula
Animals - Birds	Egretta thula	snowy egret	ABNGA06030	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Birds - Ardeidae - Egretta thula
Animals - Birds	Ixobrychus exilis	least bittern	ABNGA02010	None	None	SSC	-	3812144	Florin	Unprocessed	Animals - Birds - Ardeidae - Ixobrychus exilis
Animals - Birds	Ixobrychus exilis	least bittern	ABNGA02010	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Ardeidae - Ixobrychus exilis
Animals - Birds	Nycticorax nycticorax	black-crowned night heron	ABNGA11010	None	None	-	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Ardeidae - Nycticorax nycticorax
Animals - Birds	Nycticorax nycticorax	black-crowned night heron	ABNGA11010	None	None	-	-	3812144	Florin	Mapped and Unprocessed	Animals - Birds - Ardeidae - Nycticorax nycticorax
Animals - Birds	Nycticorax nycticorax	black-crowned night heron	ABNGA11010	None	None	-	-	3812135	Courtland	Unprocessed	Animals - Birds - Ardeidae - Nycticorax nycticorax
Animals - Birds	Nycticorax nycticorax	black-crowned night heron	ABNGA11010	None	None	-	-	3812133	Galt	Mapped	Animals - Birds - Ardeidae - Nycticorax nycticorax
Animals - Birds	Cardinalis cardinalis	northern cardinal	ABPBX60010	None	None	WL	-	3812133	Galt	Unprocessed	Animals - Birds - Cardinalidae - Cardinalis cardinalis
Animals - Birds	Charadrius montanus	mountain plover	ABNNB03100	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Charadriidae - Charadrius montanus
Animals - Birds	Pica nuttalli	yellow-billed magpie	ABPAV09020	None	None	-	-	3812154	Sacramento East	Unprocessed	Animals - Birds - Corvidae - Pica nuttalli
Animals - Birds	Coccyzus americanus occidentalis	western yellow-billed cuckoo	ABNRB02022	Proposed Threatened	Endangered	-	-	3812145	Clarksburg	Mapped	Animals - Birds - Cuculidae - Coccyzus americanus occidentalis
Animals - Birds	Coccyzus americanus occidentalis	western yellow-billed cuckoo	ABNRB02022	Proposed Threatened	Endangered	-	-	3812134	Bruceville	Unprocessed	Animals - Birds - Cuculidae - Coccyzus americanus occidentalis
Animals - Birds	Ammodramus savannarum	grasshopper sparrow	ABPBXA0020	None	None	SSC	-	3812134	Bruceville	Unprocessed	Animals - Birds - Emberizidae - Ammodramus savannarum
Animals - Birds	Ammodramus savannarum	grasshopper sparrow	ABPBXA0020	None	None	SSC	-	3812144	Florin	Unprocessed	Animals - Birds - Emberizidae - Ammodramus savannarum
Animals - Birds	Ammodramus savannarum	grasshopper sparrow	ABPBXA0020	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Birds - Emberizidae - Ammodramus savannarum
Animals - Birds	Ammodramus savannarum	grasshopper sparrow	ABPBXA0020	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Emberizidae - Ammodramus savannarum
Animals - Birds	Ammodramus savannarum	grasshopper sparrow	ABPBXA0020	None	None	SSC	-	3812154	Sacramento East	Unprocessed	Animals - Birds - Emberizidae - Ammodramus savannarum
Animals - Birds	Chondestes grammacus	lark sparrow	ABPBX96010	None	None	-	-	3812154	Sacramento East	Unprocessed	Animals - Birds - Emberizidae - Chondestes grammacus

Animals - Birds	Chondestes grammacus	lark sparrow	ABPBX96010	None	None	-	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Emberizidae - Chondestes grammacus
Animals - Birds	Melospiza melodia	song sparrow (-inModesto-in population)	ABPBXA3010	None	None	SSC	-	3812155	Sacramento West	Mapped	Animals - Birds - Emberizidae - Melospiza melodia
Animals - Birds	Melospiza melodia	song sparrow (-inModesto-in population)	ABPBXA3010	None	None	SSC	-	3812154	Sacramento East	Mapped	Animals - Birds - Emberizidae - Melospiza melodia
Animals - Birds	Melospiza melodia	song sparrow (-inModesto-in population)	ABPBXA3010	None	None	SSC	-	3812145	Clarksburg	Mapped	Animals - Birds - Emberizidae - Melospiza melodia
Animals - Birds	Melospiza melodia	song sparrow (-inModesto-in population)	ABPBXA3010	None	None	SSC	-	3812144	Florin	Mapped	Animals - Birds - Emberizidae - Melospiza melodia
Animals - Birds	Melospiza melodia	song sparrow (-inModesto-in population)	ABPBXA3010	None	None	SSC	-	3812134	Bruceville	Mapped	Animals - Birds - Emberizidae - Melospiza melodia
Animals - Birds	Melospiza melodia	song sparrow (-inModesto-in population)	ABPBXA3010	None	None	SSC	-	3812135	Courtland	Mapped	Animals - Birds - Emberizidae - Melospiza melodia
Animals - Birds	Spizella breweri	Brewer's sparrow	ABPBX94040	None	None	-	-	3812154	Sacramento East	Unprocessed	Animals - Birds - Emberizidae - Spizella breweri
Animals - Birds	Spizella breweri	Brewer's sparrow	ABPBX94040	None	None	-	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Emberizidae - Spizella breweri
Animals - Birds	Falco columbarius	merlin	ABNKD06030	None	None	WL	-	3812144	Florin	Mapped	Animals - Birds - Falconidae - Falco columbarius
Animals - Birds	Falco mexicanus	prairie falcon	ABNKD06090	None	None	WL	-	3812154	Sacramento East	Unprocessed	Animals - Birds - Falconidae - Falco mexicanus
Animals - Birds	Falco mexicanus	prairie falcon	ABNKD06090	None	None	WL	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Falconidae - Falco mexicanus
Animals - Birds	Grus canadensis canadensis	lesser sandhill crane	ABNMK01011	None	None	SSC	-	3812134	Bruceville	Unprocessed	Animals - Birds - Gruidae - Grus canadensis canadensis
Animals - Birds	Grus canadensis tabida	greater sandhill crane	ABNMK01014	None	Threatened	FP	-	3812134	Bruceville	Unprocessed	Animals - Birds - Gruidae - Grus canadensis tabida
Animals - Birds	Grus canadensis tabida	greater sandhill crane	ABNMK01014	None	Threatened	FP	-	3812144	Florin	Unprocessed	Animals - Birds - Gruidae - Grus canadensis tabida
Animals - Birds	Progne subis	purple martin	ABPAU01010	None	None	SSC	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Birds - Hirundinidae - Progne subis
Animals - Birds	Progne subis	purple martin	ABPAU01010	None	None	SSC	-	3812154	Sacramento East	Mapped and Unprocessed	Animals - Birds - Hirundinidae - Progne subis
Animals - Birds	Riparia riparia	bank swallow	ABPAU08010	None	Threatened	-	-	3812154	Sacramento East	Mapped	Animals - Birds - Hirundinidae - Riparia riparia
Animals - Birds	Riparia riparia	bank swallow	ABPAU08010	None	Threatened	-	-	3812153	Carmichael	Mapped	Animals - Birds - Hirundinidae - Riparia riparia
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	None	SSC	-	3812153	Carmichael	Mapped	Animals - Birds - Icteridae - Agelaius tricolor

Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	None	SSC	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	None	SSC	-	3812144	Florin	Mapped and Unprocessed	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	None	SSC	-	3812143	Elk Grove	Mapped	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	None	SSC	-	3812135	Courtland	Unprocessed	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	None	SSC	-	3812134	Bruceville	Mapped and Unprocessed	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	None	SSC	-	3812133	Galt	Mapped and Unprocessed	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Xanthocephalus xanthocephalus	yellow-headed blackbird	ABPBXB3010	None	None	SSC	-	3812144	Florin	Mapped	Animals - Birds - Icteridae - Xanthocephalus xanthocephalus
Animals - Birds	Xanthocephalus xanthocephalus	yellow-headed blackbird	ABPBXB3010	None	None	SSC	-	3812145	Clarksburg	Mapped	Animals - Birds - Icteridae - Xanthocephalus xanthocephalus
Animals - Birds	Lanius ludovicianus	loggerhead shrike	ABPBR01030	None	None	SSC	-	3812144	Florin	Unprocessed	Animals - Birds - Laniidae - Lanius ludovicianus
Animals - Birds	Lanius ludovicianus	loggerhead shrike	ABPBR01030	None	None	SSC	-	3812134	Bruceville	Unprocessed	Animals - Birds - Laniidae - Lanius ludovicianus
Animals - Birds	Sternula antillarum browni	California least tern	ABNNM08103	Endangered	Endangered	FP	-	3812144	Florin	Unprocessed	Animals - Birds - Laridae - Sternula antillarum browni
Animals - Birds	Baeolophus inornatus	oak titmouse	ABPAW01100	None	None	-	-	3812144	Florin	Unprocessed	Animals - Birds - Paridae - Baeolophus inornatus
Animals - Birds	Dendroica occidentalis	hermit warbler	ABPBX03090	None	None	-	-	3812133	Galt	Unprocessed	Animals - Birds - Parulidae - Dendroica occidentalis
Animals - Birds	Dendroica petechia brewsteri	yellow warbler	ABPBX03018	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Parulidae - Dendroica petechia brewsteri
Animals - Birds	Icteria virens	yellow-breasted chat	ABPBX24010	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Birds - Parulidae - Icteria virens
Animals - Birds	Phalacrocorax auritus	double-crested cormorant	ABNFD01020	None	None	WL	-	3812134	Bruceville	Unprocessed	Animals - Birds - Phalacrocoracidae - Phalacrocorax auritus
Animals - Birds	Phalacrocorax auritus	double-crested cormorant	ABNFD01020	None	None	WL	-	3812144	Florin	Mapped and Unprocessed	Animals - Birds - Phalacrocoracidae - Phalacrocorax auritus
Animals - Birds	Picoides nuttallii	Nuttall's woodpecker	ABNYF07020	None	None	-	-	3812144	Florin	Unprocessed	Animals - Birds - Picidae - Picoides nuttallii
Animals - Birds	Athene cucularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Birds - Strigidae - Athene cucularia
Animals - Birds	Athene cucularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cucularia
Animals - Birds	Athene cucularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cucularia
Animals - Birds	Athene cucularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812154	Sacramento East	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cucularia

Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812144	Florin	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812143	Elk Grove	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812134	Bruceville	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812133	Galt	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Plegadis chihi	white-faced ibis	ABNGE02020	None	None	WL	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Threskiornithidae - Plegadis chihi
Animals - Birds	Vireo bellii pusillus	least Bell's vireo	ABPBW01114	Endangered	Endangered	-	-	3812155	Sacramento West	Mapped	Animals - Birds - Vireonidae - Vireo bellii pusillus
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812154	Sacramento East	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812144	Florin	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812145	Clarksburg	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812133	Galt	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812134	Bruceville	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812143	Elk Grove	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812135	Courtland	Mapped	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta mesovallensis	midvalley fairy shrimp	ICBRA03150	None	None	-	-	3812143	Elk Grove	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta mesovallensis
Animals - Crustaceans	Branchinecta mesovallensis	midvalley fairy shrimp	ICBRA03150	None	None	-	-	3812133	Galt	Mapped	Animals - Crustaceans - Branchinectidae - Branchinecta mesovallensis
Animals - Crustaceans	Branchinecta mesovallensis	midvalley fairy shrimp	ICBRA03150	None	None	-	-	3812144	Florin	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta mesovallensis

Animals - Crustaceans	Branchinecta mesovalleensis	midvalley fairy shrimp	ICBRA03150	None	None	-	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta mesovalleensis
Animals - Crustaceans	Dumontia oregonensis	hairy water flea	ICBRA23010	None	None	-	-	3812153	Carmichael	Mapped	Animals - Crustaceans - Dumontiidae - Dumontia oregonensis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3812154	Sacramento East	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3812144	Florin	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3812145	Clarksburg	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3812133	Galt	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3812134	Bruceville	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3812143	Elk Grove	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3812135	Courtland	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3812143	Elk Grove	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3812134	Bruceville	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3812133	Galt	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3812145	Clarksburg	Mapped	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3812144	Florin	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi

Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3812154	Sacramento East	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Fish	Acipenser transmontanus	white sturgeon	AFCAA01050	None	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Acipenseridae - Acipenser transmontanus
Animals - Fish	Archoplites interruptus	Sacramento perch	AFCQB07010	None	None	SSC	-	3812155	Sacramento West	Mapped	Animals - Fish - Centrarchidae - Archoplites interruptus
Animals - Fish	Lavinia exilicauda exilicauda	Central Valley hitch	AFCJB19012	None	None	-	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Cyprinidae - Lavinia exilicauda exilicauda
Animals - Fish	Lavinia exilicauda exilicauda	Central Valley hitch	AFCJB19012	None	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Cyprinidae - Lavinia exilicauda exilicauda
Animals - Fish	Lavinia exilicauda exilicauda	Central Valley hitch	AFCJB19012	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Fish - Cyprinidae - Lavinia exilicauda exilicauda
Animals - Fish	Mylopharodon conocephalus	hardhead	AFCJB25010	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Cyprinidae - Mylopharodon conocephalus
Animals - Fish	Mylopharodon conocephalus	hardhead	AFCJB25010	None	None	SSC	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Cyprinidae - Mylopharodon conocephalus
Animals - Fish	Mylopharodon conocephalus	hardhead	AFCJB25010	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Cyprinidae - Mylopharodon conocephalus
Animals - Fish	Pogonichthys macrolepidotus	Sacramento splittail	AFCJB34020	None	None	SSC	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Fish - Cyprinidae - Pogonichthys macrolepidotus
Animals - Fish	Pogonichthys macrolepidotus	Sacramento splittail	AFCJB34020	None	None	SSC	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Cyprinidae - Pogonichthys macrolepidotus
Animals - Fish	Pogonichthys macrolepidotus	Sacramento splittail	AFCJB34020	None	None	SSC	-	3812145	Clarksburg	Mapped and Unprocessed	Animals - Fish - Cyprinidae - Pogonichthys macrolepidotus
Animals - Fish	Pogonichthys macrolepidotus	Sacramento splittail	AFCJB34020	None	None	SSC	-	3812144	Florin	Mapped	Animals - Fish - Cyprinidae - Pogonichthys macrolepidotus
Animals - Fish	Pogonichthys macrolepidotus	Sacramento splittail	AFCJB34020	None	None	SSC	-	3812134	Bruceville	Unprocessed	Animals - Fish - Cyprinidae - Pogonichthys macrolepidotus
Animals - Fish	Pogonichthys macrolepidotus	Sacramento splittail	AFCJB34020	None	None	SSC	-	3812135	Courtland	Mapped and Unprocessed	Animals - Fish - Cyprinidae - Pogonichthys macrolepidotus
Animals - Fish	Hysterothorax traski traski	Sacramento-San Joaquin tule perch	AFCQK02012	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Fish - Embiotocidae - Hysterothorax traski traski
Animals - Fish	Hysterothorax traski traski	Sacramento-San Joaquin tule perch	AFCQK02012	None	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Embiotocidae - Hysterothorax traski traski

Animals - Fish	Hysterothorax traski	Sacramento-San Joaquin tule perch	AFCQK02012	None	None	-	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Embiotocidae - Hysterothorax traski
Animals - Fish	Hysterothorax traski	Sacramento-San Joaquin tule perch	AFCQK02012	None	None	-	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Embiotocidae - Hysterothorax traski
Animals - Fish	Hypomesus transpacificus	Delta smelt	AFCHB01040	Threatened	Endangered	-	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Osmeridae - Hypomesus transpacificus
Animals - Fish	Hypomesus transpacificus	Delta smelt	AFCHB01040	Threatened	Endangered	-	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Osmeridae - Hypomesus transpacificus
Animals - Fish	Hypomesus transpacificus	Delta smelt	AFCHB01040	Threatened	Endangered	-	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Osmeridae - Hypomesus transpacificus
Animals - Fish	Hypomesus transpacificus	Delta smelt	AFCHB01040	Threatened	Endangered	-	-	3812134	Bruceville	Unprocessed	Animals - Fish - Osmeridae - Hypomesus transpacificus
Animals - Fish	Hypomesus transpacificus	Delta smelt	AFCHB01040	Threatened	Endangered	-	-	3812135	Courtland	Unprocessed	Animals - Fish - Osmeridae - Hypomesus transpacificus
Animals - Fish	Spirinchus thaleichthys	longfin smelt	AFCHB03010	Candidate	Threatened	SSC	-	3812135	Courtland	Mapped	Animals - Fish - Osmeridae - Spirinchus thaleichthys
Animals - Fish	Spirinchus thaleichthys	longfin smelt	AFCHB03010	Candidate	Threatened	SSC	-	3812145	Clarksburg	Mapped	Animals - Fish - Osmeridae - Spirinchus thaleichthys
Animals - Fish	Spirinchus thaleichthys	longfin smelt	AFCHB03010	Candidate	Threatened	SSC	-	3812144	Florin	Mapped	Animals - Fish - Osmeridae - Spirinchus thaleichthys
Animals - Fish	Spirinchus thaleichthys	longfin smelt	AFCHB03010	Candidate	Threatened	SSC	-	3812155	Sacramento West	Mapped	Animals - Fish - Osmeridae - Spirinchus thaleichthys
Animals - Fish	Entosphenus tridentatus	Pacific lamprey	AFBAA02100	None	None	-	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Petromyzontidae - Entosphenus tridentatus
Animals - Fish	Entosphenus tridentatus	Pacific lamprey	AFBAA02100	None	None	-	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Petromyzontidae - Entosphenus tridentatus
Animals - Fish	Entosphenus tridentatus	Pacific lamprey	AFBAA02100	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Fish - Petromyzontidae - Entosphenus tridentatus
Animals - Fish	Lampetra ayresii	river lamprey	AFBAA02030	None	None	SSC	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Petromyzontidae - Lampetra ayresii
Animals - Fish	Lampetra ayresii	river lamprey	AFBAA02030	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Petromyzontidae - Lampetra ayresii
Animals - Fish	Lampetra ayresii	river lamprey	AFBAA02030	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Petromyzontidae - Lampetra ayresii
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - central California coast DPS	AFCHA0209G	Threatened	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812145	Clarksburg	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus

Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812144	Florin	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - central California coast DPS	AFCHA0209G	Threatened	None	-	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812154	Sacramento East	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812153	Carmichael	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812133	Galt	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812134	Bruceville	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812135	Courtland	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812143	Elk Grove	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - central California coast DPS	AFCHA0209G	Threatened	None	-	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812155	Sacramento West	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - spring-run Klamath-Trinity Rivers pop.	AFCHA02056	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley spring-run ESU	AFCHA0205A	Threatened	Threatened	-	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Sacramento River winter-run ESU	AFCHA0205B	Endangered	Endangered	-	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley fall / late fall-run ESU	AFCHA0205N	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - spring-run Klamath-Trinity Rivers pop.	AFCHA02056	None	None	SSC	-	3812135	Courtland	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley spring-run ESU	AFCHA0205A	Threatened	Threatened	-	-	3812135	Courtland	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha

Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Sacramento River winter-run ESU	AFCHA0205B	Endangered	Endangered	-	-	3812135	Courtland	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley fall / late fall-run ESU	AFCHA0205N	None	None	SSC	-	3812135	Courtland	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley fall / late fall-run ESU	AFCHA0205N	None	None	SSC	-	3812134	Bruceville	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley spring-run ESU	AFCHA0205A	Threatened	Threatened	-	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Sacramento River winter-run ESU	AFCHA0205B	Endangered	Endangered	-	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley fall / late fall-run ESU	AFCHA0205N	None	None	SSC	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - spring-run Klamath-Trinity Rivers pop.	AFCHA02056	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley spring-run ESU	AFCHA0205A	Threatened	Threatened	-	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Sacramento River winter-run ESU	AFCHA0205B	Endangered	Endangered	-	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley fall / late fall-run ESU	AFCHA0205N	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Insects	Cicindela hirticollis abrupta	Sacramento Valley tiger beetle	IICOL02106	None	None	-	-	3812155	Sacramento West	Mapped	Animals - Insects - Carabidae - Cicindela hirticollis abrupta
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3812154	Sacramento East	Mapped and Unprocessed	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus

Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3812133	Galt	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3812134	Bruceville	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3812135	Courtland	Unprocessed	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3812143	Elk Grove	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Hydrochara rickseckeri	Ricksecker's water scavenger beetle	IICOL5V010	None	None	-	-	3812134	Bruceville	Mapped	Animals - Insects - Hydrophilidae - Hydrochara rickseckeri
Animals - Insects	Hydrochara rickseckeri	Ricksecker's water scavenger beetle	IICOL5V010	None	None	-	-	3812153	Carmichael	Mapped	Animals - Insects - Hydrophilidae - Hydrochara rickseckeri
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3812153	Carmichael	Mapped	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3812154	Sacramento East	Mapped	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3812145	Clarksburg	Mapped	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3812144	Florin	Mapped and Unprocessed	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3812134	Bruceville	Mapped	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3812135	Courtland	Mapped	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Lasiurus blossevillii	western red bat	AMACC05060	None	None	SSC	-	3812135	Courtland	Unprocessed	Animals - Mammals - Vespertilionidae - Lasiurus blossevillii
Animals - Mammals	Lasiurus blossevillii	western red bat	AMACC05060	None	None	SSC	-	3812144	Florin	Unprocessed	Animals - Mammals - Vespertilionidae - Lasiurus blossevillii
Animals - Mammals	Lasiurus blossevillii	western red bat	AMACC05060	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Mammals - Vespertilionidae - Lasiurus blossevillii
Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05030	None	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Mammals - Vespertilionidae - Lasiurus cinereus

Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05030	None	None	-	-	3812144	Florin	Unprocessed	Animals - Mammals - Vespertilionidae - Lasiurus cinereus
Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05030	None	None	-	-	3812135	Courtland	Unprocessed	Animals - Mammals - Vespertilionidae - Lasiurus cinereus
Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05030	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Mammals - Vespertilionidae - Lasiurus cinereus
Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05030	None	None	-	-	3812155	Sacramento West	Mapped	Animals - Mammals - Vespertilionidae - Lasiurus cinereus
Animals - Mammals	Myotis ciliolabrum	western small-footed myotis	AMACC01140	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis ciliolabrum
Animals - Mammals	Myotis lucifugus	little brown bat	AMACC01010	None	None	-	-	3812135	Courtland	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis lucifugus
Animals - Mammals	Myotis lucifugus	little brown bat	AMACC01010	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis lucifugus
Animals - Mammals	Myotis lucifugus	little brown bat	AMACC01010	None	None	-	-	3812144	Florin	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis lucifugus
Animals - Mammals	Myotis lucifugus	little brown bat	AMACC01010	None	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis lucifugus
Animals - Mammals	Myotis yumanensis	Yuma myotis	AMACC01020	None	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis yumanensis
Animals - Mammals	Myotis yumanensis	Yuma myotis	AMACC01020	None	None	-	-	3812144	Florin	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis yumanensis
Animals - Mammals	Myotis yumanensis	Yuma myotis	AMACC01020	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis yumanensis
Animals - Mammals	Myotis yumanensis	Yuma myotis	AMACC01020	None	None	-	-	3812135	Courtland	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis yumanensis
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812135	Courtland	Mapped	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812143	Elk Grove	Mapped	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812134	Bruceville	Mapped	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812133	Galt	Mapped	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812144	Florin	Mapped	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata

Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812154	Sacramento East	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812153	Carmichael	Mapped	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Thamnophis gigas	giant garter snake	ARADB36150	Threatened	Threatened	-	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant garter snake	ARADB36150	Threatened	Threatened	-	-	3812145	Clarksburg	Unprocessed	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant garter snake	ARADB36150	Threatened	Threatened	-	-	3812144	Florin	Mapped	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant garter snake	ARADB36150	Threatened	Threatened	-	-	3812133	Galt	Mapped and Unprocessed	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant garter snake	ARADB36150	Threatened	Threatened	-	-	3812134	Bruceville	Mapped	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant garter snake	ARADB36150	Threatened	Threatened	-	-	3812143	Elk Grove	Mapped	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant garter snake	ARADB36150	Threatened	Threatened	-	-	3812135	Courtland	Mapped	Animals - Reptiles - Natricidae - Thamnophis gigas
Community - Terrestrial	Coastal and Valley Freshwater Marsh	Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	-	-	3812135	Courtland	Mapped	Community - Terrestrial - Coastal and Valley Freshwater Marsh
Community - Terrestrial	Coastal and Valley Freshwater Marsh	Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	-	-	3812134	Bruceville	Mapped	Community - Terrestrial - Coastal and Valley Freshwater Marsh
Community - Terrestrial	Elderberry Savanna	Elderberry Savanna	CTT63440CA	None	None	-	-	3812154	Sacramento East	Mapped	Community - Terrestrial - Elderberry Savanna
Community - Terrestrial	Elderberry Savanna	Elderberry Savanna	CTT63440CA	None	None	-	-	3812155	Sacramento West	Mapped	Community - Terrestrial - Elderberry Savanna
Community - Terrestrial	Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	-	-	3812155	Sacramento West	Mapped	Community - Terrestrial - Great Valley Cottonwood Riparian Forest
Community - Terrestrial	Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	CTT61420CA	None	None	-	-	3812134	Bruceville	Mapped	Community - Terrestrial - Great Valley Mixed Riparian Forest
Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3812134	Bruceville	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest
Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3812133	Galt	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest
Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3812143	Elk Grove	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest
Community - Terrestrial	Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	CTT44110CA	None	None	-	-	3812143	Elk Grove	Mapped	Community - Terrestrial - Northern Hardpan Vernal Pool
Community - Terrestrial	Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	CTT44110CA	None	None	-	-	3812133	Galt	Mapped	Community - Terrestrial - Northern Hardpan Vernal Pool

Community - Terrestrial	Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	CTT44110CA	None	None	-	-	3812134	Bruceville	Mapped	Community - Terrestrial - Northern Hardpan Vernal Pool
Community - Terrestrial	Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	CTT44110CA	None	None	-	-	3812153	Carmichael	Mapped	Community - Terrestrial - Northern Hardpan Vernal Pool
Community - Terrestrial	Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	CTT44110CA	None	None	-	-	3812144	Florin	Mapped	Community - Terrestrial - Northern Hardpan Vernal Pool
Community - Terrestrial	Valley Oak Woodland	Valley Oak Woodland	CTT71130CA	None	None	-	-	3812134	Bruceville	Mapped	Community - Terrestrial - Valley Oak Woodland
Community - Terrestrial	Valley Oak Woodland	Valley Oak Woodland	CTT71130CA	None	None	-	-	3812133	Galt	Mapped	Community - Terrestrial - Valley Oak Woodland
Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	None	None	-	1B.2	3812133	Galt	Mapped	Plants - Vascular - Alismataceae - Sagittaria sanfordii
Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	None	None	-	1B.2	3812135	Courtland	Mapped	Plants - Vascular - Alismataceae - Sagittaria sanfordii
Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	None	None	-	1B.2	3812143	Elk Grove	Mapped	Plants - Vascular - Alismataceae - Sagittaria sanfordii
Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	None	None	-	1B.2	3812134	Bruceville	Mapped	Plants - Vascular - Alismataceae - Sagittaria sanfordii
Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	None	None	-	1B.2	3812144	Florin	Mapped	Plants - Vascular - Alismataceae - Sagittaria sanfordii
Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	None	None	-	1B.2	3812153	Carmichael	Mapped	Plants - Vascular - Alismataceae - Sagittaria sanfordii
Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	None	None	-	1B.2	3812154	Sacramento East	Mapped	Plants - Vascular - Alismataceae - Sagittaria sanfordii
Plants - Vascular	Cicuta maculata var. bolanderi	Bolander's water-hemlock	PDAPI0M051	None	None	-	2B.1	3812135	Courtland	Mapped	Plants - Vascular - Apiaceae - Cicuta maculata var. bolanderi
Plants - Vascular	Cicuta maculata var. bolanderi	Bolander's water-hemlock	PDAPI0M051	None	None	-	2B.1	3812134	Bruceville	Mapped	Plants - Vascular - Apiaceae - Cicuta maculata var. bolanderi
Plants - Vascular	Lilaeopsis masonii	Mason's lilaeopsis	PDAPI19030	None	Rare	-	1B.1	3812134	Bruceville	Mapped	Plants - Vascular - Apiaceae - Lilaeopsis masonii
Plants - Vascular	Lilaeopsis masonii	Mason's lilaeopsis	PDAPI19030	None	Rare	-	1B.1	3812145	Clarksburg	Mapped	Plants - Vascular - Apiaceae - Lilaeopsis masonii
Plants - Vascular	Centromadia parryi ssp. rudis	Parry's rough tarplant	PDAST4R0P3	None	None	-	4.2	3812145	Clarksburg	Unprocessed	Plants - Vascular - Asteraceae - Centromadia parryi ssp. rudis
Plants - Vascular	Centromadia parryi ssp. rudis	Parry's rough tarplant	PDAST4R0P3	None	None	-	4.2	3812144	Florin	Unprocessed	Plants - Vascular - Asteraceae - Centromadia parryi ssp. rudis
Plants - Vascular	Centromadia parryi ssp. rudis	Parry's rough tarplant	PDAST4R0P3	None	None	-	4.2	3812134	Bruceville	Unprocessed	Plants - Vascular - Asteraceae - Centromadia parryi ssp. rudis
Plants - Vascular	Centromadia parryi ssp. rudis	Parry's rough tarplant	PDAST4R0P3	None	None	-	4.2	3812135	Courtland	Unprocessed	Plants - Vascular - Asteraceae - Centromadia parryi ssp. rudis
Plants - Vascular	Centromadia parryi ssp. rudis	Parry's rough tarplant	PDAST4R0P3	None	None	-	4.2	3812155	Sacramento West	Unprocessed	Plants - Vascular - Asteraceae - Centromadia parryi ssp. rudis

Plants - Vascular	<i>Hesperex caulescens</i>	hogwallow starfish	PDASTE5020	None	None	-	4.2	3812144	Florin	Unprocessed	Plants - Vascular - Asteraceae - <i>Hesperex caulescens</i>
Plants - Vascular	<i>Lasthenia ferrisiae</i>	Ferris' goldfields	PDAST5L070	None	None	-	4.2	3812134	Bruceville	Unprocessed	Plants - Vascular - Asteraceae - <i>Lasthenia ferrisiae</i>
Plants - Vascular	<i>Symphotrichum lentum</i>	Suisun Marsh aster	PDASTE8470	None	None	-	1B.2	3812155	Sacramento West	Mapped	Plants - Vascular - Asteraceae - <i>Symphotrichum lentum</i>
Plants - Vascular	<i>Lepidium latipes</i> var. <i>heckardii</i>	Heckard's pepperglass	PDBRA1M0K1	None	None	-	1B.2	3812144	Florin	Mapped	Plants - Vascular - Brassicaceae - <i>Lepidium latipes</i> var. <i>heckardii</i>
Plants - Vascular	<i>Lepidium latipes</i> var. <i>heckardii</i>	Heckard's pepperglass	PDBRA1M0K1	None	None	-	1B.2	3812145	Clarksburg	Mapped	Plants - Vascular - Brassicaceae - <i>Lepidium latipes</i> var. <i>heckardii</i>
Plants - Vascular	<i>Brasenia schreberi</i>	watershield	PDCAB01010	None	None	-	2B.3	3812134	Bruceville	Mapped	Plants - Vascular - Cabombaceae - <i>Brasenia schreberi</i>
Plants - Vascular	<i>Brasenia schreberi</i>	watershield	PDCAB01010	None	None	-	2B.3	3812135	Courtland	Mapped	Plants - Vascular - Cabombaceae - <i>Brasenia schreberi</i>
Plants - Vascular	<i>Downingia pusilla</i>	dwarf downingia	PDCAM060C0	None	None	-	2B.2	3812143	Elk Grove	Mapped	Plants - Vascular - Campanulaceae - <i>Downingia pusilla</i>
Plants - Vascular	<i>Downingia pusilla</i>	dwarf downingia	PDCAM060C0	None	None	-	2B.2	3812133	Galt	Mapped	Plants - Vascular - Campanulaceae - <i>Downingia pusilla</i>
Plants - Vascular	<i>Downingia pusilla</i>	dwarf downingia	PDCAM060C0	None	None	-	2B.2	3812144	Florin	Mapped	Plants - Vascular - Campanulaceae - <i>Downingia pusilla</i>
Plants - Vascular	<i>Legenere limosa</i>	legenere	PDCAM0C010	None	None	-	1B.1	3812144	Florin	Mapped	Plants - Vascular - Campanulaceae - <i>Legenere limosa</i>
Plants - Vascular	<i>Legenere limosa</i>	legenere	PDCAM0C010	None	None	-	1B.1	3812153	Carmichael	Mapped	Plants - Vascular - Campanulaceae - <i>Legenere limosa</i>
Plants - Vascular	<i>Legenere limosa</i>	legenere	PDCAM0C010	None	None	-	1B.1	3812133	Galt	Mapped	Plants - Vascular - Campanulaceae - <i>Legenere limosa</i>
Plants - Vascular	<i>Legenere limosa</i>	legenere	PDCAM0C010	None	None	-	1B.1	3812134	Bruceville	Mapped	Plants - Vascular - Campanulaceae - <i>Legenere limosa</i>
Plants - Vascular	<i>Legenere limosa</i>	legenere	PDCAM0C010	None	None	-	1B.1	3812143	Elk Grove	Mapped	Plants - Vascular - Campanulaceae - <i>Legenere limosa</i>
Plants - Vascular	<i>Cuscuta obtusiflora</i> var. <i>glandulosa</i>	Peruvian dodder	PDCUS01111	None	None	-	2B.2	3812144	Florin	Mapped	Plants - Vascular - Cuscutaceae - <i>Cuscuta obtusiflora</i> var. <i>glandulosa</i>
Plants - Vascular	<i>Carex comosa</i>	bristly sedge	PMCYP032Y0	None	None	-	2B.1	3812145	Clarksburg	Mapped	Plants - Vascular - Cyperaceae - <i>Carex comosa</i>
Plants - Vascular	<i>Carex comosa</i>	bristly sedge	PMCYP032Y0	None	None	-	2B.1	3812135	Courtland	Mapped	Plants - Vascular - Cyperaceae - <i>Carex comosa</i>
Plants - Vascular	<i>Carex comosa</i>	bristly sedge	PMCYP032Y0	None	None	-	2B.1	3812134	Bruceville	Mapped	Plants - Vascular - Cyperaceae - <i>Carex comosa</i>
Plants - Vascular	<i>Astragalus tener</i> var. <i>ferrisiae</i>	Ferris' milk-vetch	PDFAB0F8R3	None	None	-	1B.1	3812155	Sacramento West	Mapped	Plants - Vascular - Fabaceae - <i>Astragalus tener</i> var. <i>ferrisiae</i>
Plants - Vascular	<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	Delta tule pea	PDFAB250D2	None	None	-	1B.2	3812135	Courtland	Mapped	Plants - Vascular - Fabaceae - <i>Lathyrus jepsonii</i> var. <i>jepsonii</i>

Plants - Vascular	Lathyrus jepsonii var. jepsonii	Delta tulle pea	PDFAB250D2	None	None	-	1B.2	3812134	Bruceville	Mapped	Plants - Vascular - Fabaceae - Lathyrus jepsonii var. jepsonii
Plants - Vascular	Trifolium hydrophilum	saline clover	PDFAB400R5	None	None	-	1B.2	3812134	Bruceville	Mapped	Plants - Vascular - Fabaceae - Trifolium hydrophilum
Plants - Vascular	Trifolium hydrophilum	saline clover	PDFAB400R5	None	None	-	1B.2	3812145	Clarksburg	Mapped	Plants - Vascular - Fabaceae - Trifolium hydrophilum
Plants - Vascular	Trifolium hydrophilum	saline clover	PDFAB400R5	None	None	-	1B.2	3812144	Florin	Mapped	Plants - Vascular - Fabaceae - Trifolium hydrophilum
Plants - Vascular	Juglans hindsii	Northern California black walnut	PDJUG02040	None	None	-	1B.1	3812144	Florin	Mapped	Plants - Vascular - Juglandaceae - Juglans hindsii
Plants - Vascular	Juglans hindsii	Northern California black walnut	PDJUG02040	None	None	-	1B.1	3812145	Clarksburg	Mapped	Plants - Vascular - Juglandaceae - Juglans hindsii
Plants - Vascular	Juglans hindsii	Northern California black walnut	PDJUG02040	None	None	-	1B.1	3812135	Courtland	Mapped	Plants - Vascular - Juglandaceae - Juglans hindsii
Plants - Vascular	Juncus leiospermus var. ahartii	Ahart's dwarf rush	PMJUN011L1	None	None	-	1B.2	3812153	Carmichael	Mapped	Plants - Vascular - Juncaceae - Juncus leiospermus var. ahartii
Plants - Vascular	Scutellaria galericulata	marsh skullcap	PDLAM1U0J0	None	None	-	2B.2	3812134	Bruceville	Mapped	Plants - Vascular - Lamiaceae - Scutellaria galericulata
Plants - Vascular	Scutellaria lateriflora	side-flowering skullcap	PDLAM1U0Q0	None	None	-	2B.2	3812134	Bruceville	Mapped	Plants - Vascular - Lamiaceae - Scutellaria lateriflora
Plants - Vascular	Scutellaria lateriflora	side-flowering skullcap	PDLAM1U0Q0	None	None	-	2B.2	3812135	Courtland	Mapped	Plants - Vascular - Lamiaceae - Scutellaria lateriflora
Plants - Vascular	Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3812135	Courtland	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpus var. occidentalis
Plants - Vascular	Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3812134	Bruceville	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpus var. occidentalis
Plants - Vascular	Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3812145	Clarksburg	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpus var. occidentalis
Plants - Vascular	Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3812144	Florin	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpus var. occidentalis
Plants - Vascular	Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B.2	3812155	Sacramento West	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpus var. occidentalis
Plants - Vascular	Gratiola heterosepala	Boggs Lake hedge-hyssop	PDSCR0R060	None	Endangered	-	1B.2	3812153	Carmichael	Mapped	Plants - Vascular - Plantaginaceae - Gratiola heterosepala
Plants - Vascular	Gratiola heterosepala	Boggs Lake hedge-hyssop	PDSCR0R060	None	Endangered	-	1B.2	3812143	Elk Grove	Mapped	Plants - Vascular - Plantaginaceae - Gratiola heterosepala

Plants - Vascular	<i>Orcuttia tenuis</i>	slender Orcutt grass	PMPOA4G050	Threatened	Endangered	-	1B.1	3812143	Elk Grove	Mapped	Plants - Vascular - Poaceae - <i>Orcuttia tenuis</i>
Plants - Vascular	<i>Orcuttia viscida</i>	Sacramento Orcutt grass	PMPOA4G070	Endangered	Endangered	-	1B.1	3812143	Elk Grove	Mapped	Plants - Vascular - Poaceae - <i>Orcuttia viscida</i>
Plants - Vascular	<i>Orcuttia viscida</i>	Sacramento Orcutt grass	PMPOA4G070	Endangered	Endangered	-	1B.1	3812153	Carmichael	Mapped	Plants - Vascular - Poaceae - <i>Orcuttia viscida</i>
Plants - Vascular	<i>Navarretia eriocephala</i>	hoary navarretia	PDPLM0C060	None	None	-	4.3	3812143	Elk Grove	Unprocessed	Plants - Vascular - Polemoniaceae - <i>Navarretia eriocephala</i>
Plants - Vascular	<i>Limosella australis</i>	Delta mudwort	PDSCR10050	None	None	-	2B.1	3812135	Courtland	Mapped	Plants - Vascular - Scrophulariaceae - <i>Limosella australis</i>
Plants - Vascular	<i>Limosella australis</i>	Delta mudwort	PDSCR10050	None	None	-	2B.1	3812134	Bruceville	Mapped	Plants - Vascular - Scrophulariaceae - <i>Limosella australis</i>

Plant List

26 matches found. *Click on scientific name for details*

Search Criteria

Found in 9 Quads around 38121D4

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
<u>Astragalus tener var. ferrisiae</u>	Ferris' milk-vetch	Fabaceae	annual herb	1B.1	S1	G2T1
<u>Brasenia schreberi</u>	watershield	Cabombaceae	perennial rhizomatous herb	2B.3	S2	G5
<u>Carex comosa</u>	bristly sedge	Cyperaceae	perennial rhizomatous herb	2B.1	S2	G5
<u>Centromadia parryi ssp. rudis</u>	Parry's rough tarplant	Asteraceae	annual herb	4.2	S3.2	G3T3
<u>Cicuta maculata var. bolanderi</u>	Bolander's water-hemlock	Apiaceae	perennial herb	2B.1	S2	G5T3T4
<u>Cuscuta obtusiflora var. glandulosa</u>	Peruvian dodder	Convolvulaceae	annual vine (parasitic)	2B.2	SH	G5T4T5
<u>Downingia pusilla</u>	dwarf downingia	Campanulaceae	annual herb	2B.2	S2	GU
<u>Gratiola heterosepala</u>	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	1B.2	S2	G2
<u>Hesperervax caulescens</u>	hogwallow starfish	Asteraceae	annual herb	4.2	S3.2	G3
<u>Hibiscus lasiocarpus var. occidentalis</u>	woolly rose-mallow	Malvaceae	perennial rhizomatous herb	1B.2	S2	G5T2
<u>Juglans hindsii</u>	Northern California black walnut	Juglandaceae	perennial deciduous tree	1B.1	S1	G1
<u>Juncus leiospermus var. ahartii</u>	Ahart's dwarf rush	Juncaceae	annual herb	1B.2	S1	G2T1
<u>Lasthenia ferrisiae</u>	Ferris' goldfields	Asteraceae	annual herb	4.2	S3.2	G3
<u>Lathyrus jepsonii var. jepsonii</u>	Delta tule pea	Fabaceae	perennial herb	1B.2	S2.2	G5T2
<u>Legenere limosa</u>	legenere	Campanulaceae	annual herb	1B.1	S2	G2
<u>Lepidium latipes var. heckardii</u>	Heckard's pepper-grass	Brassicaceae	annual herb	1B.2	S2	G4T2
<u>Lilaeopsis masonii</u>	Mason's lilaeopsis	Apiaceae	perennial rhizomatous herb	1B.1	S2	G2
<u>Limosella australis</u>	Delta mudwort	Scrophulariaceae	perennial stoloniferous herb	2B.1	S2	G4G5
<u>Navarretia eriocephala</u>	hoary navarretia	Polemoniaceae	annual herb	4.3	S3.3	G3
<u>Orcuttia tenuis</u>	slender Orcutt grass	Poaceae	annual herb	1B.1	S2	G2
<u>Orcuttia viscida</u>		Poaceae	annual herb	1B.1	S1	G1

	Sacramento Orcutt grass					
<u>Sagittaria sanfordii</u>	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb	1B.2	S3	G3
<u>Scutellaria galericulata</u>	marsh skullcap	Lamiaceae	perennial rhizomatous herb	2B.2	S2	G5
<u>Scutellaria lateriflora</u>	side-flowering skullcap	Lamiaceae	perennial rhizomatous herb	2B.2	S1	G5
<u>Symphotrichum lentum</u>	Suisun Marsh aster	Asteraceae	perennial rhizomatous herb	1B.2	S2	G2
<u>Trifolium hydrophilum</u>	saline clover	Fabaceae	annual herb	1B.2	S2	G2

Suggested Citation

CNPS, Rare Plant Program. 2014. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> [accessed 25 June 2014].

Search the Inventory

[Simple Search](#)

[Advanced Search](#)

[Glossary](#)

Information

[About the Inventory](#)

[About the Rare Plant Program](#)

[CNPS Home Page](#)

[About CNPS](#)

[Join CNPS](#)

Contributors

[The Calflora Database](#)

[The California Lichen Society](#)

Appendix B Wetland Delineation



REPLY TO
ATTENTION OF

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

RECEIVED

MAY 01 2014

CITY OF ELK GROVE
PUBLIC WORKS

April 28, 2014

Regulatory Division SPK-2014-00230

City of Elk Grove
Attn: Mr. Michael Karoly
8401 Laguna Palms Drive
Elk Grove, California 95758

Dear Mr. Karoly:

We are responding to your request for a preliminary jurisdictional determination (JD), in accordance with our Regulatory Guidance Letter (RGL) 08-02, for the Laguna Creek Trail, Camden Spur site. The approximately 23-acre site is located north of Bond Road, south of Sheldon Road, east of State Route 99, and west of Elk Grove-Florin Road, in Section 25, Township 7 North, Range 5 East, Mount Diablo Meridian, Latitude 38.4292° North, Longitude 121.3859° West, in the City of Elk Grove, Sacramento County, California.

Based on available information, we concur with the amount and location of wetlands and other water bodies on the site as depicted on the enclosed December 11-12 *Figure 4, Delineation of Wetlands and Waters of the U.S.* drawing prepared by the PMC. The approximately 2.048 acres of wetlands and/or other water bodies present within the survey area are potential waters of the United States regulated under Section 404 of the Clean Water Act.

We have enclosed a copy of the *Preliminary Jurisdictional Determination Form* for this site. Please sign and return a copy of the completed form to this office. Once we receive a copy of the form with your signature we can accept and process a Pre-Construction Notification or permit application for your proposed project.

You should not start any work in potentially jurisdictional waters of the United States unless you have Department of the Army permit authorization for the activity. You may request an approved JD for this site at any time prior to starting work within waters. In certain circumstances, as described in RGL 08-02, an approved JD may later be necessary.

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 preliminary determination has been conducted to identify the potential limits of wetlands and other water bodies which may be subject to Corps of Engineers' jurisdiction for the particular site identified in this request. A Notification of Appeal Process and Request for Appeal form is enclosed to notify you of your options with this determination. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are U.S. Department of Agriculture (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.

We appreciate your feedback. At your earliest convenience, please tell us how we are doing by completing the customer survey on our website under *Customer Service Survey*.

Please refer to identification number SPK-2014-00230 in any correspondence concerning this project. If you have any questions, please contact Lisa Gibson at 1325 J Street, Room 1350, Sacramento, California 95814, by email at Lisa.M.Gibson2@usace.army.mil, or telephone at 916-557-5288. For more information regarding our program, please visit our website at www.spk.usace.army.mil/Missions/Regulatory.aspx.

Sincerely,



Kathleen A. Dadey, PhD
Chief, CA South Branch
Regulatory Division

Enclosures

cc: (w/o encls)

Ms. Summer Pardo, PMC, spardo@PMCWorld.com

Ms. Leana Rosetti, U.S. Environmental Protection Agency, Region IX, Wetlands Regulatory Office (WTR-8), 75 Hawthorne Street, San Francisco, California 94105-3901

Ms. Tina Bartlett, California Department of Fish and Wildlife, Region 2, 1701 Nimbus Road, Rancho Cordova, California 95670-4599

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

Ms. Kellie Berry, Sacramento Valley Branch, Endangered Species Division, U.S. Fish and Wildlife Service, 2800 Cottage Way, Suite W2605, Sacramento, California 95825-3901

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

Sacramento District

This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

Regulatory Branch: California South File/ORM #: SPK-2014-00230 PJD Date: April 25, 2014	
State: CA City/County: Elk Grove, Sacramento County Nearest Waterbody: Laguna Creek and Whitehouse Creek Location (Lat/Long): 38.4292° North, 121.3859° West Size of Review Area: 23 acres	Name/Address City of Elk Grove Of Property Attn: Mr. Michael Karoly Owner/ 8401 Laguna Palms Drive Potential Elk Grove, California 95758 Applicant
Identify (Estimate) Amount of Waters in the Review Area Non-Wetland Waters: linear feet ft wide 2.026 acre(s) Stream Flow: Perennial and Intermittent Wetlands: 0.022 acre(s) Cowardin Class: Palustrine, emergent	Name of any Water Bodies Tidal: on the site identified as Section 10 Waters: Non-Tidal: <input type="checkbox"/> Office (Desk) Determination <input checked="" type="checkbox"/> Field Determination: Date(s) of Site Visit(s): April 7, 2014

SUPPORTING DATA: Data reviewed for preliminary JD (check all that apply – checked items should be included in case file and, where checked and requested, appropriately reference sources below)

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Figure 4, Delineation of Wetlands and Waters of the U.S.
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
- Data sheets prepared by the Corps.
- Corps navigable waters' study.
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data.
 - USGS HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24K; CA-FLORIN
- USDA Natural Resources Conservation Service Soil Survey.
- National wetlands inventory map(s).
- State/Local wetland inventory map(s).
- FEMA/FIRM maps.
- 100-year Floodplain Elevation (if known):
- Photographs: Aerial
 Other
- Previous determination(s). File no. and date of response letter: SPK-2011-00034, February 11, 2011
- Other information (please specify):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

 Signature and Date of Regulatory Project Manager (REQUIRED)	4/28/14	 Signature and Date of Person Requesting Preliminary JD (REQUIRED, unless obtaining the signature is impracticable)	5/1/14
---	---------	---	--------

EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DETERMINATIONS:

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: City of Elk Grove	File No.: SPK-2014-00230	Date: April 28, 2014
Attached is:		See Section below
<input type="checkbox"/>	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
<input type="checkbox"/>	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
<input type="checkbox"/>	PERMIT DENIAL	C
<input type="checkbox"/>	APPROVED JURISDICTIONAL DETERMINATION	D
<input checked="" type="checkbox"/>	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/cecw/pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Lisa M. Gibson
Senior Project Manager
California South Branch
U.S. Army Corps of Engineers
1325 J Street, Room 1350
Sacramento, California 95814-2922
Phone: 916-557-5288, FAX 916-557-7803
Email: Lisa.M.Gibson2@usace.army.mil

If you only have questions regarding the appeal process you may also contact:

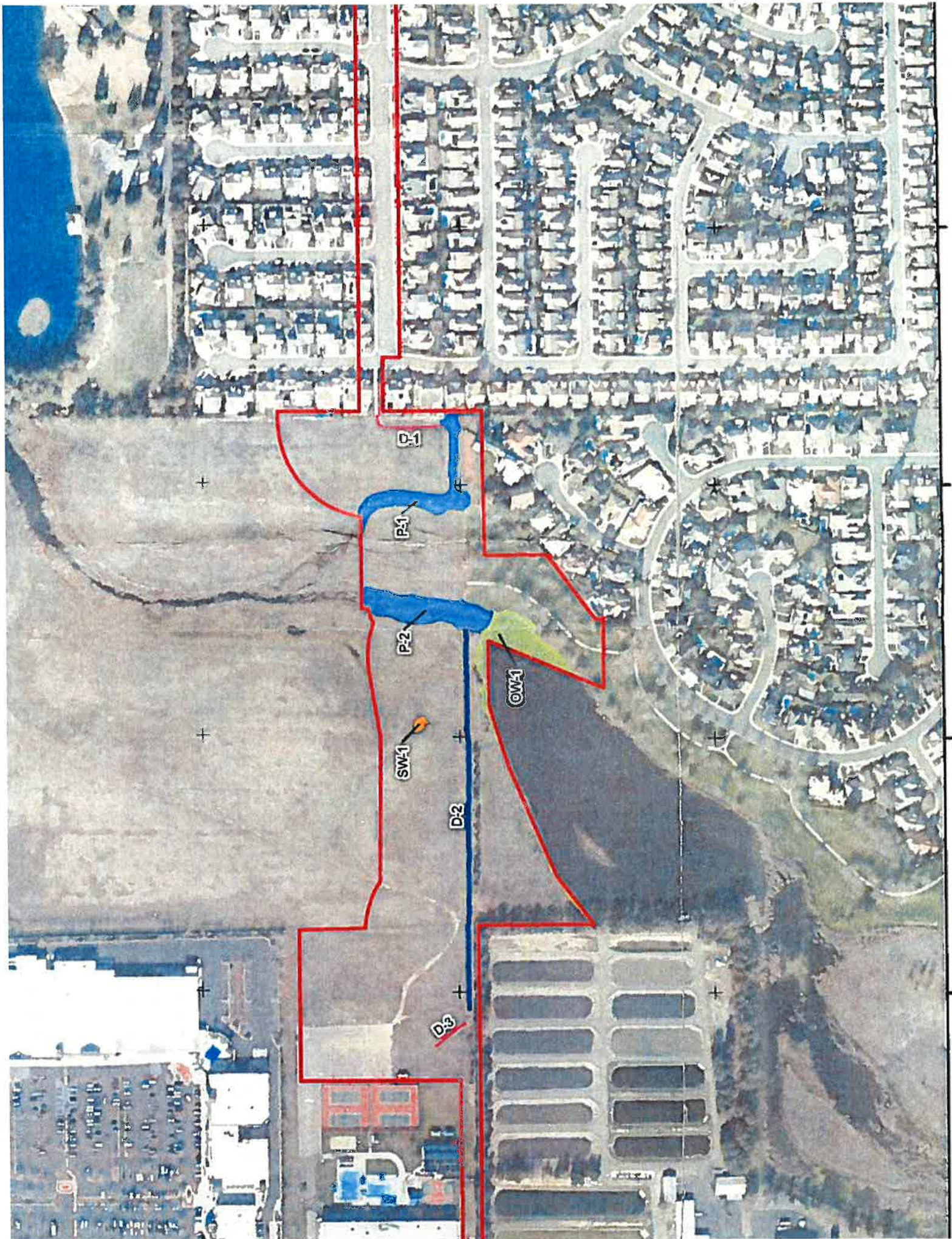
Thomas J. Cavanaugh
Administrative Appeal Review Officer
U.S. Army Corps of Engineers
South Pacific Division
1455 Market Street, 2052B
San Francisco, California 94103-1399
Phone: 415-503-6574, FAX 415-503-6646
Email: Thomas.J.Cavanaugh@usace.army.mil

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.

Date:

Telephone number:





4254984

4254784

4254584

4254384

Appendix C Rare Plant Survey



Interoffice Memorandum

May 11, 2011

James McLaughlin

.....
Date

.....
To

Rare Plant Surveys for the Laguna Creek Trail –
Camden Spur Project

Angela Calderaro

.....
Subject

.....
From

Introduction

The purpose of this technical memorandum is to describe the results of the survey for rare plant species that may occur within the project study area (PSA). At nearly three miles, the Laguna Creek Trail is one of the longest trails aligning through the City of Elk Grove and connecting to several regional trails. The Laguna Creek Bike Trail Connector Project -Camden Spur Project is part of a citywide effort to provide alternative transportation options, close trail gaps, improve regional and local bicycle/pedestrian routes, and increase safety along busy traffic corridors. Connectivity and access is limited for pedestrians and bicyclists traveling west on the longest part (nearly three miles) of the Laguna Creek Trail. The trail currently ends leaving a large gap between Bond Road and the Camden Passage neighborhood. The proposed project proposes to close this gap and improve safety.

Methods

City of Elk Grove biologist, Angela Calderaro, conducted focused rare plant surveys in suitable habitat within the PSA on May 6, 2011. The rare plant surveys were conducted in accordance with the *General Rare Plant Guidelines* (USFWS 2002) and the *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities* (CDFG 2000). Transects of the PSA were systematically walked to detect presence of rare plant species. When rare plants were observed, their presence was recorded on a Trimble Geo XT with submeter accuracy. If the species was growing in a large clump, the number of individual plants were estimated. Locations of rare plants recorded in the field were then overlaid on an aerial photograph of the PSA. According to the California Environmental Quality Act (CEQA) document (City of Elk Grove 2011) for this report, the rare plant species listed in **Table 1** have the potential to occur in the PSA.

TABLE 1 – RARE PLANT SPECIES

Scientific Name Common Name	CNPS Status	General Habitat
<i>Downingia pusilla</i> Dwarf Downingia	List 2.2	This annual herb is restricted to vernal pools and similar seasonal wetlands, including mesic grassland and the margins of small lakes or stock ponds. Blooms: March - May
<i>Gratiola heterosepala</i> Bogg's Lake hedge-hyssop	List 1B.2	This annual herb is found in marshes, swamps, lake margins, and vernal pools with clay soils. Blooms: April - June
<i>Legenere limosa</i> Legenere	List 1B.1	This annual herb grows in moist or wet ground or with the plant's base submerged in the shallow water of vernal pools. Blooms: April - June
<i>Sagittaria sanfordii</i> Sanford's arrowhead	List 1B.2	This perennial herb occurs in assorted shallow freshwater marshes and swamps and artificial ponds and lakes. Blooms: May - October

Source: CNPS 2011

Code Designations

List 1B = Plant species that are rare, threatened, or endangered in California and elsewhere.

List 2 = Plant species that are rare, threatened, or endangered in California, but more common elsewhere.

Threat Ranks - 0.1-Seriously threatened in California (high degree/immediacy of threat), 0.2-Fairly threatened in California (moderate degree/immediacy of threat)

Results

Sanford's arrowhead may occur within Laguna Creek within the PSA. Two small plants with one to three leaves and approximately five to ten inches tall were located along the water's edge. Since the plant was not flowering, identification could not be confirmed (see Photo 1). Plants were found adjacent to the water's edge with common cattail (*Typha latifolia*) and bulrush (*Scirpus californicus*). Even so, if these plants are Sanford's arrowhead, the proposed project would avoid the low-water channel where these plants occur. As a part of Mitigation Measure 4a-2c, the Worker Environmental Awareness Program (WEAP) will be implemented to educate construction workers about the presence of special-status species or other sensitive resources in and near the PSA, and to instruct them on proper avoidance, required measures and practices for protecting biological resources and contacts and procedures in case species are injured or encountered during construction. As a part of the avoidance and minimization measures to the creek (a water of the U.S.), the plants will be avoided during construction. No additional mitigation measures are necessary.



Photo 1 – Possible Sanford's arrowhead within Elk Grove Creek.

The vernal pool within the PSA was also checked for the presence of rare plant species. The dry pool contained turkey mullein (*Eremocarpus setigerus*), coyote thistle (*Eryngium vaseyi*), vernal pool buttercup (*Ranunculus bonariensis* var. *trisepalus*), rayless goldfields (*R. glaberrima*), popcorn flower (*Plagiobothrys stipitatus*), curly dock (*Rumex crispus*), Italian wildrye (*Lolium multiflorum*), and pale spikerush (*Eleocharis macrostachya*).

Although rare plant surveys were not conducted in the blooming period for Bolander's water-hemlock (*Cicuta maculata* var. *bolanderi*) and woolly rose mallow (*Hibiscus lasiocarpus*), these species are not expected to occur in the PSA due to the lack of suitable habitat. There are no previously recorded occurrences of these species within a five-mile radius of the PSA (CDFG 2011). No other rare plants were observed in the PSA.

The survey described in this report fulfills the survey requirement described under Mitigation Measure 4a-1a of the Initial Study/Mitigated Negative Declaration (IS/MND) (City of Elk Grove 2011).

References

United States Fish and Wildlife Service (USFWS). 2002. *General Rare Plant Survey Guidelines*. July 2002. Ellen A. Cypher, California State University, Stanislaus, Endangered Species Recovery Program. Bakersfield, CA.

California Department of Fish and Game. 2000. *Guidelines for assessing the effects of proposed projects on rare, threatened, and endangered plants and natural communities*. (Revision of 1983 guidelines.) Sacramento, CA, 2 pp.

California Department of Fish and Game (CDFG). 2011. California Natural Diversity Database (CNDDDB), Wildlife and Habitat Data Analysis Branch, Rarefind Version 3.1.1. Commercial Version -- Dated April 02, 2011.

City of Elk Grove. 2011. Initial Study/Mitigated Negative Declaration for the Laguna Creek Trail – Camden Spur Project. City of Elk Grove, CA.

EXHIBIT A-C



REPLY TO
ATTENTION OF

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

RECEIVED

MAY 01 2014

CITY OF ELK GROVE
PUBLIC WORKS

April 28, 2014

Regulatory Division SPK-2014-00230

City of Elk Grove
Attn: Mr. Michael Karoly
8401 Laguna Palms Drive
Elk Grove, California 95758

Dear Mr. Karoly:

We are responding to your request for a preliminary jurisdictional determination (JD), in accordance with our Regulatory Guidance Letter (RGL) 08-02, for the Laguna Creek Trail, Camden Spur site. The approximately 23-acre site is located north of Bond Road, south of Sheldon Road, east of State Route 99, and west of Elk Grove-Florin Road, in Section 25, Township 7 North, Range 5 East, Mount Diablo Meridian, Latitude 38.4292° North, Longitude 121.3859° West, in the City of Elk Grove, Sacramento County, California.

Based on available information, we concur with the amount and location of wetlands and other water bodies on the site as depicted on the enclosed December 11-12 *Figure 4, Delineation of Wetlands and Waters of the U.S.* drawing prepared by the PMC. The approximately 2.048 acres of wetlands and/or other water bodies present within the survey area are potential waters of the United States regulated under Section 404 of the Clean Water Act.

We have enclosed a copy of the *Preliminary Jurisdictional Determination Form* for this site. Please sign and return a copy of the completed form to this office. Once we receive a copy of the form with your signature we can accept and process a Pre-Construction Notification or permit application for your proposed project.

You should not start any work in potentially jurisdictional waters of the United States unless you have Department of the Army permit authorization for the activity. You may request an approved JD for this site at any time prior to starting work within waters. In certain circumstances, as described in RGL 08-02, an approved JD may later be necessary.

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 preliminary determination has been conducted to identify the potential limits of wetlands and other water bodies which may be subject to Corps of Engineers' jurisdiction for the particular site identified in this request. A Notification of Appeal Process and Request for Appeal form is enclosed to notify you of your options with this determination. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are U.S. Department of Agriculture (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.

We appreciate your feedback. At your earliest convenience, please tell us how we are doing by completing the customer survey on our website under *Customer Service Survey*.

Please refer to identification number SPK-2014-00230 in any correspondence concerning this project. If you have any questions, please contact Lisa Gibson at 1325 J Street, Room 1350, Sacramento, California 95814, by email at Lisa.M.Gibson2@usace.army.mil, or telephone at 916-557-5288. For more information regarding our program, please visit our website at www.spk.usace.army.mil/Missions/Regulatory.aspx.

Sincerely,



Kathleen A. Dadey, PhD
Chief, CA South Branch
Regulatory Division

Enclosures

cc: (w/o encls)

Ms. Summer Pardo, PMC, spardo@PMCWorld.com

Ms. Leana Rosetti, U.S. Environmental Protection Agency, Region IX, Wetlands Regulatory Office (WTR-8), 75 Hawthorne Street, San Francisco, California 94105-3901

Ms. Tina Bartlett, California Department of Fish and Wildlife, Region 2, 1701 Nimbus Road, Rancho Cordova, California 95670-4599

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

Ms. Kellie Berry, Sacramento Valley Branch, Endangered Species Division, U.S. Fish and Wildlife Service, 2800 Cottage Way, Suite W2605, Sacramento, California 95825-3901

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

Sacramento District

This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

Regulatory Branch: California South File/ORM #: SPK-2014-00230 PJD Date: April 25, 2014

State: CA City/County: Elk Grove, Sacramento County Nearest Waterbody: Laguna Creek and Whitehouse Creek Location (Lat/Long): 38.4292° North, 121.3859° West Size of Review Area: 23 acres	Name/Address City of Elk Grove Of Property Attn: Mr. Michael Karoly Owner/ 8401 Laguna Palms Drive Potential Elk Grove, California 95758 Applicant
---	--

Identify (Estimate) Amount of Waters in the Review Area Non-Wetland Waters: linear feet ft wide 2.026 acre(s) Stream Flow: Perennial and Intermittent Wetlands: 0.022 acre(s) Cowardin Class: Palustrine, emergent	Name of any Water Bodies Tidal: on the site identified as Section 10 Waters: Non-Tidal: <input type="checkbox"/> Office (Desk) Determination <input checked="" type="checkbox"/> Field Determination: Date(s) of Site Visit(s): April 7, 2014
--	--

SUPPORTING DATA: Data reviewed for preliminary JD (check all that apply – checked items should be included in case file and, where checked and requested, appropriately reference sources below)

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: **Figure 4, Delineation of Wetlands and Waters of the U.S.**
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
- Data sheets prepared by the Corps.
- Corps navigable waters' study.
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data.
 - USGS HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: **1:24K; CA-FLORIN**
- USDA Natural Resources Conservation Service Soil Survey.
- National wetlands inventory map(s).
- State/Local wetland inventory map(s).
- FEMA/FIRM maps.
- 100-year Floodplain Elevation (if known):
- Photographs: Aerial
 Other
- Previous determination(s). File no. and date of response letter: **SPK-2011-00034, February 11, 2011**
- Other information (please specify):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

 Signature and Date of Regulatory Project Manager (REQUIRED)	 Signature and Date of Person Requesting Preliminary JD (REQUIRED, unless obtaining the signature is impracticable)
---	---

EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DETERMINATIONS:

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.
2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: City of Elk Grove	File No.: SPK-2014-00230	Date: April 28, 2014
Attached is:		See Section below
<input type="checkbox"/>	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
<input type="checkbox"/>	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
<input type="checkbox"/>	PERMIT DENIAL	C
<input type="checkbox"/>	APPROVED JURISDICTIONAL DETERMINATION	D
<input checked="" type="checkbox"/>	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/cecw/pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Lisa M. Gibson
Senior Project Manager
California South Branch
U.S. Army Corps of Engineers
1325 J Street, Room 1350
Sacramento, California 95814-2922
Phone: 916-557-5288, FAX 916-557-7803
Email: Lisa.M.Gibson2@usace.army.mil

If you only have questions regarding the appeal process you may also contact:

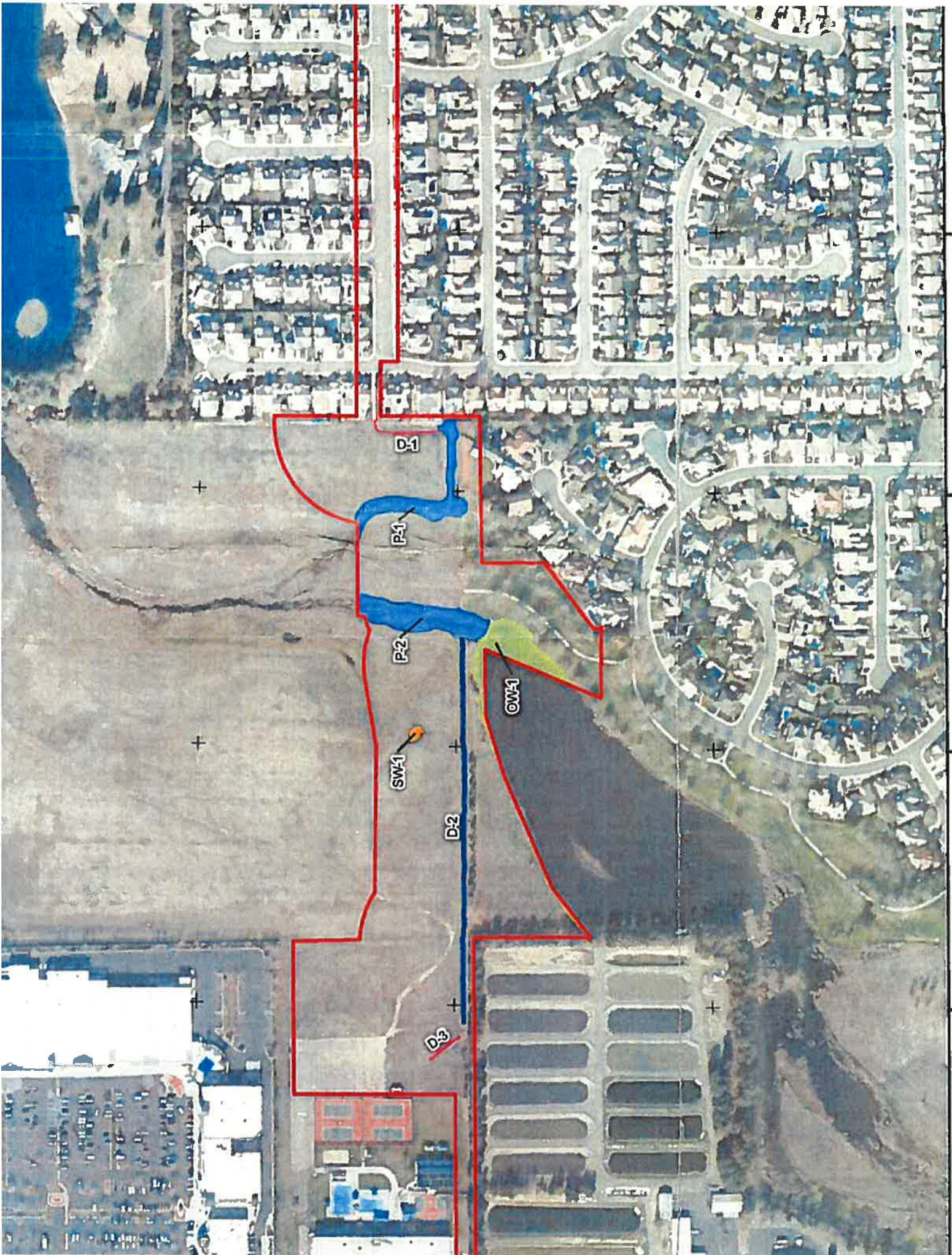
Thomas J. Cavanaugh
Administrative Appeal Review Officer
U.S. Army Corps of Engineers
South Pacific Division
1455 Market Street, 2052B
San Francisco, California 94103-1399
Phone: 415-503-6574, FAX 415-503-6646
Email: Thomas.J.Cavanaugh@usace.army.mil

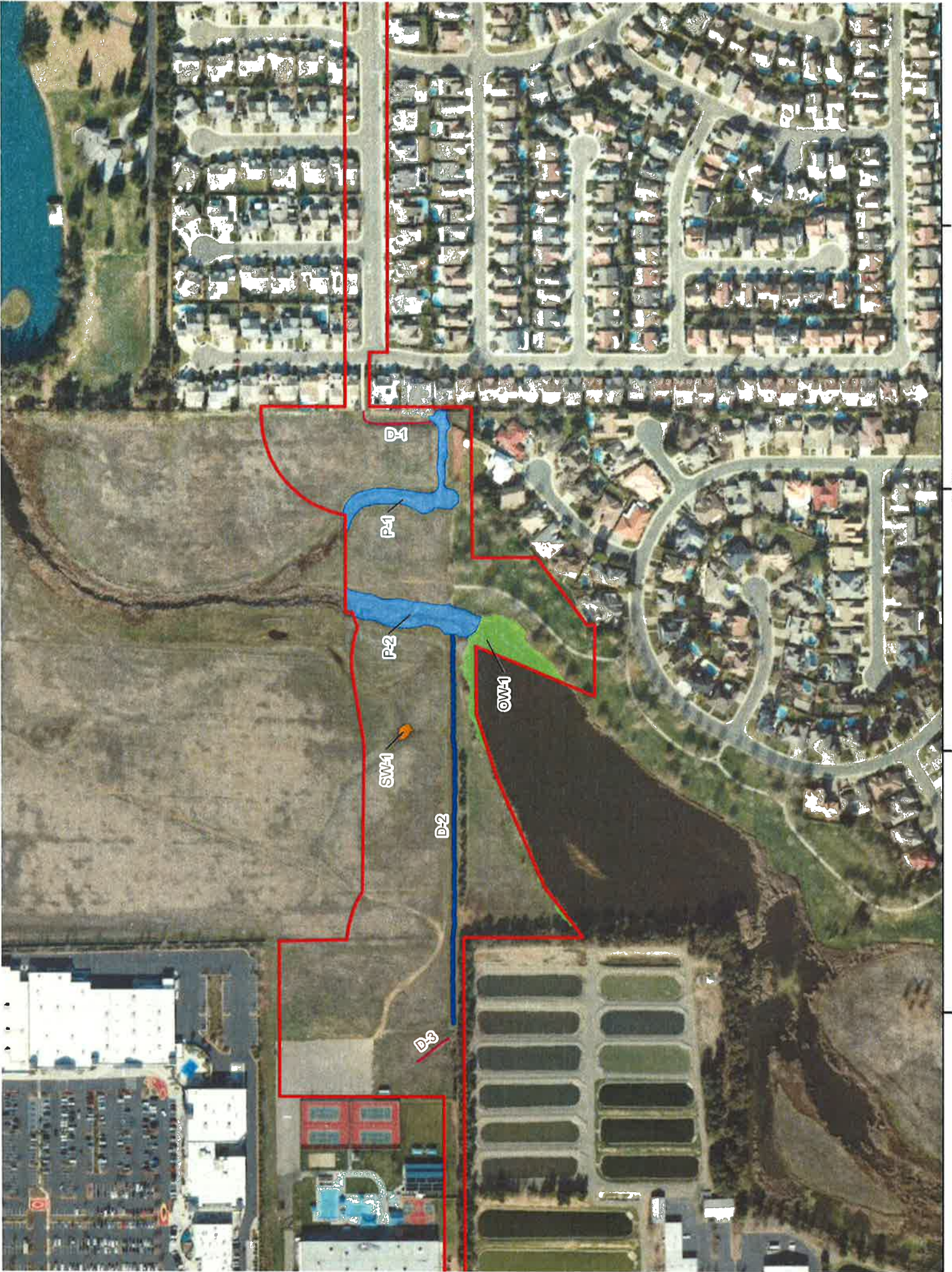
RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.

Date:

Telephone number:





4254984

4254784

4254584

4254384

CITY OF ELK GROVE
LAGUNA CREEK TRAIL-CAMDEN SPUR
PRELIMINARY DELINEATION OF WETLANDS AND WATERS OF THE US



Prepared by:



2729 Prospect Park Drive, Suite 220
Rancho Cordova, CA 95670

Prepared for:

City of Elk Grove
8401 Laguna Palms Way
Elk Grove, CA 95758

February 2014

PMC biologist Leslie Parker, on behalf of the City of Elk Grove, conducted a formal delineation (JD) of waters of the United States (WoUS) on the ±23-acre Laguna Creek Trail-Camden Spur project study area (PSA) (**Figure 1**). A large portion of the PSA was previously delineated in 2010 and verified by the US Army Corps of Engineers (Corps, **Appendix A**). The project extent has been expanded since the 2010 delineation; therefore, the purpose of this JD was to reverify the work done in 2010 and to map the aquatic features in the remaining portions of the PSA. The JD and reverification were conducted on December 11, 2013, in accordance with the methodologies outlined in the Corps regulatory guidance letter regarding *Ordinary High Water Mark Identification* (2005), the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987), and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Environmental Laboratory 2008).

This report presents the findings of a review of available literature and soil survey data, along with the results and analysis of field data collected during the field investigation. Four types or classes of WoUS were identified, mapped, and evaluated on the proposed project site. These features are depicted on **Figure 4** and include three perennial streams (P-1 through P-3), three man-made ditches (D-1 through D-3), one lake (OW-1), and one seasonal wetland (SW-1).

This JD is subject to verification by the Corps. PMC advises all parties to treat the information contained herein as preliminary until the Corps provides written verification of the extent of their jurisdiction on-site.

TABLE OF CONTENTS

PROJECT LOCATION	13
PROJECT DESCRIPTION	13
PROJECT SETTING	13
TOPOGRAPHY	13
HYDROLOGY	13
SOILS	14
CLIMATE	14
VEGETATIVE COMMUNITIES	19
URBAN	19
ANNUAL GRASSLAND	19
AQUATIC FEATURES	20
Perennial Streams	20
Drainage Ditches	19
Seasonal Wetland	19
Open Water	19
FIELD INVESTIGATION	19
VEGETATION	20
HYDROLOGY	20
SOILS	20
MAPPING	21
JURISDICTIONAL ANALYSIS	21
CONCLUSION	22
REFERENCES	19
APPENDIX A – PREVIOUS DELINEATION	A-1
APPENDIX B – DATASHEETS	B-1
APPENDIX C – SITE PHOTOS	C-1

FIGURES

Figure 1: Regional Vicinity Map 15
Figure 2: Project Location Map 17
Figure 3: Vegetative Communities Within the Project Study Area 21
Figure 4: Delineation of Wetlands and Waters of the US..... 17

TABLES

Table 1: Wetland Indicator Status..... 20
Table 2: Summary of Potentially Jurisdictional Features..... 22

The purpose of this preliminary delineation (JD) is to describe the existing biological environment, summarize the results of the data collected during the field investigation, and discuss the extent of wetlands and other waters of the United States (WoUS) within the project study area (PSA).

PROJECT LOCATION

The ±23-acre PSA is located in the north-central part of Elk Grove, in Sacramento County, California (**Figure 1**). The PSA includes the project's limits of disturbance as well as a buffer that was created based on standard buffers associated with special-status species that have the potential occur in the vicinity of the PSA (**Figure 2**). The PSA is located in Section 25, Township 07 North, Range 05 East, on the Florin, California, US Geological Survey (USGS) 7.5-minute quadrangle. More specifically, the PSA is located north of Bond Road and south of Sheldon Road, between State Route (SR) 99 and Elk Grove Florin Road. Surrounding land uses include residential neighborhoods and parks, commercial uses, and an office of the Sacramento-Yolo County Mosquito and Vector Control District. The open grasslands west of the central portion of the PSA are the only undeveloped area surrounding the PSA.

PROJECT DESCRIPTION

At nearly 3 miles, the Laguna Creek Trail is one of the longest trail segments through Elk Grove and connects several regional trails. The Laguna Creek Trail-Camden Spur project, from Bond Road to Whitehouse Creek, is part of a citywide effort to provide alternative transportation options, close trail gaps, improve regional and local bicycle/pedestrian routes, and increase safety along busy traffic corridors. Connectivity and access is limited for pedestrians and bicyclists traveling west on the Laguna Creek Trail. There is currently a large gap in the trail between Bond Road and the Camden and Sheldon Passage neighborhoods. The project proposes to close this gap and improve safety.

PROJECT SETTING

TOPOGRAPHY

The PSA is located in the Central Valley between the Sacramento and Cosumnes rivers. Site topography is generally flat across the property and ranges from 32 feet above mean sea level (amsl) to 40 feet amsl.

HYDROLOGY

The PSA is part of the Lower Sacramento hydrologic unit (HUC 18020109). All waterways in the PSA drain into Laguna Creek, which flows east to west through the PSA. Whitehouse Creek, which flows along the northern edge of the PSA, connects with Laguna Creek off-site to the west. Laguna Creek flows westerly and eventually drains into Morrison Creek, which flows into

the Sacramento River. Three perennial streams, three man-made ditches, one lake, and one seasonal wetland feature were mapped within the PSA. Man-made Shortline Lake lies west of the PSA. It appears that Whitehouse Creek historically flowed directly west, but when the lake was constructed, the creek was redirected and now bypasses the lake.

SOILS

The Natural Resources Conservation Service's (2013a) Web Soil Survey identifies five mapped soil units within the PSA. Each soil type is described below. The San Joaquin silt loam soil types are considered hydric in Sacramento County (NRCS 2013b). A soil map of the PSA is presented at the bottom of the wetland delineation map (**Figure 4**).

Bruella sandy loam, 0 to 2 percent slopes. This is a well-drained soil that occurs on terraces between 30 and 150 feet amsl. The depth to the restrictive feature is estimated to be more than 80 inches. This soil type is derived from alluvium derived from granite.

San Joaquin silt loam, leveled, 0 to 1 percent slopes. This is a moderately well drained soil that occurs on terraces between 20 and 500 feet amsl. The depth to the restrictive feature (duripan) is estimated to be between 28 and 54 inches. This soil type is derived from alluvium derived from granite. This is considered a hydric soil in Sacramento County.

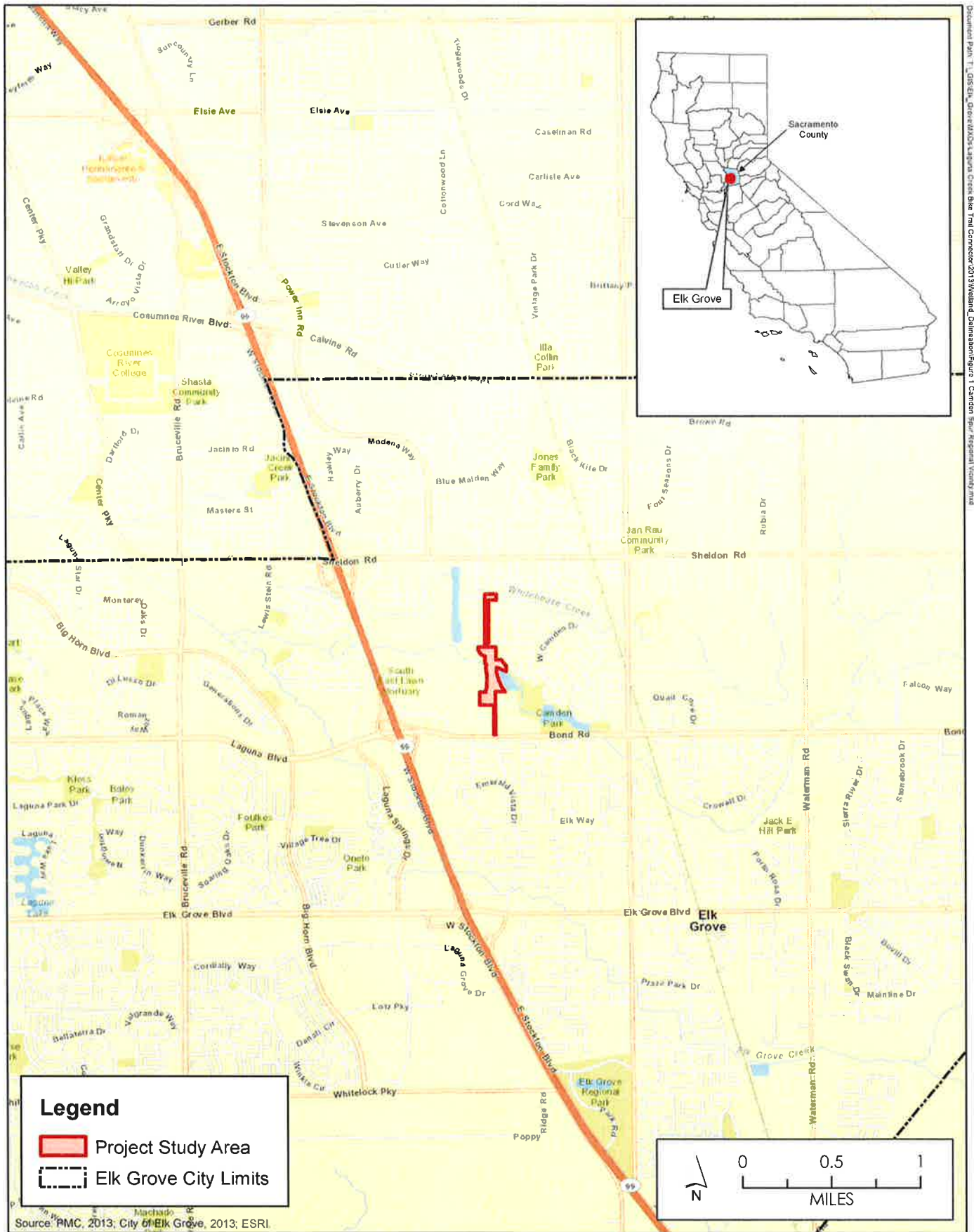
San Joaquin silt loam, 0 to 3 percent slopes. Same as above.

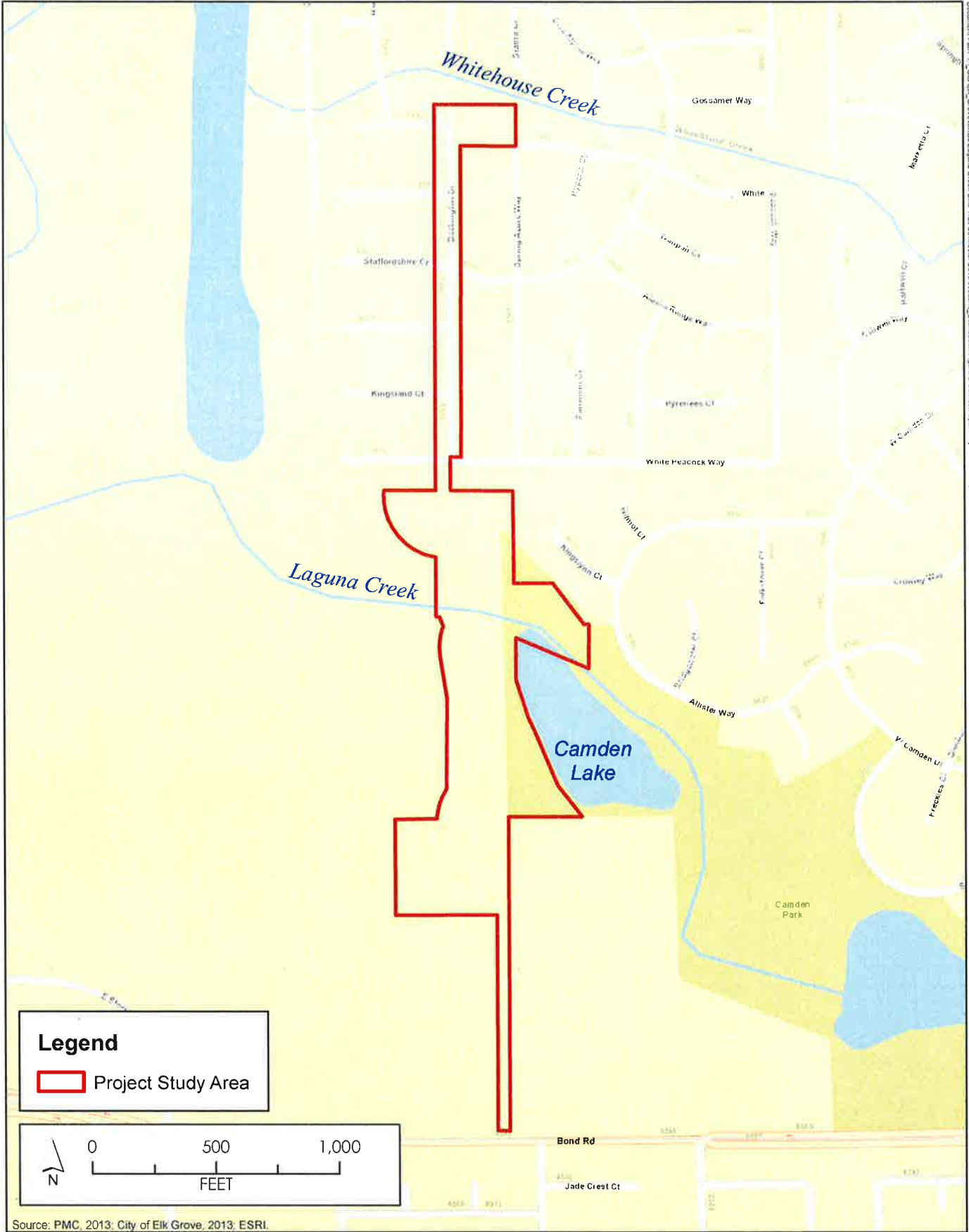
San Joaquin silt loam, 3 to 8 percent slopes. Same as above.

Water. This is associated with the open water of Camden Lake.

CLIMATE

The PSA is characterized by a Mediterranean climate with warm to hot, dry summers and cool, wet, rainy winters. Average annual air temperature ranges from 58°F to 62°F. Average precipitation is approximately 10 to 25 inches per year and falls primarily as rain. The average freeze-free period is approximately 250 to 300 days (Goudey and Miles 1998).





Source: PMC, 2013; City of Elk Grove, 2013; ESRI.



City of Elk Grove
Development Services

Figure 2
Project Location

VEGETATIVE COMMUNITIES

Vegetative communities are assemblages of plant species that occur in the same area and are defined by species composition and relative abundance. The PSA is characterized by three vegetative communities: urban, annual grassland, and aquatic features (**Figure 3**). Each cover type is described below and is based on descriptions obtained from the CDFW's (2013) *A Guide to Wildlife Habitats of California*.

URBAN

Urban areas within the PSA include parking lots, roads, residential neighborhoods, and Camden Park, as well as portions of California Family Fitness in the southern portion of the PSA. Camden Park is characterized by a lawn ground cover and has been landscaped with a mix of native and ornamental trees including several varieties of oak (*Quercus* sp.), pine (*Pinus* sp.) and willow (*Salix* sp.). Ornamental trees line the streets in the residential areas.

Because of the high degree of disturbance, developed areas generally have a low habitat value for wildlife; however, migratory birds may nest in the trees and shrubs. Camden Park is used by migratory birds that are drawn to Camden Lake, such as Canada geese (*Branta* sp.).

ANNUAL GRASSLAND

Annual grassland habitats are open grasslands dominated by annual plant species found from the flat plains of the Central Valley to the coastal mountain ranges of Mendocino County and in scattered locations across the southern portion of the state. Species typically associated with this community include wild oats (*Avena* spp.), soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), red brome (*Bromus madritensis* ssp. *rubens*), wild barley (*Hordeum* spp.), foxtail fescue (*Vulpia myuros*), bradleaf filaree (*Erodium botrys*), redstem filaree (*Erodium cicutarium*), turkey mullein (*Croton setigerus*), true clovers (*Trifolium* spp.), bur clover (*Medicago* spp.), popcorn flower (*Cryptantha* spp.), and several other grasses and forbs.

In the PSA, this community is composed of primarily introduced species and includes Italian ryegrass (*Festuca perennis*), medusa head (*Elymus caput-medusae*), soft chess, barley, and wild oats (*Avena fatua*). Forbs are intermixed with the grasses and include cocklebur (*Xanthium strumarium*), mustards (*Brassica* sp.), spring vetch (*Vicia sativa*), yellow star-thistle (*Centaurea solstitialis*), and field bindweed (*Convolvulus arvensis*). The grassland adjacent to Camden Lake has been planted with scattered valley oak (*Quercus lobata*) saplings. In addition, a row of planted redwood trees (*Sequoia sempervirens*) runs between Camden Lake and a long drainage ditch (D-2).

Annual grasslands provide foraging habitat for a wide variety of wildlife species, including raptors, seed-eating birds, small mammals, amphibians, and reptiles. However, some require special habitat features such as cliffs, caves, ponds, or habitats with woody vegetation for breeding, resting, and escape cover. Reptiles commonly associated with this habitat type include western fence lizard (*Sceloporus occidentalis*), common garter snake (*Thamnophis sirtalis*), and western rattlesnake (*Crotalis viridis*). Black-tailed jackrabbit (*Lepus californicus*), California ground squirrel (*Otospermophilus beecheyi*), western harvest mouse (*Reithrodontomys megalotis*), Botta's pocket gopher (*Thomomys bottae*), California vole (*Microtus californicus*), badger (*Taxidea taxus*), and coyote (*Canis latrans*) are mammals commonly found in this habitat type. Common birds known to breed in annual grasslands are burrowing owl (*Athene cunicularia*), short-eared owl (*Asio flammeus*), horned lark (*Eremophila alpestris*), and western meadowlark (*Sturnella neglecta*). The row of planted redwood trees provides suitable nesting habitat for migratory birds. A pair of white-tailed kites was observed in these trees during the site visit on December 11, 2013.

AQUATIC FEATURES

Four aquatic classifications occur in the PSA: perennial stream, drainage ditch, seasonal wetland, and open water (**Figure 4**). Stream and ditch habitats are characterized by intermittent to continually flowing water. Streams typically originate at some elevated source, such as a spring or lake, and flow downhill at a rate relative to the slope or gradient and to the volume of surface water runoff or discharge. Flow velocities generally decline as the stream descends in elevation, and the volume of water increases until the stream flattens out at lower elevations. The transition from a high-gradient, high-flow stream to a low-gradient, low-flow river results in increases in water temperature and turbidity, while dissolved oxygen decreases and the bed material transitions from rock to mud. Wetland habitats are characterized by saturated or periodically flooded soils. They are commonly found on level or gently rolling topography, but can occur virtually anywhere provided there is a periodically flooded/saturated depression.

Perennial Streams

The perennial streams in the PSA are characterized by dense riparian and emergent vegetation. Common species associated with these features include red willow (*Salix laevigata*), narrowleaf willow (*Salix exigua*), Fremont's cottonwood (*Populus fremontii*), Himalayan blackberry (*Rubus armeniacus*), common cattail (*Typha latifolia*), tall flatsedge (*Cyperus eragrostis*), and bulrush (*Schoenoplectus* sp.). A portion of the mapped area of Whitehouse Creek (P-3) is the overflow channel and has notably less riparian vegetation due to its short hydroperiod.



Shortline Lake

Shortline Ln

Sheldon Creek Dr

Beckington Dr

Spring Azure Way

White Peacock Way

Laguna Creek

Allister Way

Camden Lake



4254984

4254784

4254584

4254384

1184

Drainage Ditches

Herbaceous species dominate in the ditch channels and along their banks. Common species include spreading rush (*Juncus patens*), tall flatsedge, fiddle dock (*Rumex pulcher*), curly dock (*Rumex crispus*), Bermuda grass (*Cynodon dactylon*), tall annual willow-herb (*Epilobium brachycarpum*), bulrush, dove's foot geranium (*Geranium molle*), and English plantain (*Plantago lanceolata*).

Seasonal Wetlands

Seasonal wetlands are defined by a hydrologic regime that is dominated by saturation, rather than inundation. Seasonal wetlands inundate for short time periods following a storm event but the primary hydrologic regime is one of saturation. Plant species found within seasonal wetlands are adapted to withstand short periods of inundation. The seasonal wetland was observed to contain species such as curly dock, popcorn flower, coyote thistle (*Eryngium* sp.), smooth goldfields (*Lasthenia glaberrima*), and vernal pool buttercup (*Ranunculus bonariensis* var. *triseptalis*). There was also some encroachment of species from the surrounding uplands, including soft chess, Italian rye grass, medusa head, and barley.

Open Water

Camden Lake is bordered by emergent vegetation that is dominated by spreading rush. Other common species include cattail, bulrush, Bermuda grass, and dallis grass (*Paspalum dilatatum*).

FIELD INVESTIGATION

This wetland delineation and reverification was conducted by PMC biologist Leslie Parker on December 11, 2013. The delineation used the Routine Determination Method as described in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987), hereafter called the 1987 Manual. The 1987 Manual was used in conjunction with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Environmental Laboratory 2008) and the Corps' regulatory guidance letter regarding *Ordinary High Water Mark Identification*. For areas where the 1987 Manual and the supplement differ, the supplement was followed.

Three positive wetland parameters must normally be present for an area to meet wetland criteria: (1) a dominance of wetland vegetation, (2) presence of hydric soils, and (3) presence of wetland hydrology. Presence or absence of positive indicators for wetland vegetation, as well as soils and hydrology, were assessed at two points: one inside the observed wetland boundary and one outside the observed wetland boundary. Data collected at each point was recorded on a Wetland Determination Data Form – Arid West Region (**Appendix B**). Data from the 2010 delineation can be found in **Appendix A**.

VEGETATION

Dominant plant species within each wetland or other jurisdictional water and the adjacent uplands were identified to species using standard floras (UC Berkeley 2013). Each plant species was then assigned a wetland indicator status based on the Corps' 2013 National Wetland Plant List website (Version 3.1) and the data recorded on the datasheets for each sample point (**Appendix B**).

The NRCS assigns indicator statuses to designate a plant species' likelihood of occurrence in wetlands or uplands. The definition of each indicator status and the status codes are presented in **Table 1**. A hydrophyte is a plant species that possesses physiological traits which allow them to grow and persist in soils subject to inundation and anaerobic soil conditions.

TABLE 1: WETLAND INDICATOR STATUS

Code	Indicator Status	Definition
OBL	Obligate Wetland	Almost always is a hydrophyte, rarely in uplands
FACW	Facultative Wetland	Usually is a hydrophyte but occasionally found in uplands
FAC	Facultative	Commonly occurs as either a hydrophyte or non-hydrophyte
FACU	Facultative Upland	Occasionally is a hydrophyte but usually occurs in uplands
UPL	Upland	Rarely is a hydrophyte, almost always in uplands

HYDROLOGY

Hydrologic conditions were evaluated at each data point and positive indicators of wetland hydrology recorded on the datasheets (**Appendix B**). Wetland hydrology was determined at each data point by the presence of one or more of the following primary and/or secondary indicators: visual observation of inundation, biotic crust, sediment deposits, flow or drift accumulations at channel margins, channel flow marks in beds, scouring, surface cracking, water staining, and drainage patterns (Corps 2008). Drainages with obvious bed and banks were characterized by noting vegetation, geomorphology (e.g., incision), and hydrologic characteristics and by measuring representative channel bank cross sections to obtain average bankfull width (i.e., ordinary high water mark) (Corps 2005).

SOILS

The NRCS's (2013a) Web Soil Survey was consulted to determine the on-site soil characteristics. In addition, the NRCS's (2013b) *Hydric Soils List for the United States* was reviewed to determine the recognized status of the on-site soils. Hydric soils are formed under conditions of saturation, flooding, or ponding that lasts long enough during the growing season to develop anaerobic conditions in the upper soil layer. Some common characteristics of hydric soils include

inundation, saturation, low chromas, redoximorphic features (or mottles), and manganese and iron concretions.

Soils were examined by digging at least an 18-inch-deep soil pit to document saturation, visible horizons, oxidized root channels, matrix color, and mottling. Soil matrix was characterized by moistening the soil with water and using the *Munsell Soil Color Charts* (1992) to classify the soils using three criteria: (1) hue; (2) value (lightness); and (3) chroma (color purity/saturation). Soil texture properties such as organic, mucky mineral, and mineral were also noted on the data forms (**Appendix B**).

MAPPING

Jurisdictional features were mapped using a Trimble Geo XT Global Positioning System (GPS). Supplemental materials utilized in the determination included aerial photographs, topographic maps, and data forms. These data and the ArcGIS 9.3 software program were then utilized to generate **Figure 4**.

JURISDICTIONAL ANALYSIS

The Corps and the Environmental Protection Agency (EPA) issued guidance related to the Rapanos decision in the *Jurisdictional Determination Form Instructional Guidebook* (hereinafter referred to as the JD Guidebook) (Corps 2007). The Rapanos-Carabell consolidated decisions addressed several issues including the question of jurisdiction over non-Relatively Permanent Waters (RPWs). The agencies will typically assert jurisdiction over the following waters: (1) traditional navigable waters (TNW); (2) all wetlands adjacent to TNWs; (3) RPWs that are non-navigable tributaries to TNWs and have relatively permanent flow or seasonally continuous flow (typically three months); and (4) wetlands that directly abut jurisdictional RPWs (Corps 2007). Case-by-case investigations are usually conducted by the agencies to ascertain whether there is a significant nexus to a TNW for waters that are non-navigable tributaries and do not contain relatively permanent or seasonal flow, wetlands adjacent to the aforementioned features, and wetlands adjacent to but not directly abutting RPWs (Corps 2007). Jurisdiction is not generally asserted over swales or erosional features (e.g., gullies or small washes characterized by low-volume/short-duration flow events) or over ditches constructed wholly within and draining only uplands that do not have relatively permanent flows (Corps 2007).

Eight potentially jurisdictional features were identified within the PSA (**Figure 4**) including three perennial streams, three man-made ditches, one lake, and one seasonal wetland. Two of the man-made ditches (D-1 and D-3) were constructed wholly within uplands, provide catchment for runoff from adjacent roads, and do not show signs of regular inundation. As a result, these features do not appear to meet the guidelines outlined in the JD Guidebook (Corps 2007). All other features have a direct or indirect hydrologic connection to Laguna Creek, a tributary to

LAGUNA CREEK TRAIL-CAMDEN SPUR
 PRELIMINARY DELINEATION OF WETLANDS
 AND WATERS OF THE US

the Sacramento River that meets the Corps definition of traditional navigable waters (Corps 2007). Therefore, it is PMC's opinion that the three perennial streams, one man-made ditch (D-2), one lake, and one seasonal wetland would be considered WoUS and subject to Clean Water Act (CWA) regulations. **Table 2** provides a summary of these features. Photos of these features can be found in **Appendix C**.

TABLE 2: SUMMARY OF POTENTIALLY JURISDICTIONAL FEATURES

Map ID	Feature Type	Length (ft)	Acreage	Jurisdictional
P-1	perennial	490	0.391	Yes
P-2	perennial	335	0.480	Yes
P-3	perennial	90	0.366	Yes
D-1	ditch	190	0.015	No
D-2	ditch	980	0.226	Yes
D-2	ditch	100	0.009	No
OW-1	open water	N/A	0.539	Yes
SW-1	seasonal wetland	N/A	0.022	Yes
Totals		2,185	2.048	
Total Jurisdictional		1,895	2.024	

CONCLUSION

This preliminary JD concludes that a total of 1,895 linear feet of jurisdictional streams and ditches, 0.539 acre of open water, and 0.022 acre of seasonal wetland could be considered waters of the United States within the PSA, while 290 linear feet of man-made ditches do not meet the characteristics of waters subject to CWA regulations. The Corps has final authority over the extent of wetlands and other WoUS under their jurisdiction, determination of area affected by the project, and the type of permits and conditions required. Based on the jurisdictional analysis above, it is the opinion of PMC biologists that 2.024 acres of on-site aquatic features meet the jurisdictional criteria set forth by the Corps and the EPA.

This preliminary JD report documents the limits of all aquatic features and the best professional judgment of PMC biologists. All conclusions presented should be considered preliminary and subject to change pending official review and verification in writing by the Corps.

REFERENCES

- California Department of Fish and Wildlife (CDFW). 2013. *A Guide to Wildlife Habitats of California (online edition)*. CDFW Biogeographic Data Branch; Sacramento, CA. Accessed December 12, 2013. Available at: http://www.dfg.ca.gov/biogeodata/cwhr/wildlife_habitats.asp.
- Environmental Laboratory. 1987. *Corps of Engineers Wetland Delineation Manual. Technical Report Y-87-1*. US Army Corps of Engineers (Corps) Waterways Experiment Station; Vicksburg, MS.
- . 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*. Technical Report TR-08-28. Corps Engineer Research and Development Center, Vicksburg, MS.
- Goudey, Charles B., and Scott R. Miles. 1998. Ecological Subregions of California: Section & Subsection Descriptions. Major contributions by Earl B. Alexander and John O. Sawyer. UDSA, Forest Service, Pacific Southwest Region.
- Munsell. 1992. *Munsell Soil Color Charts*, revised edition. Macbeth, Division of Kollmorgen Instruments Corp.; Newburgh, NY.
- Natural Resources Conservation Service (NRCS). 2013a. United States Department of Agriculture Web Soil Survey 2.3 (online edition). Accessed December 10, 2013. <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>.
- . 2013b. *Hydric Soils List of the United States*. NRCS, Washington, D.C.
- University of California at Berkeley (UC Berkeley). 2013. The Jepson Online Interchange California Floristics. Accessed December 12, 2013. Available at: <http://ucjeps.berkeley.edu/interchange.html>
- US Army Corps of Engineers (Corps). 2005. *Ordinary High Water Mark Identification*.
- . 2007. *Jurisdictional Determination Form Instructional Guidebook*. Corps and US Environmental Protection Agency.
- . 2013. National Wetland Plant List (NWPL) Website Version 3.1. Accessed December 12, 2013. Available at: <http://rsgisias.crrel.usace.army.mil/NWPL/index.html>





REPLY TO
ATTENTION OF

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

RECEIVED
FEB 15 2011
CITY OF ELK GROVE
PLANNING

February 11, 2011

Regulatory Division SPK-2011-00034

City of Elk Grove
Attn: Ms. Jeanette Owen
8401 Laguna Palms
Elk Grove, California 95758

Dear Ms. Owen:

We are responding to your November 15, 2010 request for an approved jurisdictional determination for the Laguna Creek Bike Trail Connector project. The approximately 6.87-acre site is located north of Bond Road, south of Sheldon Road, east of State Route 99, and west of Elk Grove-Florin Road, in Section 25, Township 7 North, Range 5 East, Mount Diablo Meridian, Latitude 38.42851° North, Longitude 121.38610° West, City of Elk Grove, Sacramento County, California.

Based on available information, **we concur with the estimate of waters of the United States, as depicted on the enclosed updated December 15, 2010 Figure 6: Delineation of Wetlands and Waters of the U.S. for the Laguna Creek Bike Trail Connector drawing prepared by the City of Elk Grove.** Approximately 0.61 acres of waters of the United States, including wetlands, are present within the survey area. These waters are identified as PC-1, PC-2 and SW-1 on the above drawing. These waters are regulated under Section 404 of the Clean Water Act, as they consist of Laguna Creek and adjacent wetlands, which are tributary to the Morrison Creek, a tributary to the Sacramento River, a traditional navigable water.

The 0.120-acre waters identified as FEW-1 and SW-2 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 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, CESPDPDS-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.

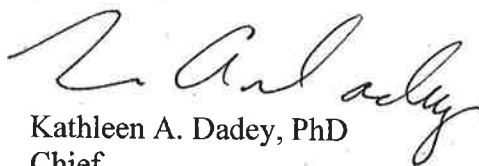
You should provide a copy of this letter and notice to all other affected parties, including any individual who has an identifiable and substantial legal interest in the property.

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.

We appreciate your feedback. At your earliest convenience, please tell us how we are doing by completing the customer survey on our website under *Customer Service Survey*.

Please refer to identification number SPK-2011-00034 in any correspondence concerning this project. If you have any questions, please contact Lisa Gibson at the letterhead address, email Lisa.M.Gibson2@usace.army.mil, or telephone 916-557-5288. For more information regarding our program, please visit our website at www.spk.usace.army.mil/regulatory.html.

Sincerely,



Kathleen A. Dadey, PhD
Chief,
California Delta Branch

Enclosure(s)

Copy furnished without enclosure(s)

Mr. Taro Echiburu, 8401 Laguna Palms Way, Elk Grove, California 95758

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

Wetland Section Chief (W-8), United States Environmental Protection Agency, 75 Hawthorne
Street, San Francisco, California 94105

California Department of Fish and Game, 1701 Nimbus Road, Rancho Cordova, CA 95670-4503

Sacramento Valley Branch, Endangered Species Division, U.S. Fish and Wildlife Service, 2800
Cottage Way, Suite W2605, Sacramento, California 95825-3901



0 100

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: _____ County/parish/borough: _____ City: _____
Center coordinates of site (lat/long in degree decimal format): Lat. 38° 25' 50.248" ° **N**, Long. 121° 23' 8.289" ° **W**.
Universal Transverse Mercator: _____

Name of nearest waterbody: _____

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: _____

Name of watershed or Hydrologic Unit Code (HUC): _____

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

Office (Desk) Determination. Date: _____

Field Determination. Date(s): _____

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Pick List** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

Explain: _____

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Pick List** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: linear feet: _____ width (ft) and/or _____ acres.

Wetlands: _____ acres.

c. Limits (boundaries) of jurisdiction based on: **Established by OHWM.**

Elevation of established OHWM (if known): 34 feet.

2. Non-regulated waters/wetlands (check if applicable):³

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.

Explain: _____

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: Laguna Creek Watershed - 21,176 acres

Drainage area: Pick List

Average annual rainfall: 22 inches

Average annual snowfall: 0 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through Pick List tributaries before entering TNW.

Project waters are Pick List river miles from TNW.

Project waters are Pick List river miles from RPW.

Project waters are 5-10 aerial (straight) miles from TNW.

Project waters are Pick List aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW⁵: Downstream, Laguna Creek drains into the Stone Lakes Wildlife Refuge, where the water is pumped into the Sacramento River.

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary stream order, if known:

(b) General Tributary Characteristics (check all that apply):

Tributary is: Natural
 Artificial (man-made). Explain:
 Manipulated (man-altered). Explain: Directly outside the PSA to the east, Laguna Creek is artificially dammed.

Tributary properties with respect to top of bank (estimate):

Average width: 50 feet
Average depth: 0.5 feet
Average side slopes: **4:1 (or greater)**.

Primary tributary substrate composition (check all that apply):

Silts Sands Concrete
 Cobbles Gravel Muck
 Bedrock Vegetation. Type/% cover: Cattails and Bulrush (95%)
 Other. Explain:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Stable.

Presence of run/riffle/pool complexes. Explain: None.

Tributary geometry: **Relatively straight**

Tributary gradient (approximate average slope): 5 %

(c) Flow:

Tributary provides for: **Seasonal flow**

Estimate average number of flow events in review area/year: **20 (or greater)**

Describe flow regime: The creek is perennial. PEC-1 has a seasonal flow whereas PEC-2 is perennial.

Other information on duration and volume:

Surface flow is: **Confined**. Characteristics:

Subsurface flow: **Unknown**. Explain findings:

Dye (or other) test performed:

Tributary has (check all that apply):

Bed and banks
 OHWM⁶ (check all indicators that apply):
 clear, natural line impressed on the bank the presence of litter and debris
 changes in the character of soil destruction of terrestrial vegetation
 shelving the presence of wrack line
 vegetation matted down, bent, or absent sediment sorting
 leaf litter disturbed or washed away scour
 sediment deposition multiple observed or predicted flow events
 water staining abrupt change in plant community
 other (list):
 Discontinuous OHWM.⁷ Explain:

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

High Tide Line indicated by: Mean High Water Mark indicated by:
 oil or scum line along shore objects survey to available datum;
 fine shell or debris deposits (foreshore) physical markings;
 physical markings/characteristics vegetation lines/changes in vegetation types.
 tidal gauges
 other (list):

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain:

Identify specific pollutants, if known:

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

(iv) **Biological Characteristics. Channel supports (check all that apply):**

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings: Possibly Giant Garter Snake.
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings: Western pond turtle and tri-colored blackbird.
 - Aquatic/wildlife diversity. Explain findings: Bullfrogs and mosquitofish observed.

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size: _____ acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain:

Surface flow is: **Pick List**

Characteristics:

Subsurface flow: **Pick List**. Explain findings:

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

(iii) **Biological Characteristics. Wetland supports (check all that apply):**

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

3. **Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately () acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

- TNWs: linear feet width (ft), Or, acres.
- Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**

- Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:

Label	Feature	Acreage	Square Feet	Length	Width
PC-1	Perennial Creek	0.375	16,354	459.7	35.58
PC-2	Perennial Creek	0.213	9,290	144.5	64.29.

- Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
 - Other non-wetland waters: acres.
- Identify type(s) of waters: .

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

- Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet width (ft).
 - Other non-wetland waters: acres.
- Identify type(s) of waters: .

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
 - Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
 - Wetlands directly abutting an RPW where tributaries typically flow “seasonally.” Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: **Seasonal Wetland (SW-1) is 0.022 acres.**

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

- Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.⁹

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from “waters of the U.S.,” or
- Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
- from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- which are or could be used for industrial purposes by industries in interstate commerce.
- Interstate isolated waters. Explain: .

⁸See Footnote # 3.

⁹To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Other factors. Explain: .

Identify water body and summarize rationale supporting determination:

Provide estimates for jurisdictional waters in the review area (check all that apply):

Tributary waters: linear feet width (ft).

Other non-wetland waters: acres.

Identify type(s) of waters: .

Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.

Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.

Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).

Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .

Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

Non-wetland waters (i.e., rivers, streams): linear feet width (ft).

Lakes/ponds: acres.

Other non-wetland waters: acres. List type of aquatic resource: .

Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

Non-wetland waters (i.e., rivers, streams): **man-made drainage ditch 191.5** linear feet, **3.48** width (ft).

Lakes/ponds: acres.

Other non-wetland waters: acres. List type of aquatic resource: .

Wetlands: Fresh Emergent Wetland (FEW-1) - 0.109acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .

Data sheets prepared/submitted by or on behalf of the applicant/consultant.

Office concurs with data sheets/delineation report.

Office does not concur with data sheets/delineation report.

Data sheets prepared by the Corps: .

Corps navigable waters' study: .

U.S. Geological Survey Hydrologic Atlas: .

USGS NHD data.

USGS 8 and 12 digit HUC maps.

U.S. Geological Survey map(s). Cite scale & quad name: Florin, California.

USDA Natural Resources Conservation Service Soil Survey. Citation:USDA 1993.

National wetlands inventory map(s). Cite name:USFWS.

State/Local wetland inventory map(s): .

FEMA/FIRM maps: .

100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)

Photographs: Aerial (Name & Date): GoogleEarth.

or Other (Name & Date):October 27, 2010.

Previous determination(s). File no. and date of response letter: .

Applicable/supporting case law: .

Applicable/supporting scientific literature: .

Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD:

JURISDICTIONAL ANALYSIS

Potential Jurisdictional Wetlands

The seasonal wetland (SW-1) that is located within the annual grassland seems to be connected via swale (a linear depression that does not exhibit wetland indicators) to Laguna Creek. Water temporarily ponds in the depressional seasonal wetland; wetland hydrology indicators such as surface soil cracks and saturation visible on aerial imagery (GoogleEarth June 29, 2007 and May 30, 2002) support this conclusion. A distinct demarcation of the boundary of the seasonal wetland is marked by an abrupt change in vegetation. Vegetation within the seasonal wetland included vernal pool buttercup (OBL), vernal pool popcorn flower (OBL), dense-flowered spike primrose (OBL), and curly dock (FACW-). These plants were dead during the survey but still identifiable. There was also some encroachment of turkey mullein (NI), Italian ryegrass (FAC*) and field bindweed (NOL) as the PSA was surveyed during the dry season. The surrounding uplands did not exhibit the wetland parameters and contained upland grasses.

The USACE and EPA issued guidance related to the Rapanos decision on June 5, 2007. The Rapanos-Carabell consolidated decisions addressed several issues including the question of jurisdiction in relation to non-RPWs. It was concluded that non-RPWs that have a significant nexus with a TNW, including non-navigable tributaries that do not typically flow year-round or have continuous flow at least seasonally; wetlands adjacent to such tributaries; and wetlands adjacent to but do not directly abut permanent, non-navigable tributary, may be considered waters of the U.S. A significant nexus can be determined to be present if the tributary, in combination with any adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical, and biological integrity of a TNW. Key considerations when evaluating significant nexus include volume, duration, and frequency of the flow of water in the tributary and the proximity of the tributary to the TNW, plus hydrologic, ecologic, and other functions related to the tributary and all of its adjacent wetlands. A data point was taken approximately 90 feet to the north of SW-1. Tractor tires became stuck in the mud at some point and created a depression. Although the tire tracks contained surface water

Potential Other Waters of the United States

Perennial Creek

Laguna Creek is the only waters of the U.S. identified within the PSA. Laguna Creek, a perennial creek, flows through the PSA east to west. This feature has a defined bed and bank, and an ordinary high watermark making it a "waters of the U.S.". The extent of Laguna Creek within the PSA is 0.588 acre (25,644 linear feet). The majority of the creek within the PSA was choked with emergent wetland vegetation including common cattail and bulrush. There were some areas that contained seasonal wetland and riparian vegetation (see Figure 5). The OHWM was determined by the change in vegetation, local topographic relief, and shelving.

The perennial creek delineated within the PSA is Laguna Creek. Laguna Creek is considered a jurisdictional water feature per the USACE (many verified wetland delineations have designated Laguna Creek as such). Laguna Creek is a tributary to a USACE classified TNW (Sacramento River) beyond the PSA boundaries. It is therefore our opinion that this feature has a significant nexus to a TNW and therefore should be considered as a regulated feature under the Clean Water Act. A perennial creek with contiguous emergent wetland, seasonal wetland and riparian habitat was recorded within the PSA as a jurisdictional feature. The USACE typically takes jurisdiction over any creek features as well as decides on final authority over the extent of the feature, determination of area affected by the project, and type of permits and conditions required.

Non-jurisdictional Features

Drainage Ditch

A man-made drainage ditch flows from the south straight into Laguna Creek just west of the dam location within the PSA. This ditch lacks the vegetation requirements necessary to qualify it as an official wetlands per USACE standards. There is no ordinary high water mark in a portion of the ditch leading to the tributary, instead it has swale-like features (i.e., encroachment of grasses from the surrounding uplands). This man-made ditch was created by excavating uplands to relieve periodic flooding events in the adjacent residential subdivision created by blockages in the stormwater drain. Although this ditch drains into a tributary to Laguna Creek, after the Rapanos legal case, the USACE generally will not assert jurisdiction over ditches excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

Isolated Fresh Emergent Wetland

An isolated fresh emergent wetland (FEW-1) is located in between commercial buildings in the southern portion of the PSA. Although the water source was not clearly determined, it is assumed water either comes from a leaky irrigation pipe, over-irrigation of landscaped plants or runoff from the surrounding paved areas. No soil pit was dug at this location. Surface water was present and aerial photographs reveal saturation and inundation (GoogleEarth May 27, 2009 and April 6, 2010). Common cattails and willows were observed behind the commercial dumpster storage. Tall flatsedge, pale spikerush, and curly dock were located along the edges of the emergent wetland. The area was significantly disturbed. Soil seemed to be haphazardly dumped and overturned there. Garbage and debris surrounded the area. Historic areas revealed the strip of land in between the two commercial buildings were an old dirt driveway for a farm. The area is isolated from any other wetland or waters of the U.S. For this reason, the isolated fresh emergent wetland (FEW-1) is not considered jurisdictional. .

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Laguna Creek Bike Trail Connector Project City/County: Elk Grove, Sacramento County Sampling Date: October 27 2010
 Applicant/Owner: City of Elk Grove State: CA Sampling Point: T1P1
 Investigator(s): Angela Calderaro Section, Township, Range: Township 7 North, Range 5 East
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR): C - Mediterranean California Lat: 121° 23' 8.289" W Long: 38° 25' 50.248" N Datum: WGS 84
 Soil Map Unit Name: San Joaquin Silt Loam, 0 to 3 Percent Slopes (214) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>	
Wetland Hydrology Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>	
Remarks: According to a near-by resident, the ditch was created by a City maintenance crew to alleviate the periodic flooding problems that occurred when the culvert to the tributary would periodically clog up and flood the stormwater system in the adjacent residential community. The ditch ends before it reaches the creek tributary.			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>N/A</u>				Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A)
2. _____				Total Number of Dominant Species Across All Strata:	<u>1</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0.0</u> % (A/B)
4. _____					
Total Cover: _____ %				Prevalence Index worksheet:	
Sapling/Shrub Stratum				Total % Cover of: _____ Multiply by: _____	
1. <u>N/A</u>				OBL species	<u>0</u>
2. _____				FACW species	<u>0</u>
3. _____				FAC species	<u>45</u> x 3 = <u>135</u>
4. _____				FACU species	<u>0</u>
5. _____				UPL species	<u>55</u> x 5 = <u>275</u>
Total Cover: _____ %				Column Totals:	<u>100</u> (A) <u>410</u> (B)
Herb Stratum				Prevalence Index = B/A = <u>4.10</u>	
1. <u>Avena fatua</u>	<u>50</u>	<u>Yes</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators:	
2. <u>Brassica rapa</u>	<u>5</u>	<u>No</u>	<u>UPL</u>	<input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹	
3. <u>Lolium multiflorum</u>	<u>45</u>	<u>No</u>	<u>FAC</u>	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
4. _____				¹ Indicators of hydric soil and wetland hydrology must be present.	
5. _____					
6. _____					
7. _____					
8. _____				Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
Total Cover: <u>100</u> %					
Woody Vine Stratum					
1. <u>N/A</u>					
2. _____					
Total Cover: _____ %					
% Bare Ground in Herb Stratum <u>0</u> %	% Cover of Biotic Crust <u>0</u> %				

Remarks:

SOIL

Sampling Point: T1P1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
No								
Soil Pit								
Dug								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.
³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)		Indicators for Problematic Hydric Soils⁴: <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)	
--	--	---	--	--	--

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: None Depth (inches): _____	Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
---	---

Remarks:
 The man-made ditch was excavated wholly in uplands and drains only uplands.

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient)		Secondary Indicators (2 or more required)	
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)	

Field Observations: Surface Water Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>1</u> Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
---	--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
 Aerial Photos

Remarks:
 There were some areas of ponding due to recent rains.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Laguna Creek Bike Trail Connector Project City/County: Elk Grove, Sacramento County Sampling Date: October 27 2010
 Applicant/Owner: City of Elk Grove State: CA Sampling Point: T2P1
 Investigator(s): Angela Calderaro Section, Township, Range: Township 7 North, Range 5 East
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR): C - Mediterranean California Lat: 121° 23' 7.687" W Long: 38° 25' 48.673" N Datum: WGS 84
 Soil Map Unit Name: San Joaquin Silt Loam, 0 to 3 Percent Slopes (214) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>	Is the Sampled Area within a Wetland?		
Hydric Soil Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>		Yes <input type="radio"/>	No <input checked="" type="radio"/>
Wetland Hydrology Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>		Yes <input type="radio"/>	No <input checked="" type="radio"/>
Remarks: The data point was located in an area that had been carved out by tire tracks. Since soil hydric indicators were not present, this area was not delineated as a wetland.					

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1. <i>Salix exigua</i>	5	No	OBL	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)		
2.				Total Number of Dominant Species Across All Strata: <u>1</u> (B)		
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0 %</u> (A/B)		
4.				Prevalence Index worksheet:		
Total Cover: <u>5 %</u>				Total % Cover of: <u>100</u> x 1 = <u>100</u>		
Sapling/Shrub Stratum				FACW species <u>5</u> x 2 = <u>10</u>		
1. <i>Populus fremontii</i>	5	No	FACW	FAC species <u>0</u> x 3 = <u>0</u>		
2.				FACU species <u>0</u> x 4 = <u>0</u>		
3.				UPL species <u>0</u> x 5 = <u>0</u>		
4.				Column Totals: <u>105</u> (A) <u>110</u> (B)		
5.				Prevalence Index = B/A = <u>1.05</u>		
Total Cover: <u>5 %</u>				Hydrophytic Vegetation Indicators:		
Herb Stratum				<input checked="" type="checkbox"/> Dominance Test is >50%		
1. <i>Typha latifolia</i>	95	Yes	OBL	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹		
2.				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)		
3.				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)		
4.				¹ Indicators of hydric soil and wetland hydrology must be present.		
5.				Hydrophytic Vegetation Present?		
6.				Yes <input checked="" type="radio"/> No <input type="radio"/>		
7.						
8.						
Total Cover: <u>95 %</u>						
Woody Vine Stratum						
1. <i>N/A</i>						
2.						
Total Cover: <u>0 %</u>						
% Bare Ground in Herb Stratum <u>0 %</u>		% Cover of Biotic Crust <u>0 %</u>				

Remarks:

SOIL

Sampling Point: T2P1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
No								
Soil Pit								
Dug.								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.
³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	

Indicators for Problematic Hydric Soils:⁴

<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: None _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
 The presence of hydric soil is assumed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Water-Stained Leaves (B9)	

Secondary Indicators (2 or more required)

<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Thin Muck Surface (C7)
<input checked="" type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches):	<u>4</u>
Water Table Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches):	_____
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches):	_____

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
 Aerial Photos

Remarks:
 Mosquito Fish and Bullfrogs were present.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Laguna Creek Bike Trail Connector Project City/County: Elk Grove, Sacramento County Sampling Date: October 27 2010
 Applicant/Owner: City of Elk Grove State: CA Sampling Point: T3P1
 Investigator(s): Angela Calderaro Section, Township, Range: Township 7 North, Range 5 East
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR): C - Mediterranean California Lat: 121° 23' 9.195" W Long: 38° 25' 43.904" N Datum: WGS 84
 Soil Map Unit Name: San Joaquin Silt Loam, 0 TO 3 Percent Slopes (214) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>			
Remarks: The data point was located in an area that had been carved out by tire tracks. Since soil hydric indicators were not present, this area was not delineated as a wetland.					

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status																																										
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0 %</u> (A/B)																																									
2.																																													
3.																																													
4.																																													
Total Cover: <u> </u> %				Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%;">Multiply by:</th> <th style="width: 10%;"></th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td><u> </u></td> <td>x 1 =</td> <td><u>0</u></td> <td></td> </tr> <tr> <td>FACW species</td> <td><u>2</u></td> <td>x 2 =</td> <td><u>4</u></td> <td></td> </tr> <tr> <td>FAC species</td> <td><u>70</u></td> <td>x 3 =</td> <td><u>210</u></td> <td></td> </tr> <tr> <td>FACU species</td> <td><u> </u></td> <td>x 4 =</td> <td><u>0</u></td> <td></td> </tr> <tr> <td>UPL species</td> <td><u>25</u></td> <td>x 5 =</td> <td><u>125</u></td> <td></td> </tr> <tr> <td>Column Totals:</td> <td><u>97</u></td> <td>(A)</td> <td><u>339</u></td> <td>(B)</td> </tr> <tr> <td colspan="5" style="text-align: right;">Prevalence Index = B/A = <u>3.49</u></td> </tr> </tbody> </table>		Total % Cover of:		Multiply by:			OBL species	<u> </u>	x 1 =	<u>0</u>		FACW species	<u>2</u>	x 2 =	<u>4</u>		FAC species	<u>70</u>	x 3 =	<u>210</u>		FACU species	<u> </u>	x 4 =	<u>0</u>		UPL species	<u>25</u>	x 5 =	<u>125</u>		Column Totals:	<u>97</u>	(A)	<u>339</u>	(B)	Prevalence Index = B/A = <u>3.49</u>				
Total % Cover of:		Multiply by:																																											
OBL species	<u> </u>	x 1 =	<u>0</u>																																										
FACW species	<u>2</u>	x 2 =	<u>4</u>																																										
FAC species	<u>70</u>	x 3 =	<u>210</u>																																										
FACU species	<u> </u>	x 4 =	<u>0</u>																																										
UPL species	<u>25</u>	x 5 =	<u>125</u>																																										
Column Totals:	<u>97</u>	(A)	<u>339</u>	(B)																																									
Prevalence Index = B/A = <u>3.49</u>																																													
Total Cover: <u> </u> %																																													
Sapling/Shrub Stratum																																													
1. <u>N/A</u>																																													
2.																																													
3.																																													
4.																																													
5.																																													
Total Cover: <u> </u> %																																													
Herb Stratum																																													
1. <u>Avena fatua</u>	10	No	UPL																																										
2. <u>Rumex crispus</u>	2	No	FACW																																										
3. <u>Lolium multiflorum</u>	70	Yes	FAC																																										
4. <u>Brassica rapa</u>	5	No	UPL																																										
5. <u>Taeniatherum caput-medusae</u>	10	No	UPL																																										
6.																																													
7.																																													
8.																																													
Total Cover: <u>97</u> %																																													
Woody Vine Stratum																																													
1. <u>N/A</u>																																													
2.																																													
Total Cover: <u> </u> %																																													
% Bare Ground in Herb Stratum <u>3</u> %	% Cover of Biotic Crust <u>0</u> %																																												

Remarks:

SOIL

Sampling Point: T3P1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12"	7.5Y 3/3	100					Clay Loam	
12" =								
bottom								
of pit.								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.
³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Vernal Pools (F9) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils:⁴

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: None
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

The soil did not exhibit any hydric soil indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input checked="" type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Thin Muck Surface (C7)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): 3
 Water Table Present? Yes No Depth (inches): _____
 Saturation Present? Yes No Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Aerial Photos

Remarks:

The area where the soil pit was dug exhibited few hydrology indicators.

STREAM CHARACTERIZATION DATA FORM

Project/Site: Laguna Creek Trail-North Camden Spur City/County: EIK Grove/Sacramento Sampling Date: 12/16/13
 Applicant/Owner: City of EIK Grove State: CA Sampling Point: D-3
 Investigator(s): Leslie Parker Section, Township, Range: 25, 07N, 05E
 Subregion (LRR): C Lat: 4254371N Long: 640927E Datum: _____
 Soil Map Unit Name: San Joaquin silt loam NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)

Remarks:
man-made, drains uplands, ends in culver which likely drains into D-2

STREAM CHARACTERIZATION

Stream Type: Ephemeral _____ Intermittent _____ Perennial _____ Stream Form Present _____ Pool(s) _____ Riffle(s) Run(s) _____
 Approximate: Water Depth 0 Feet Bank Full Width (OHWM) 2 Feet Stream Width (top of bank to top of bank) 4 Feet
 Average: Height of channel banks 1 Left 1 Right Depth of pool(s) 0 Feet
 Presence of logs and/or large woody debris in stream: None _____ Occasional _____ Plentiful _____
 Description of stream channel: _____ narrow, deep narrow, shallow _____ wide, deep _____ wide, shallow _____

Stream Bottom			
	None	<50%	>50%
silt	<input checked="" type="checkbox"/>		
clay			<input checked="" type="checkbox"/>
mud	<input checked="" type="checkbox"/>		
sand		<input checked="" type="checkbox"/>	
gravel	<input checked="" type="checkbox"/>		
cobbles		<input checked="" type="checkbox"/>	
boulders	<input checked="" type="checkbox"/>		
bedrock	<input checked="" type="checkbox"/>		

Description that best fits the stream bank*		
left		right
	vertical/undercut	
	steeply sloped (>30%)	
<input checked="" type="checkbox"/>	gradual/no slope (<30%)	<input checked="" type="checkbox"/>

Water Appearance	
<input type="checkbox"/>	clear
<input type="checkbox"/>	milky
<input type="checkbox"/>	foamy
<input type="checkbox"/>	turbid
<input type="checkbox"/>	light brown
<input type="checkbox"/>	dark brown
<input type="checkbox"/>	oily sheen
<input type="checkbox"/>	orange
<input type="checkbox"/>	greenish
<input type="checkbox"/>	other:
<input checked="" type="checkbox"/>	none

Water Odor	
<input type="checkbox"/>	sewage
<input type="checkbox"/>	chlorine
<input type="checkbox"/>	fishy
<input type="checkbox"/>	rotten eggs
<input type="checkbox"/>	organic
<input type="checkbox"/>	other:
<input checked="" type="checkbox"/>	none

Extent to which vegetation shades the stream					
<input type="checkbox"/>	0%	<input checked="" type="checkbox"/>	50%	<input type="checkbox"/>	100%
<input type="checkbox"/>	25%	<input type="checkbox"/>	75%	<input type="checkbox"/>	other - _____ %

VEGETATION – Use scientific names of plants

Tree Stratum	Absolute % Cover	Dominant Species (Y/N)	Indicator Status
Total % Cover	0		
Sapling/Shrub Stratum			
Total % Cover	0		
Herb Stratum			
Rumex crispus	4	N	FAC
Cyperus eragrostis	2	N	FACW
Avena fatua	30	Y	UPL
Festuca perennis	14	N	FAC
total % cover	50		
% bare	50		

OW-1

Pond Field Data Form

Laguna Creek Trail -
 Location/Project #: North Camden Spur Date: 12/11/13 Client: City of Elk Grove
 Pond Name: Camden Lakes Investigator(s): Leslie Parker
 County: Sacramento UTM North (Lat): 4254672 N UTM West (Long): 640957E
 Compass Dir. to road: NE Approx. Distance to road: 170ft In study area boundary? yes
 Hydrologic connection to Waters of the U.S.? yes no

Description (circle one): Permanent lake/pond Temporary lake/pond Marsh/Bog Swamp/forest Other

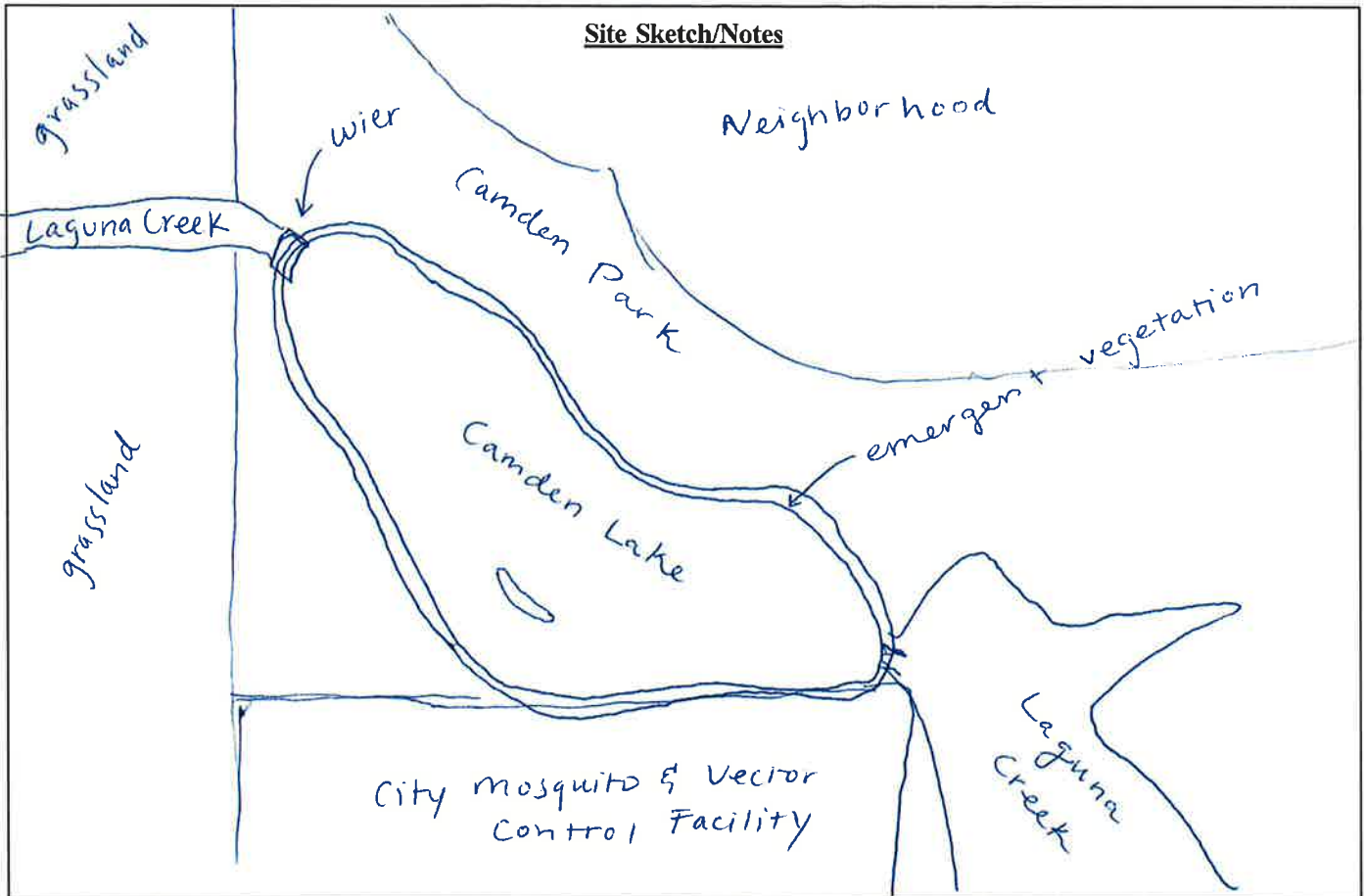
Origin: Natural Man-made Unknown Perimeter GPS data taken: yes no

Estimated pond depth: Approx. 12 Ft. Primary Substrate: Silt/Muck Sand/Gravel Cobble Bedrock Other

% of Pond Margin with Emergent Vegetation: 0 1-25 25-50 50-75 >75 Within Forest? Yes No

Distance to Forest Edge: N/A Ft. Surrounding landscape/vegetation: landscaped park with lawn and mix of planted native & ornamental trees

Dominant species observed: Juncus patens, Typha latifolia, Schoenoplectus sp., Cynodon dactylon, Paspalum dilatatum, Ludwigia peploides



STREAM CHARACTERIZATION DATA FORM

Project/Site: Laguna Creek Trail - North Camdenspur City/County: City Elk Grove / Sacramento County Sampling Date: 12/11/13
 Applicant/Owner: City of Elk Grove State: CA Sampling Point: D-2
 Investigator(s): Leslie Parker Section, Township, Range: 25, 07N, 05E
 Subregion (LRR): C Lat: 4254371N Long: 640927E Datum: _____
 Soil Map Unit Name: San Joaquin silt loam & Buella sandy loam NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)

Remarks:
man-made, begins at culvert

STREAM CHARACTERIZATION

Stream Type: _____ Ephemeral Intermittent _____ Perennial _____ Stream Form Present Pool(s) _____ Riffle(s) Run(s) _____
 Approximate: Water Depth 0.25 Feet Bank Full Width (OHWM) 5 Feet Stream Width (top of bank to top of bank) 10 Feet
 Average: Height of channel banks 3 Left 3 Right _____ Depth of pool(s) 0.25 Feet
 Presence of logs and/or large woody debris in stream: None _____ Occasional 0.25 Plentiful _____
 Description of stream channel: _____ narrow, deep narrow, shallow _____ wide, deep _____ wide, shallow _____

Stream Bottom			
	None	<50%	>50%
silt		<input checked="" type="checkbox"/>	
clay		<input checked="" type="checkbox"/>	
mud			<input checked="" type="checkbox"/>
sand			
gravel	<input checked="" type="checkbox"/>		
cobbles	<input checked="" type="checkbox"/>		
boulders	<input checked="" type="checkbox"/>		
bedrock	<input checked="" type="checkbox"/>		

Description that best fits the stream bank*		
left		right
	vertical/undercut	
<input checked="" type="checkbox"/>	steeply sloped (>30%)	<input checked="" type="checkbox"/>
	gradual/no slope (<30%)	

Water Appearance	
<input checked="" type="checkbox"/>	clear
	milky
	foamy
<input checked="" type="checkbox"/>	turbid
	light brown
	dark brown
	oily sheen
	orange
	greenish
	other:
	none

Water Odor	
	sewage
	chlorine
	fishy
	rotten eggs
	organic
	other:
<input checked="" type="checkbox"/>	none

Extent to which vegetation shades the stream				
0%		50%		100%
	25%	75%	other -	<u>90</u> %

VEGETATION – Use scientific names of plants

Tree Stratum	Absolute % Cover	Dominant Species (Y/N)	Indicator Status
Total % Cover	0		
Sapling/Shrub Stratum			
Total % Cover	0		
Herb Stratum			
Juncus patens	40	Y	FACW
Cyperus eragrostis	40	Y	FACW
Rumex pulcher	1	N	FAC
Typha latifolia	1	N	OBL
Festuca perennis (bank)	2	N	FAC
Conyza canadensis (bank)	1	N	FACU
Epilobium brachycarpum	1	N	UPL
Geranium molle (bank)	1	N	UPL
Polygonum aviculare	1	N	FACW
Persicaria maculosa	1	N	FACW
Plantago lanceolata (bank)	1	N	FAC
Total % Cover	90		
% Bare	10		

STREAM CHARACTERIZATION DATA FORM

Project/Site: Laguna Creek Trail - North Camden Spur City/County: Elk Grove/Sacramento Sampling Date: 12/11/13
 Applicant/Owner: City of Elk Grove State: CA Sampling Point: P-3
 Investigator(s): Leslie Parker Section, Township, Range: 25, 07N, 05E
 Subregion (LRR): C Lat: 4255310N Long: 640917E Datum: _____
 Soil Map Unit Name: San Joaquin silt loam NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)

Remarks: Includes main channel of Whitehouse Creek and the overflow channel

STREAM CHARACTERIZATION

Stream Type: _____ Ephemeral _____ Intermittent Perennial _____ Stream Form Present Pool(s) Riffle(s) Run(s) _____
 Approximate: Water Depth 0.5 Feet Bank Full Width (OHWM) 10 Feet Stream Width (top of bank to top of bank) 40 Feet
 Average: Height of channel banks 4 Left 4 Right _____ Depth of pool(s) 0.5 Feet
 Presence of logs and/or large woody debris in stream: _____ None Occasional _____ Plentiful _____
 Description of stream channel: _____ narrow, deep _____ narrow, shallow _____ wide, deep wide, shallow _____

Stream Bottom			
	None	<50%	>50%
silt	<input checked="" type="checkbox"/>		
clay		<input checked="" type="checkbox"/>	
mud		<input checked="" type="checkbox"/>	
sand		<input checked="" type="checkbox"/>	
gravel	<input checked="" type="checkbox"/>		
cobbles	<input checked="" type="checkbox"/>		
boulders	<input checked="" type="checkbox"/>		
bedrock	<input checked="" type="checkbox"/>		

Description that best fits the stream bank*		
left		right
	vertical/undercut	
	steeply sloped (>30%)	
<input checked="" type="checkbox"/>	gradual/no slope (<30%)	<input checked="" type="checkbox"/>

Water Appearance	
<input checked="" type="checkbox"/>	clear
	milky
	foamy
	turbid
	light brown
	dark brown
	oily sheen
	orange
	greenish
	other:
<input checked="" type="checkbox"/>	none

Water Odor	
	sewage
	chlorine
	fishy
	rotten eggs
	organic
	other:
<input checked="" type="checkbox"/>	none

Extent to which vegetation shades the stream				
0%	50%	100%		
25%	<input checked="" type="checkbox"/>	75%	other - _____ %	

VEGETATION – Use scientific names of plants

Tree Stratum	Absolute % Cover	Dominant Species (Y/N)	Indicator Status
<i>Salix laevigatus</i>	35	Y	FACW
<i>Salix exigua</i>	5	N	FACW
<i>Populus fremontii</i>	10	N	FAC
Total % Cover	50		
Sapling/Shrub Stratum			
Rosa <i>Ligustrum sp. japonicum</i>	1	N	FACU
<i>Rubus armeniacus</i>	3	N	FACU
<i>Quercus wislizeni</i>	1	N	UPL
<i>Quercus lobata</i>	1	N	FACU
Total % Cover	6		
Herb Stratum			
<i>Rumex crispus</i>	2	N	FAC
<i>Festuca perennis</i>	2	N	FAC
<i>Juncus patens</i>	5	N	FACW
<i>Typha latifolia</i>	5	N	OBL
<i>Cyperus eragrostis</i>	2	N	FACW
<i>Eleocharis macrostachys</i>	20	Y	OBL
<i>Eryngium sp.</i>	2	N	OBL
Dactyloctenium <i>Cynodon dactylon</i>	5	N	FACW
<i>Plantago lanceolata</i>	1	N	FAC
<i>Lichorium intybus</i>	1	N	FACU
<i>Holocarpha virgata</i>	1	N	UPL
<i>Alisma sp.</i>	1	N	OBL
total %	45		

Laguna Creek Trail-North Camden Spur



D-1



D-2



D-3



OW-1

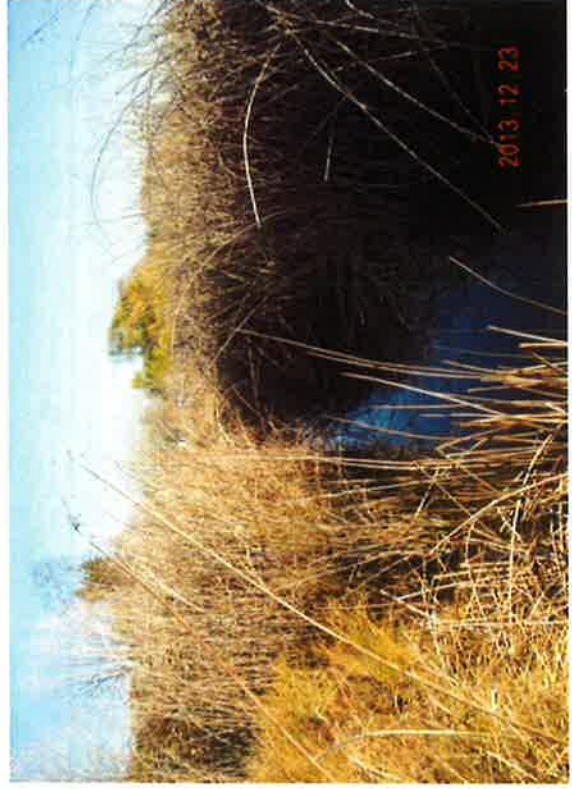
Laguna Creek Trail-North Camden Spur



P-1



P-1



P-2



P-2

Laguna Creek Trail-North Camden Spur



P-3 (main channel)



P-3 (overflow channel)



SW-1

EXHIBIT A-D

U.S. Fish & Wildlife Service Sacramento Fish & Wildlife Office

Federal Endangered and Threatened Species that Occur in
or may be Affected by Projects in the Counties and/or
U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 140625123349

Current as of: June 25, 2014

Quad Lists

Listed Species

Invertebrates

- Branchinecta conservatio*
Conservancy fairy shrimp (E)
- Branchinecta lynchi*
Critical habitat, vernal pool fairy shrimp (X)
vernal pool fairy shrimp (T)
- Desmocerus californicus dimorphus*
Critical habitat, valley elderberry longhorn beetle (X)
valley elderberry longhorn beetle (T)
- Elaphrus viridis*
delta green ground beetle (T)
- Lepidurus packardi*
Critical habitat, vernal pool tadpole shrimp (X)
vernal pool tadpole shrimp (E)

Fish

- Acipenser medirostris*
green sturgeon (T) (NMFS)
- Hypomesus transpacificus*
Critical habitat, delta smelt (X)
delta smelt (T)
- Oncorhynchus mykiss*
Central Valley steelhead (T) (NMFS)
Critical habitat, Central Valley steelhead (X) (NMFS)
- Oncorhynchus tshawytscha*
Central Valley spring-run chinook salmon (T) (NMFS)
Critical Habitat, Central Valley spring-run chinook (X) (NMFS)
Critical habitat, winter-run chinook salmon (X) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

- Ambystoma californiense*
California tiger salamander, central population (T)
- Rana draytonii*
California red-legged frog (T)

Reptiles

- Thamnophis gigas*
giant garter snake (T)

Birds

- Vireo bellii pusillus*
Least Bell's vireo (E)

Plants

Calystegia stebbinsii
Stebbins's morning-glory (E)

Castilleja campestris ssp. succulenta
succulent (=fleshy) owl's-clover (T)

Ceanothus roderickii
Pine Hill ceanothus (E)

Fremontodendron californicum ssp. decumbens
Pine Hill flannelbush (E)

Galium californicum ssp. sierrae
El Dorado bedstraw (E)

Orcuttia tenuis
Critical habitat, slender Orcutt grass (X)
slender Orcutt grass (T)

Orcuttia viscida
Critical habitat, Sacramento Orcutt grass (X)
Sacramento Orcutt grass (E)

Senecio layneae
Layne's butterweed (=ragwort) (T)

Quads Containing Listed, Proposed or Candidate Species:

ELK GROVE (496A)
FLORIN (496B)
BRUCEVILLE (496C)
GALT (496D)
COURTLAND (497D)
CLARKSVILLE (511A)
SACRAMENTO EAST (512C)
CARMICHAEL (512D)
SACRAMENTO WEST (513D)

County Lists

Sacramento County

Listed Species

Invertebrates

Apodemia mormo langei
Lange's metalmark butterfly (E)

Branchinecta conservatio
Conservancy fairy shrimp (E)

Branchinecta lynchi
Critical habitat, vernal pool fairy shrimp (X)
vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
Critical habitat, valley elderberry longhorn beetle (X)
valley elderberry longhorn beetle (T)

Elaphrus viridis
delta green ground beetle (T)

Lepidurus packardi

Critical habitat, vernal pool tadpole shrimp (X)
vernal pool tadpole shrimp (E)

Fish

Acipenser medirostris
green sturgeon (T) (NMFS)

Hypomesus transpacificus
Critical habitat, delta smelt (X)
delta smelt (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)
Critical habitat, Central Valley steelhead (X) (NMFS)

Oncorhynchus tshawytscha
Central Valley spring-run chinook salmon (T) (NMFS)
Critical Habitat, Central Valley spring-run chinook (X) (NMFS)
Critical habitat, winter-run chinook salmon (X) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)
Critical habitat, CA tiger salamander, central population (X)

Rana draytonii
California red-legged frog (T)

Reptiles

Thamnophis gigas
giant garter snake (T)

Birds

Charadrius alexandrinus nivosus
western snowy plover (T)

Rallus longirostris obsoletus
California clapper rail (E)

Sternula antillarum (=Sterna, =albifrons) browni
California least tern (E)

Vireo bellii pusillus
Least Bell's vireo (E)

Mammals

Reithrodontomys raviventris
salt marsh harvest mouse (E)

Sylvilagus bachmani riparius
riparian brush rabbit (E)

Vulpes macrotis mutica
San Joaquin kit fox (E)

Plants

Arctostaphylos myrtifolia
Ione manzanita (T)

Calystegia stebbinsii
Stebbins's morning-glory (E)

Castilleja campestris ssp. succulenta
Critical habitat, succulent (=fleshy) owl's-clover (X)
succulent (=fleshy) owl's-clover (T)

Ceanothus roderickii
Pine Hill ceanothus (E)

Cordylanthus mollis ssp. mollis
soft bird's-beak (E)

Cordylanthus palmatus
palmate-bracted bird's-beak (E)

Eriogonum apricum var. apricum
Ione buckwheat (E)

Eriogonum apricum var. prostratum
Irish Hill buckwheat (E)

Erysimum capitatum ssp. angustatum
Contra Costa wallflower (E)
Critical Habitat, Contra Costa wallflower (X)

Fremontodendron californicum ssp. decumbens
Pine Hill flannelbush (E)

Galium californicum ssp. sierrae
El Dorado bedstraw (E)

Lasthenia conjugens
Contra Costa goldfields (E)

Neostapfia colusana
Colusa grass (T)

Oenothera deltoides ssp. howellii
Antioch Dunes evening-primrose (E)
Critical habitat, Antioch Dunes evening-primrose (X)

Orcuttia tenuis
Critical habitat, slender Orcutt grass (X)

slender Orcutt grass (T)

Orcuttia viscida

Critical habitat, Sacramento Orcutt grass (X)

Sacramento Orcutt grass (E)

Senecio layneae

Layne's butterweed (=ragwort) (T)

Sidalcea keckii

Keck's checker-mallow (=checkerbloom) (E)

Candidate Species

Birds

Coccyzus americanus occidentalis

Western yellow-billed cuckoo (C)

Key:

(E) *Endangered* - Listed as being in danger of extinction.

(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.

(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.

(NMFS) Species under the Jurisdiction of the [National Oceanic & Atmospheric Administration Fisheries Service](#). Consult with them directly about these species.

Critical Habitat - Area essential to the conservation of a species.

(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.

(C) *Candidate* - Candidate to become a proposed species.

(V) *Vacated* by a court order. Not currently in effect. Being reviewed by the Service.

(X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online [Inventory of Rare and Endangered Plants](#).

Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our [Protocol](#) and [Recovery Permits](#) pages.

For plant surveys, we recommend using the [Guidelines for Conducting and Reporting Botanical Inventories](#). The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal [consultation](#) with the Service.

During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our [Map Room](#) page.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. [More info](#)

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6520.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be September 23, 2014.

CNDDDB 9-Quad Species List 328 records.

Element Type	Scientific Name	Common Name	Element Code	Federal Status	State Status	CDFW Status	CA Rare Plant Rank	Quad Code	Quad Name	Data Status	Taxonomic Sort
Animals - Amphibians	Ambystoma californiense	California tiger salamander	AAAAA01180	Threatened	Threatened	SSC	-	3812133	Galt	Mapped and Unprocessed	Animals - Amphibians - Ambystomatidae - Ambystoma californiense
Animals - Amphibians	Spea hammondi	western spadefoot	AAABF02020	None	None	SSC	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Amphibians - Scaphiopodidae - Spea hammondi
Animals - Birds	Accipiter cooperii	Cooper's hawk	ABNKC12040	None	None	WL	-	3812144	Florin	Mapped	Animals - Birds - Accipitridae - Accipiter cooperii
Animals - Birds	Accipiter cooperii	Cooper's hawk	ABNKC12040	None	None	WL	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Birds - Accipitridae - Accipiter cooperii
Animals - Birds	Accipiter cooperii	Cooper's hawk	ABNKC12040	None	None	WL	-	3812154	Sacramento East	Mapped	Animals - Birds - Accipitridae - Accipiter cooperii
Animals - Birds	Accipiter cooperii	Cooper's hawk	ABNKC12040	None	None	WL	-	3812143	Elk Grove	Mapped	Animals - Birds - Accipitridae - Accipiter cooperii
Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP WL	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Birds - Accipitridae - Aquila chrysaetos
Animals - Birds	Buteo regalis	ferruginous hawk	ABNKC19120	None	None	WL	-	3812153	Carmichael	Mapped	Animals - Birds - Accipitridae - Buteo regalis
Animals - Birds	Buteo regalis	ferruginous hawk	ABNKC19120	None	None	WL	-	3812144	Florin	Mapped	Animals - Birds - Accipitridae - Buteo regalis
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812143	Elk Grove	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812135	Courtland	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812133	Galt	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812134	Bruceville	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812153	Carmichael	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812154	Sacramento East	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812144	Florin	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812145	Clarksburg	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Circus cyaneus	northern harrier	ABNKC11010	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Birds - Accipitridae - Circus cyaneus
Animals - Birds	Circus cyaneus	northern harrier	ABNKC11010	None	None	SSC	-	3812135	Courtland	Unprocessed	Animals - Birds - Accipitridae - Circus cyaneus
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812135	Courtland	Mapped and Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus

Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812144	Florin	Mapped and Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812143	Elk Grove	Mapped	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812133	Galt	Mapped	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812134	Bruceville	Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812154	Sacramento East	Mapped and Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3812153	Carmichael	Unprocessed	Animals - Birds - Accipitridae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3812134	Bruceville	Unprocessed	Animals - Birds - Accipitridae - Pandion haliaetus
Animals - Birds	Chaetura vauxi	Vaux's swift	ABNUA03020	None	None	SSC	-	3812153	Carmichael	Unprocessed	Animals - Birds - Apodidae - Chaetura vauxi
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3812133	Galt	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3812144	Florin	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3812135	Courtland	Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3812135	Courtland	Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3812144	Florin	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3812133	Galt	Mapped	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3812154	Sacramento East	Mapped	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Botaurus lentiginosus	American bittern	ABNGA01020	None	None	-	-	3812144	Florin	Unprocessed	Animals - Birds - Ardeidae - Botaurus lentiginosus

Animals - Birds	Egretta thula	snowy egret	ABNGA06030	None	None	-	-	3812144	Florin	Unprocessed	Animals - Birds - Ardeidae - Egretta thula
Animals - Birds	Egretta thula	snowy egret	ABNGA06030	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Birds - Ardeidae - Egretta thula
Animals - Birds	Ixobrychus exilis	least bittern	ABNGA02010	None	None	SSC	-	3812144	Florin	Unprocessed	Animals - Birds - Ardeidae - Ixobrychus exilis
Animals - Birds	Ixobrychus exilis	least bittern	ABNGA02010	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Ardeidae - Ixobrychus exilis
Animals - Birds	Nycticorax nycticorax	black-crowned night heron	ABNGA11010	None	None	-	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Ardeidae - Nycticorax nycticorax
Animals - Birds	Nycticorax nycticorax	black-crowned night heron	ABNGA11010	None	None	-	-	3812144	Florin	Mapped and Unprocessed	Animals - Birds - Ardeidae - Nycticorax nycticorax
Animals - Birds	Nycticorax nycticorax	black-crowned night heron	ABNGA11010	None	None	-	-	3812135	Courtland	Unprocessed	Animals - Birds - Ardeidae - Nycticorax nycticorax
Animals - Birds	Nycticorax nycticorax	black-crowned night heron	ABNGA11010	None	None	-	-	3812133	Galt	Mapped	Animals - Birds - Ardeidae - Nycticorax nycticorax
Animals - Birds	Cardinalis cardinalis	northern cardinal	ABPBX60010	None	None	WL	-	3812133	Galt	Unprocessed	Animals - Birds - Cardinalidae - Cardinalis cardinalis
Animals - Birds	Charadrius montanus	mountain plover	ABNNB03100	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Charadriidae - Charadrius montanus
Animals - Birds	Pica nuttalli	yellow-billed magpie	ABPAV09020	None	None	-	-	3812154	Sacramento East	Unprocessed	Animals - Birds - Corvidae - Pica nuttalli
Animals - Birds	Coccyzus americanus occidentalis	western yellow-billed cuckoo	ABNRB02022	Proposed Threatened	Endangered	-	-	3812145	Clarksburg	Mapped	Animals - Birds - Cuculidae - Coccyzus americanus occidentalis
Animals - Birds	Coccyzus americanus occidentalis	western yellow-billed cuckoo	ABNRB02022	Proposed Threatened	Endangered	-	-	3812134	Bruceville	Unprocessed	Animals - Birds - Cuculidae - Coccyzus americanus occidentalis
Animals - Birds	Ammodramus savannarum	grasshopper sparrow	ABPBXA0020	None	None	SSC	-	3812134	Bruceville	Unprocessed	Animals - Birds - Emberizidae - Ammodramus savannarum
Animals - Birds	Ammodramus savannarum	grasshopper sparrow	ABPBXA0020	None	None	SSC	-	3812144	Florin	Unprocessed	Animals - Birds - Emberizidae - Ammodramus savannarum
Animals - Birds	Ammodramus savannarum	grasshopper sparrow	ABPBXA0020	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Birds - Emberizidae - Ammodramus savannarum
Animals - Birds	Ammodramus savannarum	grasshopper sparrow	ABPBXA0020	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Emberizidae - Ammodramus savannarum
Animals - Birds	Ammodramus savannarum	grasshopper sparrow	ABPBXA0020	None	None	SSC	-	3812154	Sacramento East	Unprocessed	Animals - Birds - Emberizidae - Ammodramus savannarum
Animals - Birds	Chondestes grammacus	lark sparrow	ABPBX96010	None	None	-	-	3812154	Sacramento East	Unprocessed	Animals - Birds - Emberizidae - Chondestes grammacus

Animals - Birds	Chondestes grammacus	lark sparrow	ABPBX96010	None	None	-	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Emberizidae - Chondestes grammacus
Animals - Birds	Melospiza melodia	song sparrow (-inModesto-in population)	ABPBXA3010	None	None	SSC	-	3812155	Sacramento West	Mapped	Animals - Birds - Emberizidae - Melospiza melodia
Animals - Birds	Melospiza melodia	song sparrow (-inModesto-in population)	ABPBXA3010	None	None	SSC	-	3812154	Sacramento East	Mapped	Animals - Birds - Emberizidae - Melospiza melodia
Animals - Birds	Melospiza melodia	song sparrow (-inModesto-in population)	ABPBXA3010	None	None	SSC	-	3812145	Clarksburg	Mapped	Animals - Birds - Emberizidae - Melospiza melodia
Animals - Birds	Melospiza melodia	song sparrow (-inModesto-in population)	ABPBXA3010	None	None	SSC	-	3812144	Florin	Mapped	Animals - Birds - Emberizidae - Melospiza melodia
Animals - Birds	Melospiza melodia	song sparrow (-inModesto-in population)	ABPBXA3010	None	None	SSC	-	3812134	Bruceville	Mapped	Animals - Birds - Emberizidae - Melospiza melodia
Animals - Birds	Melospiza melodia	song sparrow (-inModesto-in population)	ABPBXA3010	None	None	SSC	-	3812135	Courtland	Mapped	Animals - Birds - Emberizidae - Melospiza melodia
Animals - Birds	Spizella breweri	Brewer's sparrow	ABPBX94040	None	None	-	-	3812154	Sacramento East	Unprocessed	Animals - Birds - Emberizidae - Spizella breweri
Animals - Birds	Spizella breweri	Brewer's sparrow	ABPBX94040	None	None	-	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Emberizidae - Spizella breweri
Animals - Birds	Falco columbarius	merlin	ABNKD06030	None	None	WL	-	3812144	Florin	Mapped	Animals - Birds - Falconidae - Falco columbarius
Animals - Birds	Falco mexicanus	prairie falcon	ABNKD06090	None	None	WL	-	3812154	Sacramento East	Unprocessed	Animals - Birds - Falconidae - Falco mexicanus
Animals - Birds	Falco mexicanus	prairie falcon	ABNKD06090	None	None	WL	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Falconidae - Falco mexicanus
Animals - Birds	Grus canadensis canadensis	lesser sandhill crane	ABNMK01011	None	None	SSC	-	3812134	Bruceville	Unprocessed	Animals - Birds - Gruidae - Grus canadensis canadensis
Animals - Birds	Grus canadensis tabida	greater sandhill crane	ABNMK01014	None	Threatened	FP	-	3812134	Bruceville	Unprocessed	Animals - Birds - Gruidae - Grus canadensis tabida
Animals - Birds	Grus canadensis tabida	greater sandhill crane	ABNMK01014	None	Threatened	FP	-	3812144	Florin	Unprocessed	Animals - Birds - Gruidae - Grus canadensis tabida
Animals - Birds	Progne subis	purple martin	ABPAU01010	None	None	SSC	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Birds - Hirundinidae - Progne subis
Animals - Birds	Progne subis	purple martin	ABPAU01010	None	None	SSC	-	3812154	Sacramento East	Mapped and Unprocessed	Animals - Birds - Hirundinidae - Progne subis
Animals - Birds	Riparia riparia	bank swallow	ABPAU08010	None	Threatened	-	-	3812154	Sacramento East	Mapped	Animals - Birds - Hirundinidae - Riparia riparia
Animals - Birds	Riparia riparia	bank swallow	ABPAU08010	None	Threatened	-	-	3812153	Carmichael	Mapped	Animals - Birds - Hirundinidae - Riparia riparia
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	None	SSC	-	3812153	Carmichael	Mapped	Animals - Birds - Icteridae - Agelaius tricolor

Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	None	SSC	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	None	SSC	-	3812144	Florin	Mapped and Unprocessed	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	None	SSC	-	3812143	Elk Grove	Mapped	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	None	SSC	-	3812135	Courtland	Unprocessed	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	None	SSC	-	3812134	Bruceville	Mapped and Unprocessed	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	None	SSC	-	3812133	Galt	Mapped and Unprocessed	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Xanthocephalus xanthocephalus	yellow-headed blackbird	ABPBXB3010	None	None	SSC	-	3812144	Florin	Mapped	Animals - Birds - Icteridae - Xanthocephalus xanthocephalus
Animals - Birds	Xanthocephalus xanthocephalus	yellow-headed blackbird	ABPBXB3010	None	None	SSC	-	3812145	Clarksburg	Mapped	Animals - Birds - Icteridae - Xanthocephalus xanthocephalus
Animals - Birds	Lanius ludovicianus	loggerhead shrike	ABPBR01030	None	None	SSC	-	3812144	Florin	Unprocessed	Animals - Birds - Laniidae - Lanius ludovicianus
Animals - Birds	Lanius ludovicianus	loggerhead shrike	ABPBR01030	None	None	SSC	-	3812134	Bruceville	Unprocessed	Animals - Birds - Laniidae - Lanius ludovicianus
Animals - Birds	Sternula antillarum browni	California least tern	ABNNM08103	Endangered	Endangered	FP	-	3812144	Florin	Unprocessed	Animals - Birds - Laridae - Sternula antillarum browni
Animals - Birds	Baeolophus inornatus	oak titmouse	ABPAW01100	None	None	-	-	3812144	Florin	Unprocessed	Animals - Birds - Paridae - Baeolophus inornatus
Animals - Birds	Dendroica occidentalis	hermit warbler	ABPBX03090	None	None	-	-	3812133	Galt	Unprocessed	Animals - Birds - Parulidae - Dendroica occidentalis
Animals - Birds	Dendroica petechia brewsteri	yellow warbler	ABPBX03018	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Parulidae - Dendroica petechia brewsteri
Animals - Birds	Icteria virens	yellow-breasted chat	ABPBX24010	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Birds - Parulidae - Icteria virens
Animals - Birds	Phalacrocorax auritus	double-crested cormorant	ABNFD01020	None	None	WL	-	3812134	Bruceville	Unprocessed	Animals - Birds - Phalacrocoracidae - Phalacrocorax auritus
Animals - Birds	Phalacrocorax auritus	double-crested cormorant	ABNFD01020	None	None	WL	-	3812144	Florin	Mapped and Unprocessed	Animals - Birds - Phalacrocoracidae - Phalacrocorax auritus
Animals - Birds	Picoides nuttallii	Nuttall's woodpecker	ABNYF07020	None	None	-	-	3812144	Florin	Unprocessed	Animals - Birds - Picidae - Picoides nuttallii
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812154	Sacramento East	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia

Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812144	Florin	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812143	Elk Grove	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812134	Bruceville	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812133	Galt	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Plegadis chihi	white-faced ibis	ABNGE02020	None	None	WL	-	3812155	Sacramento West	Unprocessed	Animals - Birds - Threskiornithidae - Plegadis chihi
Animals - Birds	Vireo bellii pusillus	least Bell's vireo	ABPBW01114	Endangered	Endangered	-	-	3812155	Sacramento West	Mapped	Animals - Birds - Vireonidae - Vireo bellii pusillus
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812154	Sacramento East	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812144	Florin	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812145	Clarksburg	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812133	Galt	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812134	Bruceville	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812143	Elk Grove	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812135	Courtland	Mapped	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Branchinecta mesovallensis	midvalley fairy shrimp	ICBRA03150	None	None	-	-	3812143	Elk Grove	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta mesovallensis
Animals - Crustaceans	Branchinecta mesovallensis	midvalley fairy shrimp	ICBRA03150	None	None	-	-	3812133	Galt	Mapped	Animals - Crustaceans - Branchinectidae - Branchinecta mesovallensis
Animals - Crustaceans	Branchinecta mesovallensis	midvalley fairy shrimp	ICBRA03150	None	None	-	-	3812144	Florin	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta mesovallensis

Animals - Crustaceans	Branchinecta mesovallensis	midvalley fairy shrimp	ICBRA03150	None	None	-	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta mesovallensis
Animals - Crustaceans	Dumontia oregonensis	hairy water flea	ICBRA23010	None	None	-	-	3812153	Carmichael	Mapped	Animals - Crustaceans - Dumontiidae - Dumontia oregonensis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3812154	Sacramento East	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3812144	Florin	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3812145	Clarksburg	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3812133	Galt	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3812134	Bruceville	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3812143	Elk Grove	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3812135	Courtland	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3812143	Elk Grove	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3812134	Bruceville	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3812133	Galt	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3812145	Clarksburg	Mapped	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3812144	Florin	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi

Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3812154	Sacramento East	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Fish	Acipenser transmontanus	white sturgeon	AFCAA01050	None	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Acipenseridae - Acipenser transmontanus
Animals - Fish	Archoplites interruptus	Sacramento perch	AFCQB07010	None	None	SSC	-	3812155	Sacramento West	Mapped	Animals - Fish - Centrarchidae - Archoplites interruptus
Animals - Fish	Lavinia exilicauda exilicauda	Central Valley hitch	AFCJB19012	None	None	-	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Cyprinidae - Lavinia exilicauda exilicauda
Animals - Fish	Lavinia exilicauda exilicauda	Central Valley hitch	AFCJB19012	None	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Cyprinidae - Lavinia exilicauda exilicauda
Animals - Fish	Lavinia exilicauda exilicauda	Central Valley hitch	AFCJB19012	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Fish - Cyprinidae - Lavinia exilicauda exilicauda
Animals - Fish	Mylopharodon conocephalus	hardhead	AFCJB25010	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Cyprinidae - Mylopharodon conocephalus
Animals - Fish	Mylopharodon conocephalus	hardhead	AFCJB25010	None	None	SSC	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Cyprinidae - Mylopharodon conocephalus
Animals - Fish	Mylopharodon conocephalus	hardhead	AFCJB25010	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Cyprinidae - Mylopharodon conocephalus
Animals - Fish	Pogonichthys macrolepidotus	Sacramento splittail	AFCJB34020	None	None	SSC	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Fish - Cyprinidae - Pogonichthys macrolepidotus
Animals - Fish	Pogonichthys macrolepidotus	Sacramento splittail	AFCJB34020	None	None	SSC	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Cyprinidae - Pogonichthys macrolepidotus
Animals - Fish	Pogonichthys macrolepidotus	Sacramento splittail	AFCJB34020	None	None	SSC	-	3812145	Clarksburg	Mapped and Unprocessed	Animals - Fish - Cyprinidae - Pogonichthys macrolepidotus
Animals - Fish	Pogonichthys macrolepidotus	Sacramento splittail	AFCJB34020	None	None	SSC	-	3812144	Florin	Mapped	Animals - Fish - Cyprinidae - Pogonichthys macrolepidotus
Animals - Fish	Pogonichthys macrolepidotus	Sacramento splittail	AFCJB34020	None	None	SSC	-	3812134	Bruceville	Unprocessed	Animals - Fish - Cyprinidae - Pogonichthys macrolepidotus
Animals - Fish	Pogonichthys macrolepidotus	Sacramento splittail	AFCJB34020	None	None	SSC	-	3812135	Courtland	Mapped and Unprocessed	Animals - Fish - Cyprinidae - Pogonichthys macrolepidotus
Animals - Fish	Hysterocharpus traski traski	Sacramento-San Joaquin tule perch	AFCQK02012	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Fish - Embiotocidae - Hysterocharpus traski traski
Animals - Fish	Hysterocharpus traski traski	Sacramento-San Joaquin tule perch	AFCQK02012	None	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Embiotocidae - Hysterocharpus traski traski

Animals - Fish	Hysterothorax traski	Sacramento-San Joaquin tule perch	AFCQK02012	None	None	-	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Embiotocidae - Hysterothorax traski
Animals - Fish	Hysterothorax traski	Sacramento-San Joaquin tule perch	AFCQK02012	None	None	-	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Embiotocidae - Hysterothorax traski
Animals - Fish	Hypomesus transpacificus	Delta smelt	AFCHB01040	Threatened	Endangered	-	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Osmeridae - Hypomesus transpacificus
Animals - Fish	Hypomesus transpacificus	Delta smelt	AFCHB01040	Threatened	Endangered	-	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Osmeridae - Hypomesus transpacificus
Animals - Fish	Hypomesus transpacificus	Delta smelt	AFCHB01040	Threatened	Endangered	-	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Osmeridae - Hypomesus transpacificus
Animals - Fish	Hypomesus transpacificus	Delta smelt	AFCHB01040	Threatened	Endangered	-	-	3812134	Bruceville	Unprocessed	Animals - Fish - Osmeridae - Hypomesus transpacificus
Animals - Fish	Hypomesus transpacificus	Delta smelt	AFCHB01040	Threatened	Endangered	-	-	3812135	Courtland	Unprocessed	Animals - Fish - Osmeridae - Hypomesus transpacificus
Animals - Fish	Spirinchus thaleichthys	longfin smelt	AFCHB03010	Candidate	Threatened	SSC	-	3812135	Courtland	Mapped	Animals - Fish - Osmeridae - Spirinchus thaleichthys
Animals - Fish	Spirinchus thaleichthys	longfin smelt	AFCHB03010	Candidate	Threatened	SSC	-	3812145	Clarksburg	Mapped	Animals - Fish - Osmeridae - Spirinchus thaleichthys
Animals - Fish	Spirinchus thaleichthys	longfin smelt	AFCHB03010	Candidate	Threatened	SSC	-	3812144	Florin	Mapped	Animals - Fish - Osmeridae - Spirinchus thaleichthys
Animals - Fish	Spirinchus thaleichthys	longfin smelt	AFCHB03010	Candidate	Threatened	SSC	-	3812155	Sacramento West	Mapped	Animals - Fish - Osmeridae - Spirinchus thaleichthys
Animals - Fish	Entosphenus tridentatus	Pacific lamprey	AFBAA02100	None	None	-	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Petromyzontidae - Entosphenus tridentatus
Animals - Fish	Entosphenus tridentatus	Pacific lamprey	AFBAA02100	None	None	-	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Petromyzontidae - Entosphenus tridentatus
Animals - Fish	Entosphenus tridentatus	Pacific lamprey	AFBAA02100	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Fish - Petromyzontidae - Entosphenus tridentatus
Animals - Fish	Lampetra ayresii	river lamprey	AFBAA02030	None	None	SSC	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Petromyzontidae - Lampetra ayresii
Animals - Fish	Lampetra ayresii	river lamprey	AFBAA02030	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Petromyzontidae - Lampetra ayresii
Animals - Fish	Lampetra ayresii	river lamprey	AFBAA02030	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Petromyzontidae - Lampetra ayresii
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - central California coast DPS	AFCHA0209G	Threatened	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812145	Clarksburg	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus

Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812144	Florin	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - central California coast DPS	AFCHA0209G	Threatened	None	-	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812154	Sacramento East	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812153	Carmichael	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812133	Galt	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812134	Bruceville	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812135	Courtland	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812143	Elk Grove	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	central California coast DPS	AFCHA0209G	Threatened	None	-	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812155	Sacramento West	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - spring-run Klamath-Trinity Rivers pop.	AFCHA02056	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley spring-run ESU	AFCHA0205A	Threatened	Threatened	-	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Sacramento River winter-run ESU	AFCHA0205B	Endangered	Endangered	-	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley fall / late fall-run ESU	AFCHA0205N	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - spring-run Klamath-Trinity Rivers pop.	AFCHA02056	None	None	SSC	-	3812135	Courtland	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley spring-run ESU	AFCHA0205A	Threatened	Threatened	-	-	3812135	Courtland	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha

Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Sacramento River winter-run ESU	AFCHA0205B	Endangered	Endangered	-	-	3812135	Courtland	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley fall / late fall-run ESU	AFCHA0205N	None	None	SSC	-	3812135	Courtland	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley fall / late fall-run ESU	AFCHA0205N	None	None	SSC	-	3812134	Bruceville	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley spring-run ESU	AFCHA0205A	Threatened	Threatened	-	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Sacramento River winter-run ESU	AFCHA0205B	Endangered	Endangered	-	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley fall / late fall-run ESU	AFCHA0205N	None	None	SSC	-	3812154	Sacramento East	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - spring-run Klamath-Trinity Rivers pop.	AFCHA02056	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley spring-run ESU	AFCHA0205A	Threatened	Threatened	-	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Sacramento River winter-run ESU	AFCHA0205B	Endangered	Endangered	-	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley fall / late fall-run ESU	AFCHA0205N	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Insects	Cicindela hirticollis abrupta	Sacramento Valley tiger beetle	IICOL02106	None	None	-	-	3812155	Sacramento West	Mapped	Animals - Insects - Carabidae - Cicindela hirticollis abrupta
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3812154	Sacramento East	Mapped and Unprocessed	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus

Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3812153	Carmichael	Mapped and Unprocessed	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3812133	Galt	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3812134	Bruceville	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3812135	Courtland	Unprocessed	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	IICOL48011	Threatened	None	-	-	3812143	Elk Grove	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
Animals - Insects	Hydrochara rickseckeri	Ricksecker's water scavenger beetle	IICOL5V010	None	None	-	-	3812134	Bruceville	Mapped	Animals - Insects - Hydrophilidae - Hydrochara rickseckeri
Animals - Insects	Hydrochara rickseckeri	Ricksecker's water scavenger beetle	IICOL5V010	None	None	-	-	3812153	Carmichael	Mapped	Animals - Insects - Hydrophilidae - Hydrochara rickseckeri
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3812153	Carmichael	Mapped	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3812154	Sacramento East	Mapped	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3812145	Clarksburg	Mapped	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3812144	Florin	Mapped and Unprocessed	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3812134	Bruceville	Mapped	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3812135	Courtland	Mapped	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Lasiurus blossevillii	western red bat	AMACC05060	None	None	SSC	-	3812135	Courtland	Unprocessed	Animals - Mammals - Vespertilionidae - Lasiurus blossevillii
Animals - Mammals	Lasiurus blossevillii	western red bat	AMACC05060	None	None	SSC	-	3812144	Florin	Unprocessed	Animals - Mammals - Vespertilionidae - Lasiurus blossevillii
Animals - Mammals	Lasiurus blossevillii	western red bat	AMACC05060	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Mammals - Vespertilionidae - Lasiurus blossevillii
Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05030	None	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Mammals - Vespertilionidae - Lasiurus cinereus

Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05030	None	None	-	-	3812144	Florin	Unprocessed	Animals - Mammals - Vespertilionidae - Lasiurus cinereus
Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05030	None	None	-	-	3812135	Courtland	Unprocessed	Animals - Mammals - Vespertilionidae - Lasiurus cinereus
Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05030	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Mammals - Vespertilionidae - Lasiurus cinereus
Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05030	None	None	-	-	3812155	Sacramento West	Mapped	Animals - Mammals - Vespertilionidae - Lasiurus cinereus
Animals - Mammals	Myotis ciliolabrum	western small-footed myotis	AMACC01140	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis ciliolabrum
Animals - Mammals	Myotis lucifugus	little brown bat	AMACC01010	None	None	-	-	3812135	Courtland	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis lucifugus
Animals - Mammals	Myotis lucifugus	little brown bat	AMACC01010	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis lucifugus
Animals - Mammals	Myotis lucifugus	little brown bat	AMACC01010	None	None	-	-	3812144	Florin	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis lucifugus
Animals - Mammals	Myotis lucifugus	little brown bat	AMACC01010	None	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis lucifugus
Animals - Mammals	Myotis yumanensis	Yuma myotis	AMACC01020	None	None	-	-	3812145	Clarksburg	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis yumanensis
Animals - Mammals	Myotis yumanensis	Yuma myotis	AMACC01020	None	None	-	-	3812144	Florin	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis yumanensis
Animals - Mammals	Myotis yumanensis	Yuma myotis	AMACC01020	None	None	-	-	3812134	Bruceville	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis yumanensis
Animals - Mammals	Myotis yumanensis	Yuma myotis	AMACC01020	None	None	-	-	3812135	Courtland	Unprocessed	Animals - Mammals - Vespertilionidae - Myotis yumanensis
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812135	Courtland	Mapped	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812143	Elk Grove	Mapped	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812134	Bruceville	Mapped	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812133	Galt	Mapped	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812144	Florin	Mapped	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812145	Clarksburg	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata

Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812154	Sacramento East	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812153	Carmichael	Mapped	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812155	Sacramento West	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Thamnophis gigas	giant garter snake	ARADB36150	Threatened	Threatened	-	-	3812155	Sacramento West	Mapped and Unprocessed	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant garter snake	ARADB36150	Threatened	Threatened	-	-	3812145	Clarksburg	Unprocessed	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant garter snake	ARADB36150	Threatened	Threatened	-	-	3812144	Florin	Mapped	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant garter snake	ARADB36150	Threatened	Threatened	-	-	3812133	Galt	Mapped and Unprocessed	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant garter snake	ARADB36150	Threatened	Threatened	-	-	3812134	Bruceville	Mapped	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant garter snake	ARADB36150	Threatened	Threatened	-	-	3812143	Elk Grove	Mapped	Animals - Reptiles - Natricidae - Thamnophis gigas
Animals - Reptiles	Thamnophis gigas	giant garter snake	ARADB36150	Threatened	Threatened	-	-	3812135	Courtland	Mapped	Animals - Reptiles - Natricidae - Thamnophis gigas
Community - Terrestrial	Coastal and Valley Freshwater Marsh	Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	-	-	3812135	Courtland	Mapped	Community - Terrestrial - Coastal and Valley Freshwater Marsh
Community - Terrestrial	Coastal and Valley Freshwater Marsh	Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	-	-	3812134	Bruceville	Mapped	Community - Terrestrial - Coastal and Valley Freshwater Marsh
Community - Terrestrial	Elderberry Savanna	Elderberry Savanna	CTT63440CA	None	None	-	-	3812154	Sacramento East	Mapped	Community - Terrestrial - Elderberry Savanna
Community - Terrestrial	Elderberry Savanna	Elderberry Savanna	CTT63440CA	None	None	-	-	3812155	Sacramento West	Mapped	Community - Terrestrial - Elderberry Savanna
Community - Terrestrial	Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	-	-	3812155	Sacramento West	Mapped	Community - Terrestrial - Great Valley Cottonwood Riparian Forest
Community - Terrestrial	Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	CTT61420CA	None	None	-	-	3812134	Bruceville	Mapped	Community - Terrestrial - Great Valley Mixed Riparian Forest
Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3812134	Bruceville	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest
Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3812133	Galt	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest
Community - Terrestrial	Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	-	-	3812143	Elk Grove	Mapped	Community - Terrestrial - Great Valley Valley Oak Riparian Forest
Community - Terrestrial	Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	CTT44110CA	None	None	-	-	3812143	Elk Grove	Mapped	Community - Terrestrial - Northern Hardpan Vernal Pool
Community - Terrestrial	Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	CTT44110CA	None	None	-	-	3812133	Galt	Mapped	Community - Terrestrial - Northern Hardpan Vernal Pool

Community - Terrestrial	Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	CTT44110CA	None	None	-	-	3812134	Bruceville	Mapped	Community - Terrestrial - Northern Hardpan Vernal Pool
Community - Terrestrial	Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	CTT44110CA	None	None	-	-	3812153	Carmichael	Mapped	Community - Terrestrial - Northern Hardpan Vernal Pool
Community - Terrestrial	Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	CTT44110CA	None	None	-	-	3812144	Florin	Mapped	Community - Terrestrial - Northern Hardpan Vernal Pool
Community - Terrestrial	Valley Oak Woodland	Valley Oak Woodland	CTT71130CA	None	None	-	-	3812134	Bruceville	Mapped	Community - Terrestrial - Valley Oak Woodland
Community - Terrestrial	Valley Oak Woodland	Valley Oak Woodland	CTT71130CA	None	None	-	-	3812133	Galt	Mapped	Community - Terrestrial - Valley Oak Woodland
Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	None	None	-	1B.2	3812133	Galt	Mapped	Plants - Vascular - Alismataceae - Sagittaria sanfordii
Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	None	None	-	1B.2	3812135	Courtland	Mapped	Plants - Vascular - Alismataceae - Sagittaria sanfordii
Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	None	None	-	1B.2	3812143	Elk Grove	Mapped	Plants - Vascular - Alismataceae - Sagittaria sanfordii
Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	None	None	-	1B.2	3812134	Bruceville	Mapped	Plants - Vascular - Alismataceae - Sagittaria sanfordii
Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	None	None	-	1B.2	3812144	Florin	Mapped	Plants - Vascular - Alismataceae - Sagittaria sanfordii
Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	None	None	-	1B.2	3812153	Carmichael	Mapped	Plants - Vascular - Alismataceae - Sagittaria sanfordii
Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	None	None	-	1B.2	3812154	Sacramento East	Mapped	Plants - Vascular - Alismataceae - Sagittaria sanfordii
Plants - Vascular	Cicuta maculata var. bolanderi	Bolander's water-hemlock	PDAPI0M051	None	None	-	2B.1	3812135	Courtland	Mapped	Plants - Vascular - Apiaceae - Cicuta maculata var. bolanderi
Plants - Vascular	Cicuta maculata var. bolanderi	Bolander's water-hemlock	PDAPI0M051	None	None	-	2B.1	3812134	Bruceville	Mapped	Plants - Vascular - Apiaceae - Cicuta maculata var. bolanderi
Plants - Vascular	Lilaeopsis masonii	Mason's lilaeopsis	PDAPI19030	None	Rare	-	1B.1	3812134	Bruceville	Mapped	Plants - Vascular - Apiaceae - Lilaeopsis masonii
Plants - Vascular	Lilaeopsis masonii	Mason's lilaeopsis	PDAPI19030	None	Rare	-	1B.1	3812145	Clarksburg	Mapped	Plants - Vascular - Apiaceae - Lilaeopsis masonii
Plants - Vascular	Centromadia parryi ssp. rudis	Parry's rough tarplant	PDAST4R0P3	None	None	-	4.2	3812145	Clarksburg	Unprocessed	Plants - Vascular - Asteraceae - Centromadia parryi ssp. rudis
Plants - Vascular	Centromadia parryi ssp. rudis	Parry's rough tarplant	PDAST4R0P3	None	None	-	4.2	3812144	Florin	Unprocessed	Plants - Vascular - Asteraceae - Centromadia parryi ssp. rudis
Plants - Vascular	Centromadia parryi ssp. rudis	Parry's rough tarplant	PDAST4R0P3	None	None	-	4.2	3812134	Bruceville	Unprocessed	Plants - Vascular - Asteraceae - Centromadia parryi ssp. rudis
Plants - Vascular	Centromadia parryi ssp. rudis	Parry's rough tarplant	PDAST4R0P3	None	None	-	4.2	3812135	Courtland	Unprocessed	Plants - Vascular - Asteraceae - Centromadia parryi ssp. rudis
Plants - Vascular	Centromadia parryi ssp. rudis	Parry's rough tarplant	PDAST4R0P3	None	None	-	4.2	3812155	Sacramento West	Unprocessed	Plants - Vascular - Asteraceae - Centromadia parryi ssp. rudis

Plants - Vascular	Hesperevax caulescens	hogwallow starfish	PDASTE5020	None	None	-	4.2	3812144	Florin	Unprocessed	Plants - Vascular - Asteraceae - Hesperevax caulescens
Plants - Vascular	Lasthenia ferrisiae	Ferris' goldfields	PDAST5L070	None	None	-	4.2	3812134	Bruceville	Unprocessed	Plants - Vascular - Asteraceae - Lasthenia ferrisiae
Plants - Vascular	Symphyotrichum lentum	Suisun Marsh aster	PDASTE8470	None	None	-	1B.2	3812155	Sacramento West	Mapped	Plants - Vascular - Asteraceae - Symphyotrichum lentum
Plants - Vascular	Lepidium latipes var. heckardii	Heckard's pepper-grass	PDBRA1M0K1	None	None	-	1B.2	3812144	Florin	Mapped	Plants - Vascular - Brassicaceae - Lepidium latipes var. heckardii
Plants - Vascular	Lepidium latipes var. heckardii	Heckard's pepper-grass	PDBRA1M0K1	None	None	-	1B.2	3812145	Clarksburg	Mapped	Plants - Vascular - Brassicaceae - Lepidium latipes var. heckardii
Plants - Vascular	Brasenia schreberi	watershield	PDCAB01010	None	None	-	2B.3	3812134	Bruceville	Mapped	Plants - Vascular - Cabombaceae - Brasenia schreberi
Plants - Vascular	Brasenia schreberi	watershield	PDCAB01010	None	None	-	2B.3	3812135	Courtland	Mapped	Plants - Vascular - Cabombaceae - Brasenia schreberi
Plants - Vascular	Downingia pusilla	dwarf downingia	PDCAM060C0	None	None	-	2B.2	3812143	Elk Grove	Mapped	Plants - Vascular - Campanulaceae - Downingia pusilla
Plants - Vascular	Downingia pusilla	dwarf downingia	PDCAM060C0	None	None	-	2B.2	3812133	Galt	Mapped	Plants - Vascular - Campanulaceae - Downingia pusilla
Plants - Vascular	Downingia pusilla	dwarf downingia	PDCAM060C0	None	None	-	2B.2	3812144	Florin	Mapped	Plants - Vascular - Campanulaceae - Downingia pusilla
Plants - Vascular	Legenere limosa	legenere	PDCAM0C010	None	None	-	1B.1	3812144	Florin	Mapped	Plants - Vascular - Campanulaceae - Legenere limosa
Plants - Vascular	Legenere limosa	legenere	PDCAM0C010	None	None	-	1B.1	3812153	Carmichael	Mapped	Plants - Vascular - Campanulaceae - Legenere limosa
Plants - Vascular	Legenere limosa	legenere	PDCAM0C010	None	None	-	1B.1	3812133	Galt	Mapped	Plants - Vascular - Campanulaceae - Legenere limosa
Plants - Vascular	Legenere limosa	legenere	PDCAM0C010	None	None	-	1B.1	3812134	Bruceville	Mapped	Plants - Vascular - Campanulaceae - Legenere limosa
Plants - Vascular	Legenere limosa	legenere	PDCAM0C010	None	None	-	1B.1	3812143	Elk Grove	Mapped	Plants - Vascular - Campanulaceae - Legenere limosa
Plants - Vascular	Cuscuta obtusiflora var. glandulosa	Peruvian dodder	PDCUS01111	None	None	-	2B.2	3812144	Florin	Mapped	Plants - Vascular - Cuscutaceae - Cuscuta obtusiflora var. glandulosa
Plants - Vascular	Carex comosa	bristly sedge	PMCYP032Y0	None	None	-	2B.1	3812145	Clarksburg	Mapped	Plants - Vascular - Cyperaceae - Carex comosa
Plants - Vascular	Carex comosa	bristly sedge	PMCYP032Y0	None	None	-	2B.1	3812135	Courtland	Mapped	Plants - Vascular - Cyperaceae - Carex comosa
Plants - Vascular	Carex comosa	bristly sedge	PMCYP032Y0	None	None	-	2B.1	3812134	Bruceville	Mapped	Plants - Vascular - Cyperaceae - Carex comosa
Plants - Vascular	Astragalus tener var. ferrisiae	Ferris' milk-vetch	PDFAB0F8R3	None	None	-	1B.1	3812155	Sacramento West	Mapped	Plants - Vascular - Fabaceae - Astragalus tener var. ferrisiae
Plants - Vascular	Lathyrus jepsonii var. jepsonii	Delta tule pea	PDFAB250D2	None	None	-	1B.2	3812135	Courtland	Mapped	Plants - Vascular - Fabaceae - Lathyrus jepsonii var. jepsonii

Plants - Vascular	Lathyrus jepsonii var. jepsonii	Delta tule pea	PDFAB250D2	None	None	-	1B,2	3812134	Bruceville	Mapped	Plants - Vascular - Fabaceae - Lathyrus jepsonii var. jepsonii
Plants - Vascular	Trifolium hydrophilum	saline clover	PDFAB400R5	None	None	-	1B,2	3812134	Bruceville	Mapped	Plants - Vascular - Fabaceae - Trifolium hydrophilum
Plants - Vascular	Trifolium hydrophilum	saline clover	PDFAB400R5	None	None	-	1B,2	3812145	Clarksburg	Mapped	Plants - Vascular - Fabaceae - Trifolium hydrophilum
Plants - Vascular	Trifolium hydrophilum	saline clover	PDFAB400R5	None	None	-	1B,2	3812144	Florin	Mapped	Plants - Vascular - Fabaceae - Trifolium hydrophilum
Plants - Vascular	Juglans hindsii	Northern California black walnut	PDJUG02040	None	None	-	1B,1	3812144	Florin	Mapped	Plants - Vascular - Juglandaceae - Juglans hindsii
Plants - Vascular	Juglans hindsii	Northern California black walnut	PDJUG02040	None	None	-	1B,1	3812145	Clarksburg	Mapped	Plants - Vascular - Juglandaceae - Juglans hindsii
Plants - Vascular	Juglans hindsii	Northern California black walnut	PDJUG02040	None	None	-	1B,1	3812135	Courtland	Mapped	Plants - Vascular - Juglandaceae - Juglans hindsii
Plants - Vascular	Juncus leiospermus var. ahartii	Ahart's dwarf rush	PMJUN011L1	None	None	-	1B,2	3812153	Carmichael	Mapped	Plants - Vascular - Juncaceae - Juncus leiospermus var. ahartii
Plants - Vascular	Scutellaria galericulata	marsh skullcap	PDLAM1U0J0	None	None	-	2B,2	3812134	Bruceville	Mapped	Plants - Vascular - Lamiaceae - Scutellaria galericulata
Plants - Vascular	Scutellaria lateriflora	side-flowering skullcap	PDLAM1U0Q0	None	None	-	2B,2	3812134	Bruceville	Mapped	Plants - Vascular - Lamiaceae - Scutellaria lateriflora
Plants - Vascular	Scutellaria lateriflora	side-flowering skullcap	PDLAM1U0Q0	None	None	-	2B,2	3812135	Courtland	Mapped	Plants - Vascular - Lamiaceae - Scutellaria lateriflora
Plants - Vascular	Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B,2	3812135	Courtland	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpus var. occidentalis
Plants - Vascular	Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B,2	3812134	Bruceville	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpus var. occidentalis
Plants - Vascular	Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B,2	3812145	Clarksburg	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpus var. occidentalis
Plants - Vascular	Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B,2	3812144	Florin	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpus var. occidentalis
Plants - Vascular	Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	PDMAL0H0R3	None	None	-	1B,2	3812155	Sacramento West	Mapped	Plants - Vascular - Malvaceae - Hibiscus lasiocarpus var. occidentalis
Plants - Vascular	Gratiola heterosepala	Boggs Lake hedge-hyssop	PDSCR0R060	None	Endangered	-	1B,2	3812153	Carmichael	Mapped	Plants - Vascular - Plantaginaceae - Gratiola heterosepala
Plants - Vascular	Gratiola heterosepala	Boggs Lake hedge-hyssop	PDSCR0R060	None	Endangered	-	1B,2	3812143	Elk Grove	Mapped	Plants - Vascular - Plantaginaceae - Gratiola heterosepala

Plants - Vascular	Orcuttia tenuis	slender Orcutt grass	PMPOA4G050	Threatened	Endangered	-	1B.1	3812143	Elk Grove	Mapped	Plants - Vascular - Poaceae - Orcuttia tenuis
Plants - Vascular	Orcuttia viscida	Sacramento Orcutt grass	PMPOA4G070	Endangered	Endangered	-	1B.1	3812143	Elk Grove	Mapped	Plants - Vascular - Poaceae - Orcuttia viscida
Plants - Vascular	Orcuttia viscida	Sacramento Orcutt grass	PMPOA4G070	Endangered	Endangered	-	1B.1	3812153	Carmichael	Mapped	Plants - Vascular - Poaceae - Orcuttia viscida
Plants - Vascular	Navarretia eriocephala	hoary navarretia	PDPLM0C060	None	None	-	4.3	3812143	Elk Grove	Unprocessed	Plants - Vascular - Polemoniaceae - Navarretia eriocephala
Plants - Vascular	Limosella australis	Delta mudwort	PDSCR10050	None	None	-	2B.1	3812135	Courtland	Mapped	Plants - Vascular - Scrophulariaceae - Limosella australis
Plants - Vascular	Limosella australis	Delta mudwort	PDSCR10050	None	None	-	2B.1	3812134	Bruceville	Mapped	Plants - Vascular - Scrophulariaceae - Limosella australis

Plant List

26 matches found. *Click on scientific name for details*

Search Criteria

Found in 9 Quads around 38121D4

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
<u><i>Astragalus tener</i> var. <i>ferrisiae</i></u>	Ferris' milk-vetch	Fabaceae	annual herb	1B.1	S1	G2T1
<u><i>Brasenia schreberi</i></u>	watershield	Cabombaceae	perennial rhizomatous herb	2B.3	S2	G5
<u><i>Carex comosa</i></u>	bristly sedge	Cyperaceae	perennial rhizomatous herb	2B.1	S2	G5
<u><i>Centromadia parryi</i> ssp. <i>rudis</i></u>	Parry's rough tarplant	Asteraceae	annual herb	4.2	S3.2	G3T3
<u><i>Cicuta maculata</i> var. <i>bolanderi</i></u>	Bolander's water-hemlock	Apiaceae	perennial herb	2B.1	S2	G5T3T4
<u><i>Cuscuta obtusiflora</i> var. <i>glandulosa</i></u>	Peruvian dodder	Convolvulaceae	annual vine (parasitic)	2B.2	SH	G5T4T5
<u><i>Downingia pusilla</i></u>	dwarf downingia	Campanulaceae	annual herb	2B.2	S2	GU
<u><i>Gratiola heterosepala</i></u>	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	1B.2	S2	G2
<u><i>Hesperervax caulescens</i></u>	hogwallow starfish	Asteraceae	annual herb	4.2	S3.2	G3
<u><i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i></u>	woolly rose-mallow	Malvaceae	perennial rhizomatous herb	1B.2	S2	G5T2
<u><i>Juglans hindsii</i></u>	Northern California black walnut	Juglandaceae	perennial deciduous tree	1B.1	S1	G1
<u><i>Juncus leiospermus</i> var. <i>ahartii</i></u>	Ahart's dwarf rush	Juncaceae	annual herb	1B.2	S1	G2T1
<u><i>Lasthenia ferrisiae</i></u>	Ferris' goldfields	Asteraceae	annual herb	4.2	S3.2	G3
<u><i>Lathyrus jepsonii</i> var. <i>jepsonii</i></u>	Delta tule pea	Fabaceae	perennial herb	1B.2	S2.2	G5T2
<u><i>Legenere limosa</i></u>	legenere	Campanulaceae	annual herb	1B.1	S2	G2
<u><i>Lepidium latipes</i> var. <i>heckardii</i></u>	Heckard's pepper-grass	Brassicaceae	annual herb	1B.2	S2	G4T2
<u><i>Lilaeopsis masonii</i></u>	Mason's lilaeopsis	Apiaceae	perennial rhizomatous herb	1B.1	S2	G2
<u><i>Limosella australis</i></u>	Delta mudwort	Scrophulariaceae	perennial stoloniferous herb	2B.1	S2	G4G5
<u><i>Navarretia eriocephala</i></u>	hoary navarretia	Polemoniaceae	annual herb	4.3	S3.3	G3
<u><i>Orcuttia tenuis</i></u>	slender Orcutt grass	Poaceae	annual herb	1B.1	S2	G2
<u><i>Orcuttia viscida</i></u>		Poaceae	annual herb	1B.1	S1	G1

	Sacramento Orcutt grass					
<u>Sagittaria sanfordii</u>	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb	1B.2	S3	G3
<u>Scutellaria galericulata</u>	marsh skullcap	Lamiaceae	perennial rhizomatous herb	2B.2	S2	G5
<u>Scutellaria lateriflora</u>	side-flowering skullcap	Lamiaceae	perennial rhizomatous herb	2B.2	S1	G5
<u>Symphotrichum lentum</u>	Suisun Marsh aster	Asteraceae	perennial rhizomatous herb	1B.2	S2	G2
<u>Trifolium hydrophilum</u>	saline clover	Fabaceae	annual herb	1B.2	S2	G2

Suggested Citation

CNPS, Rare Plant Program. 2014. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> [accessed 25 June 2014].

Search the Inventory

[Simple Search](#)

[Advanced Search](#)

[Glossary](#)

Information

[About the Inventory](#)

[About the Rare Plant Program](#)

[CNPS Home Page](#)

[About CNPS](#)

[Join CNPS](#)

Contributors

[The Calflora Database](#)

[The California Lichen Society](#)

EXHIBIT A-E



United States Department of the Interior



In Reply Refer to:
08ESMF00-
2015-F-0302-1

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Suite W-2605
Sacramento, California 95825-1846

MAY 8 2015

Ms. Susan D. Bauer
Chief, Environmental Management, M-1 Branch
California Department of Transportation, District 3
703 B Street
Marysville, California 95901-0911

Subject: Formal Consultation on the Laguna Creek Trail – Camden Spur (North and South) Project, Sacramento County, California (Caltrans Fed. ID#s CML-5479 [040] and SR2SL-5479 [036])

Dear Ms. Bauer:

This letter is in response to the two separate California Department of Transportation's (Caltrans), April 6, 2015, requests for initiation of consultation with the U.S. Fish and Wildlife Service (Service) on the Laguna Creek Trail – Camden Spur (North and South) Project (proposed project), in Sacramento County, California. Your request letters were received by the Service on April 10, 2015 and April 13, 2015. Although your request was submitted in two parts, the Service considers the actions to be a single proposed project, and we are therefore issuing one biological opinion. The Service previously issued a biological opinion to the U.S. Army Corps of Engineers (Corps) for effects to federally-listed species for the "Laguna Creek Trail Camden Spur Project" (Service File Number 08ESMF00-2011-F-0881-1) (previous project); however, the previous project was never completed and the 404 permit issued by the Corps has expired. Due to changes in funding, Caltrans is now taking the lead for consultation on the proposed project. At issue are the proposed project's effects on the federally-listed as endangered vernal pool tadpole shrimp (*Lepidurus packardii*) (tadpole shrimp) and the federally-listed as threatened vernal pool fairy shrimp (*Branchinecta lynchi*) (fairy shrimp), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (beetle), and giant garter snake (*Thamnophis gigas*) (snake). This response is provided under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act) and in accordance with the implementing regulations pertaining to interagency cooperation (50 CFR 402).

The federal action we are consulting on is the extension of the existing Laguna Creek Trail by the city of Elk Grove (applicant) in coordination with Caltrans and the Federal Highway Administration (FHWA). The proposed project is receiving federal funding through FHWA and Caltrans has assumed FHWA's responsibilities under the Act for this consultation in accordance with Section 1313, Surface Transportation Project Delivery Program, of the Moving Ahead for Progress in the 21st Century Act (MAP-21) of 2012. The MAP-21 is described in the National Environmental Policy Act assignment Memorandum of Understanding between FHWA and Caltrans (effective October 1, 2012) and codified in 23 U.S.C. 327.

Pursuant to 50 CFR §402.12(j), you submitted two biological assessments for our review and requested concurrence with the findings presented therein. These findings conclude that the proposed project may affect, and is likely to adversely affect the beetle. The findings also conclude that the proposed project may affect, but is not likely to adversely affect the tadpole shrimp, the fairy shrimp, or the snake. The proposed project is not within designated or proposed critical habitat for any federally-listed species.

In considering your request, we based our evaluation on the following: (1) your two January 26, 2015, letters requesting initiation of consultation and the enclosed January 2015 *Laguna Creek Trail – North Camden Spur Biological Assessment* and January 2015 *Laguna Creek Trail – South Camden Spur Biological Assessment* (collectively, the original biological assessments), prepared by PMC (consultant); (2) your two April 6, 2015, revised letters, received on April 10, 2015, and April 13, 2015, requesting initiation of consultation and the enclosed revised January 2015 *Laguna Creek Trail – North Camden Spur Biological Assessment* and revised January 2015 *Laguna Creek Trail – South Camden Spur Biological Assessment* (collectively, the revised biological assessments), prepared by the consultant; (3) email and telephone correspondence between the Service, Caltrans, and the Corps; and (4) other information available to the Service.

Vernal Pool Tadpole Shrimp and Vernal Pool Fairy Shrimp

The Service concurs with your findings that the proposed project may affect, but is not likely to adversely affect the tadpole shrimp or the fairy shrimp. There are 18 known occurrences of the tadpole shrimp and 13 known occurrences of the fairy shrimp within 5 miles of the proposed project area that are characterized as presumed extant in the California Natural Diversity Database (CNDDDB 2015). The closest occurrence of the tadpole shrimp is approximately 2 miles northwest of the proposed project. The closest occurrence of the fairy shrimp is approximately 1 mile northeast of the proposed project, although much of this area has been developed due to an increase in growth within the city.

There is one vernal pool approximately 100 feet from the edge of the temporary construction zone for the proposed project that provides suitable habitat for the tadpole shrimp and the fairy shrimp. Formal surveys for the tadpole shrimp and the fairy shrimp were not conducted within the action area; however, given the number of occurrences surrounding the proposed project, it is likely that the vernal pool may be occupied by both the tadpole shrimp and/or the fairy shrimp. The trail will be constructed on the opposite side of an existing approximately 10-foot-wide man-made ditch from the vernal pool.

In addition to implementing Caltrans' standard Best Management Practices (BMPs; Caltrans 2003) throughout the proposed project area for the duration of construction, including erosion and sediment control, the applicant has proposed the following measures to Caltrans to avoid effects to the tadpole shrimp and the fairy shrimp.

- Protective silt fencing will be installed between the adjacent vernal pool habitat and the construction area limits to prevent accidental disturbance during construction and to protect water quality within the aquatic habitat during construction.
- A Worker Environmental Awareness Program (WEAP) shall be implemented to educate construction workers about the presence of sensitive habitats near the project area and to instruct them on proper avoidance measures.

- Standard staging area practices for sediment-tracking reduction shall be implemented where necessary and may include vehicle washing and street sweeping.
- All exposed/disturbed areas and access points left barren of vegetation as a result of construction activities shall be restored using locally native grass seeds, locally native grass plugs, and/or a mix of quick-growing sterile non-native grass with locally native grass seeds. Seeded areas shall be covered with broadcast straw and/or tightly woven erosion control matting (mesh size less than 0.25-inch).

After reviewing all the available information, we concur with your determination that the proposed project is not likely to adversely affect the tadpole shrimp or the fairy shrimp. The proposed project reached the 'may affect' level, and the subsequent requirement for a biological assessment, due to the fact that the proposed project occurs within the range of both species and potentially suitable habitat for the species is present in the action area. Due to the fact that the existing ditch will prevent changes in the hydrology of the vernal pool due to construction of the proposed project and the conservation measures proposed by the applicant to Caltrans, the Service believes that adverse effects to the tadpole shrimp and the fairy shrimp are extremely unlikely to occur, and are therefore discountable for the purposes of this consultation.

Giant Garter Snake

The Service also concurs with your findings that the proposed project may affect, but is not likely to adversely affect the snake. The proposed project area is located within the Delta Basin, identified as a "snake population unit" in the June 2012 snake 5-year review (Service 2012). The closest known occurrence of the snake in the CNDDDB is approximately 3.4 miles southeast of the action area, along Elk Grove Creek (CNDDDB 2015), and separated from the action area by substantial residential development. The closest known occurrence of the snake in the CNDDDB along Laguna Creek is approximately 1 river mile west of the action area, with another 1 mile beyond. These two occurrences are characterized as possibly extirpated in the CNDDDB due to the heavy residential development in the area. The closest known extant occurrence of the snake in the CNDDDB is 5.4 river miles from the action area, where a juvenile snake was observed basking on a small island in Laguna Creek in 2005.

In addition to implementing Caltrans' standard BMPs (Caltrans 2003) throughout the proposed project area for the duration of construction, including erosion and sediment control, the applicant has proposed the following measures to Caltrans to avoid effects to the snake.

- Work shall coincide with the driest time. If water is present at the time of construction, water shall be diverted around the work area and work shall resume after the site is dry. Work within the dewatered area shall be timed with awareness of precipitation forecasts and likely increases in water flows and flood stages. Construction activities within creeks shall cease prior to storm events until all reasonable erosion control measures have been implemented. Construction equipment and material shall be removed from the floodplain if inundation is likely. Revegetation, restoration, and erosion control work shall not be confined to this time period.

- A WEAP shall be implemented to educate construction workers about the potential presence of species near the project area and to instruct them on proper avoidance measures.
- If a snake is encountered within the project work area, construction will cease until the snake has been allowed to move away under its own volition.
- Tightly woven erosion control matting (mesh size less than 0.25-inch) or similar material shall be used for erosion control and other purposes at the project site to ensure that snakes are not trapped or become entangled by the erosion control material. The edge of the material shall be buried in the ground to prevent snakes from crawling underneath the material. The use of plastic, monofilament, jute, or similar erosion control netting with mesh sizes larger than 0.25-inch that could entangle snakes will be prohibited.
- A survey shall be conducted for the snake within the project work area 24 hours prior to the onset of construction and any time activities are halted for more than two weeks thereafter.

After reviewing all the available information, we concur with your determination that the proposed project is not likely to adversely affect the snake. The proposed project reached the ‘may affect’ level, and the subsequent requirement for a biological assessment, due to the fact that the proposed project occurs within a known population unit of the snake and potentially suitable habitat for the snake is present in the action area. Due to the distance from known extant occurrences and the additional conservation measures proposed by the applicant to Caltrans, the Service believes that any potential adverse effects to the snake from the proposed project are extremely unlikely to occur, and are therefore discountable for purposes of this consultation.

Consultation History

- April 11, 2012:* The Service issued a biological opinion to the Corps for effects to federally-listed species for the “Laguna Creek Trail Camden Spur Project” (Service File Number 08ESMF00-2011-F-0881-1) (previous project).
- January 26, 2015:* The Service received two January 26, 2015, letters from Caltrans requesting initiation of formal consultation with the original biological assessments enclosed.
- March 4, 2015:* Representatives of the Service, Caltrans, the Corps, and the consultant participated in a conference call to discuss the previous consultation and the proposed project’s potential effects to federally-listed species. Caltrans and the consultant agreed to revise the original biological assessments. The Corps communicated that their 404 permit previously granted had expired. The Service requested a letter stating that the permit had expired and that consultation on the previous project was no longer required.
- March 26, 2015:* The Service received an email from the Corps stating that because the permit for the previous project had expired, no work could be completed under the biological opinion for the previous project.

April 10 & 13, 2015: The Service received two separate April 6, 2015, letters from Caltrans requesting initiation of formal consultation with the revised biological assessments enclosed.

April 21 & 22, 2015: The Service and Caltrans corresponded by email to clarify the proposed conservation measures for the snake.

The remainder of this document provides our biological opinion on the effects of the proposed project on the beetle.

BIOLOGICAL OPINION

Description of the Action

The proposed project is located within the city of Elk Grove, between MacDonald Park and Bond Road. The existing Laguna Creek Trail, which currently ends at the north end of Camden Park, will be extended north to MacDonald Park via Beckington Drive and south to Bond Road. The new multi-use trail will be 14 feet wide, with 2-foot decomposed granite shoulders on either side of a 10-foot wide asphalt or concrete path. The proposed project also includes installation of a prefabricated steel bridge over Laguna Creek and a planting area east of the new trail and south of Camden Park. Relocation of a storm drain inlet, a storm manhole, and irrigation control valves will be required. Work will begin in the spring, upon conclusion of the rainy season, typically in May or June, and be completed by the end of October. Staging will occur on an existing parking lot behind a commercial building on Bond Road. Access will be from the existing concrete path in Camden Park and along an existing dirt path extending from the staging area.

One elderberry shrub with a single stem greater than or equal to 1 inch in diameter at ground level cannot be avoided and will be removed due to proposed project construction. The shrub is located along Whitehouse Creek, at the northern end of the proposed project footprint. A survey conducted in 2014 did not locate any exit holes on the elderberry shrub stem.

Conservation Measures

The applicant has proposed to purchase beetle conservation credits at a Service-approved conservation bank with a service area covering the proposed project. Conservation credits will be adequate to cover replacement of the removed elderberry shrub/stem at a ratio of 2:1 with associated native plantings at a ratio of 1:1. This conservation measure is considered part of the proposed action evaluated by the Service in this biological opinion.

Action Area

The action area is defined in 50 CFR §402.02 as, “all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action.” For the proposed project, the action area encompasses the construction footprint, as well as any areas used for access and staging. The action area also includes all areas up to 330 feet from the construction footprint in which noise from construction activities is expected to exceed ambient levels (derived from Service 2006).

Analytical Framework for the Jeopardy Determination

The following analysis relies on four components to support the jeopardy determination for the beetle: (1) the *Status of the Species*, which evaluates the species' range-wide condition, the factors responsible for that condition, and its survival and recovery needs; (2) the *Environmental Baseline*, which evaluates the condition of the beetle in the action area, the factors responsible for that condition, and the role of the action area in the species' survival and recovery; (3) the *Effects of the Action*, which determines the direct and indirect effects of the proposed federal action and the effects of any interrelated or interdependent activities on the beetle; and (4) the *Cumulative Effects*, which evaluates the effects of future, non-federal activities in the action area on the beetle.

In accordance with the implementing regulations for section 7 and Service policy, the jeopardy determination is made in the following manner: the effects of the proposed federal action are evaluated in the context of the aggregate effects of all factors that have contributed to the current status of the beetle. Additionally, for non-federal activities in the action area, we will evaluate those actions likely to affect the species in the future, to determine if implementation of the proposed action is likely to cause an appreciable reduction in the likelihood of both its survival and recovery in the wild.

The following analysis places an emphasis on using the range-wide survival and recovery needs of the beetle, and the role of the action area in providing for those needs as the context for evaluating the significance of the effects of the proposed federal action, taken together with cumulative effects, for purposes of making the jeopardy determination.

Status of the Species

For the most recent comprehensive assessment of the range-wide status of the beetle, please refer to the *Withdrawal of the Proposed Rule To Remove the Valley Elderberry Longhorn Beetle From the Federal List of Endangered and Threatened Wildlife* (Service 2014). Threats discussed in the withdrawal continue to act on the beetle, with loss of habitat being the most significant effect. While there have been continued losses of beetle habitat throughout its range, to date no project has proposed a level of effect for which the Service has issued a biological opinion of jeopardy for the beetle.

Environmental Baseline

The closest known occurrence of the beetle in the CNDDDB is over 5 miles east of the action area, along the Cosumnes River (CNDDDB 2015). Although no exit holes were located on the elderberry shrub within the action area, it is associated with riparian habitat, increasing the likelihood that beetle larvae could occupy the one stem greater than or equal to 1 inch in diameter at ground level. This stem represents an infinitesimally small proportion of habitat available throughout the full range of the beetle.

Effects of the Action

The construction of the proposed project will result in direct effects to one elderberry stem providing habitat for the beetle. Removal and destruction of the elderberry shrub will result in the death of an unknown number of individual beetle larvae inhabiting the stem.

As noted previously in the *Description of the Action* section, the applicant has also proposed a conservation measure to Caltrans of the commitment to provide compensatory habitat as a condition of the action. This compensatory habitat is intended to minimize the effect on the beetle of the project's anticipated incidental take, resulting from the permanent loss of habitat described above. The compensatory habitat proposed will be in the form of beetle conservation credits at a Service-approved conservation bank with a service area that covers the project area.

This component of the action will have the effect of protecting and managing lands for the species' conservation in perpetuity. The compensatory lands will provide suitable habitat for breeding, feeding, or sheltering commensurate with or better than habitat lost as a result of the project. Providing this compensatory habitat as part of a relatively large, contiguous block of conserved land may contribute to other recovery efforts for the beetle.

Cumulative Effects

Cumulative effects include the effects of future state, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. During this consultation, the Service did not identify any future non-federal actions that are reasonably certain to occur in the action area of the proposed project.

Conclusion

After reviewing the current status of the beetle, the environmental baseline for the action area, the effects of the proposed project, and the cumulative effects, it is the Service's biological opinion that the Laguna Creek Trail – Camden Spur (North and South) Project, as proposed, is not likely to jeopardize the continued existence of the beetle. The Service reached this conclusion because the project-related effects to the beetle, when added to the environmental baseline and analyzed in consideration of the lack of cumulative effects, will not rise to the level of precluding recovery or reducing the likelihood of survival of the species.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harass is defined by the Service regulations at 50 CFR §17.3 as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Harm is defined by the same regulations as an act which actually kills or injures wildlife. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by Caltrans so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, for the exemption in section 7(o)(2) to apply. Caltrans has a continuing duty to regulate the activity covered by this incidental take statement. If Caltrans (1) fails to assume and implement the terms and conditions or (2) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permits or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, Caltrans must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement. [50 CFR §402.14(i)(3)]

Amount or Extent of Take

The Service anticipates that incidental take of the beetle will be difficult to detect due to the fact that it is not possible to know how many larvae inhabit the one stem providing habitat for the beetle. Destruction of the elderberry shrub will result in the harm and mortality of all larvae inhabiting the stem. Therefore, the Service is authorizing incidental take to the proposed action as the harm of all larvae within the one elderberry stem greater than or equal to 1 inch in diameter at ground level.

Upon implementation of the following *Reasonable and Prudent Measures*, incidental take of the beetle associated with the Laguna Creek Trail – Camden Spur (North and South) Project will become exempt from the prohibitions described in section 9 of the Act. No other forms of take are exempted under this opinion.

Effect of the Take

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the beetle.

Reasonable and Prudent Measures

All necessary and appropriate measures to avoid or minimize effects on the beetle resulting from implementation of this project have been incorporated into the project's proposed conservation measures. Therefore, the Service believes the following Reasonable and Prudent Measure is necessary and appropriate to minimize incidental take of the beetle:

1. All conservation measures for the beetle, as described in the revised biological assessments and restated here in the *Description of the Action* section of this biological opinion, shall be fully implemented and adhered to. Further, this Reasonable and Prudent Measure shall be supplemented by the Terms and Conditions below.

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, Caltrans must ensure compliance with the following terms and conditions, which implement the Reasonable and Prudent Measure described above. These terms and conditions are nondiscretionary.

1. Caltrans shall include full implementation and adherence to the conservation measures as a condition of any permit or contract issued for the proposed project.

2. In order to monitor whether the amount or extent of incidental take anticipated from implementation of the proposed project is approached or exceeded, Caltrans shall adhere to the following reporting requirement. Should this anticipated amount or extent of incidental take be exceeded, Caltrans must immediately reinstate formal consultation, as per 50 CFR §402.16.
 - a. For those components of the action that will result in habitat degradation or modification whereby incidental take in the form of harm is anticipated, Caltrans will provide a precise accounting of the total elderberry stems greater than or equal to 1 inch in diameter at ground level impacted after the completion of construction. This report shall also include any information about changes in project implementation that result in habitat disturbance not described in the *Description of the Action* and not analyzed in this biological opinion.

REINITIATION - CLOSING STATEMENT

This concludes formal consultation on the Laguna Creek Trail – Camden Spur (North and South) Project in Sacramento County, California. As provided in 50 CFR §402.16, reinitiation of formal consultation is required and shall be requested by the federal agency or by the Service where discretionary federal agency involvement or control over the action has been retained or is authorized by law and: (a) if the amount or extent of taking specified in the incidental take statement is exceeded; (b) if new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (c) if the identified action is subsequently modified in a manner that causes an effect to listed species or critical habitat that was not considered in the biological opinion; or (d) if a new species is listed or critical habitat designated that may be affected by the identified action.

If you have questions regarding this biological opinion, please contact Lily Douglas, Fish and Wildlife Biologist (lily_douglas@fws.gov), or Kellie Berry, Chief, Sacramento Valley Division (kellie_berry@fws.gov) at the letterhead address, (916-414-6600), or by e-mail.

Sincerely,



Jennifer M. Norris
Field Supervisor

cc:

Dr. Kathleen A. Dadey, U.S. Army Corps of Engineers, Sacramento, CA
Mr. Juan Lopez Torres, California Department of Fish and Wildlife, Rancho Cordova, CA

LITERATURE CITED

- California Natural Diversity Database (CNDDDB). 2015. Biogeographic Data Branch, Department of Fish and Wildlife. Sacramento, California. Accessed 20 April 2015.
- California Department of Transportation (Caltrans). 2003. Caltrans Storm Water Quality Handbooks: Construction Site Best Management Practices (BMPs) Manual. Caltrans Publication Distribution Unit, Sacramento, California. March 2003.
- U.S. Fish and Wildlife Service (Service). 2006. Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California. Arcata Fish and Wildlife Office, Arcata, California. July 26, 2006. 61 pp.
- _____. 2012. Giant Garter Snake (*Thamnophis gigas*) 5-Year Review: Summary and Evaluation. Sacramento Fish and Wildlife Office. Sacramento, California. June 2012. 62 pp.
- _____. 2014. Withdrawal of the Proposed Rule To Remove the Valley Elderberry Longhorn Beetle From the Federal List of Endangered and Threatened Wildlife. Federal Register 79:55874-55917. September 17, 2014.

EXHIBIT A-F

State of California Transportation Agency	Department of Transportation
HISTORIC PROPERTY SURVEY REPORT	

1. UNDERTAKING DESCRIPTION AND LOCATION						
District	County	Route	Post Miles	Unit	E-FIS Project Number	Phase
District	County	<i>Federal Project Number. (Prefix, Agency Code, Project No.)</i>		<i>Location</i>		
3	SAC	CML 5479(040)		City of Elk Grove, MacDonald Park to Beckington Dr. to Laguna Creek at Camden Park		

For Local Assistance projects off the highway system, use headers in italics

Project Description:

The City of Elk Grove, in cooperation with the California Department of Transportation (Caltrans), proposes to construct the Laguna Creek Trail–North Camden Spur. The proposed project is located in the City of Elk Grove (City), Sacramento County, California. Maps of the Project Vicinity, Project Location are located in Attachment A of this Historic Property Survey Report. The City of Elk Grove proposes to extend a 0.36 mile long multi-use trail from the west end of the existing Laguna Creek Trail at the northern tip of Camden Park to MacDonald Park via Beckington Drive. Laguna Creek Trail offers access to Old Town Elk Grove, Camden Lake, residential neighborhoods, and many retail centers and restaurants. Camden Park’s main feature is Laguna Creek Trail, which is used as a scenic horse and jogging trail. MacDonald Park features a soccer field, open play area, and playground equipment. A trail along Whitehouse Creek is found just north of MacDonald Park. Currently, Laguna Creek Trail is split into three stretches – the longest extending for 2.25 miles from south of the Bond Road/Waterman Road intersection along Laguna Creek to the northern tip of Camden Park, the next longest extending for approximately 1 mile from east of Mix Park along Whitehouse Creek to just north of MacDonald Park, and the shortest extending for approximately one-third of a mile from Camden Lake to Whitehouse Creek.

The proposed project would connect the two longest segments of Laguna Creek Trail from the existing path at the northern tip of Camden Park for approximately 700 feet (ft.) of Class 1 facility to south of White Peacock Court/Beckington Drive, then along an approximately 1,050 ft. long Class 2 facility on Beckington Drive, and from White Peacock Court/Beckington Drive for approximately 200 ft. of Class 1 facility to the existing path at MacDonald Park. Approximately 115 ft. of existing Class 1 facility between homes facing White Peacock Court will require minor improvements and striping and the approximately 1,050 ft. long Class 2 facility on Beckington Drive will require only striping. The proposed project will be constructed generally within existing public right of ways and streets; however, minor acquisition and construction easements will be required. The project is consistent with the Elk Grove General Plan and the Elk Grove Bicycle, Pedestrian and Trails Master Plan. Each plan identifies the need for an off-street multi-use trail system providing connections throughout the city and the Sacramento region.

This document was prepared to comply with historic preservation regulations, policies, and statutes, primarily Section 106 of the National Historic Preservation Act, due to federal and state funding. Caltrans, acting as the lead agency under the delegated authority of the Federal Highway Administration (FHWA), is providing the Project oversight as federal funds are involved. The studies conducted for this Project are consistent with Caltrans responsibilities under the January 2014 *First Amended Programmatic Agreement Among Federal Highway*

HISTORIC PROPERTY SURVEY REPORT

Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of Federal-Aid Highway Program in California (PA) for compliance with Section 106 of the National Historic Preservation Act (NHPA).

The City of Elk Grove is responsible for compliance with the California Environmental Quality Act (CEQA), which requires that California public agencies consider the consequences of their actions on the environment, including cultural resources. Public Resources Codes provide specific guidance that supports CEQA compliance. Such guidance includes the evaluation of resources in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using criteria outlined in Section 5024.1 of the California Public Resources Code to determine whether any cultural resources potentially affected by the project are historical resources for the purposes of CEQA.

2. AREA OF POTENTIAL EFFECTS

The Area of Potential Effects (APE) for the Project was established in consultation with Erin Dwyer, Associate Environmental Planner (Archaeology) (PQS), and Cindy Root, District Local Assistance Engineer, on October 7, 2014. An APE map is located in Attachment A of this Historic Property Survey Report.

The APE was established as approximately 3 acres within Section 25 of Township 7 North, Range 5 East as depicted on the Florin (1980) 7.5" USGS Quadrangle. Boundaries were set by Caltrans District 3 and the City of Elk Grove. The APE includes portions of the existing public right of ways and streets, as well as proposed minor acquisition and construction easements.

The Project's horizontal APE consists of a linear, irregularly shaped corridor that extends from the point south of Whitehouse Creek and east of the northern corner of Beckington Drive, along Beckington Drive, south of White Peacock Court for approximately 700 ft. to the east and south through the open space behind the housing development to a point just north of Laguna Creek.

Subsurface impacts will take place on the southern and northern ends of the proposed trail segment. In these locations the vertical APE extends a maximum depth of 2 ft. The portion of the proposed trail that follows existing roads will not have subsurface disturbance and so has a vertical APE of 0 ft.

3. CONSULTING PARTIES / PUBLIC PARTICIPATION

- Native American Tribes, Groups and Individuals
 - On November 18, 2014, letters requesting information about sites, traditional cultural properties, values, or other cultural considerations within the project area were sent to 16 groups and individuals identified by the NAHC. Follow-up phone calls were made on December 1 and 2, 2014. When the individual could not be reached by phone, messages were left either on voicemail or with a receptionist. To date, three responses have been received. All consultation correspondence and consultation log are provided in Attachment B of this Historic Property Survey Report.
 - Randy Yonemura - No response.

HISTORIC PROPERTY SURVEY REPORT

- Rhonda Morningstar Pope, Chairperson, Buena Vista Rancheria - No response.
 - Roselyn Lewenya, Environmental Director, Buena Vista Rancheria - No response.
 - Judith Marks, Colfax-Todds Valley Consolidated Tribe - No response.
 - Pamela Cubbler, Colfax-Todds Valley Consolidated Tribe- No response.
 - Yvonne Miller, Chairperson, Ione Band of Miwok Indians - No response.
 - Anthony Burris, Chairperson, Ione Band of Miwok Indians Cultural Committee- No response.
 - Cosme Valdez, Interim Chief Executive, Nashville-El Dorado Miwok- No response.
 - Hermo Olanio, Vice Chairperson, Shingle Springs Band of Miwok Indians- No response.
 - Nicholas Fonseca, Chairperson, Shingle Springs Band of Miwok Indians- No response.
 - Daniel Fonseca, Cultural Resource Director, Shingle Springs Band of Miwok Indians – responded via letter sent to Caltrans dated December 1, 2014. The response letter states that Shingle Springs is not aware of any known cultural resources within the project. Shingle Springs requests continued consultation through project updates from Caltrans. Shingle Springs also requests copies of all completed record searches and surveys completed in and around the APE as well as any archaeological, cultural or environmental reports completed as part of the project.
 - Gene Whitehouse, Chairperson, United Auburn Indian Community of Auburn Rancheria - No response.
 - Marcos Guerrero, Tribal Preservation Committee, United Auburn Indian Community of Auburn Rancheria – on December 2, 2014 Mr. Guerrero stated that his staff was doing a search for ethnographic sites in the area. He asked for the record search results and was informed that no previously recorded cultural resources were within the APE. He stated that his staff would likely send out a letter requesting a copy of the cultural resources report for the project. To date, no additional response has been received.
 - Jason Camp, THPO, United Auburn Indian Community of Auburn Rancheria – on December 3, 2014 Mr. Camp left a phone message requesting that the consultation letters be resent via email. Letters were sent via email on December 3, 2014. No further response was received.
 - Raymond Hitchcock, Chairperson, Wilton Rancheria - No response.
 - Steven Hutchason, Executive Director Environmental Resources, Wilton Rancheria- No response.
- x** Native American Heritage Commission
- Letter sent on October 21, 2014 requested Sacred Lands File search and current list of Native American Contacts.
 - Response received on November 24, 2014 stating that no known sacred lands were in the immediate project area. All consultation correspondence and consultation log are provided in Attachment B.

4. SUMMARY OF IDENTIFICATION EFFORTS

- | | |
|--|---|
| <ul style="list-style-type: none"> x National Register of Historic Places x California Register of Historical Resources x California Inventory of Historic Resources | <ul style="list-style-type: none"> x California Points of Historical Interest x California Historical Resources Information System (CHRIS) x Caltrans Historic Highway Bridge Inventory |
|--|---|

HISTORIC PROPERTY SURVEY REPORT

- California Historical Landmarks
- Other Sources consulted [e.g., historical societies, city archives, etc. List names and dates below]
 - Record and Information search at the North Central Information Center completed December 8, 2010 for previous project alignment. Record search results included as Attachment C.
 - NCIC Resources within 0.25 miles of the current APE, on file at the North Central Information Center, File No. SAC-10-154, December 8, 2010.
 - NCIC Reports within 0.25 miles of the current APE, on file North Central Information Center, File No. SAC-10-15.
 - Historic Maps: 1855 GLO Plat; 1909 USGS Florin Quadrangle; and 1953 SU Army Corps of Engineers Florin Sheet.
 - Geologic and Soils Maps (Helley and Harwood 1985; NRCS 2012). See Archaeological Survey Report included as Attachment D.
- Results:** (Provide a brief summary and research results, as well as inventory findings.)
 - No known cultural resources were previously recorded within the APE or within 0.25 mile radius of the APE.
 - No cultural resources were observed within the APE during intensive pedestrian survey on November 17, 2014. Surface visibility was poor, however, there was evidence of extensive disturbance by modern development within and adjacent to the APE.
 - APE is located on a dissected alluvial fan belonging to the lower member of the Riverbank Formation. This formation dates to the middle Pleistocene (~450,000-130,000 years before present), which predates human occupation of the area indicating a low potential for buried archaeological deposits. The high degree of modern disturbance and the age of the soil formation in the APE indicate a low potential for buried archaeological deposits.

5. PROPERTIES IDENTIFIED

- No cultural resources** are present within the APE. See Archaeological Survey Report included as Attachment D.

6. HPSR to District File

- Caltrans, in accordance with Section 106 Programmatic Agreement Stipulation VIII, has determined that there are no cultural resources present in the APE and/or there are properties within the APE that **are exempt from evaluation**; see Section 5.

7. HPSR to SHPO

- Not applicable.

HISTORIC PROPERTY SURVEY REPORT**8. HPSR to CSO** Not applicable.**9. Findings for State-Owned Properties** Not applicable; project does not involve Caltrans right of way or Caltrans-owned property.**10. CEQA Considerations** Not applicable; Caltrans is not the lead agency under CEQA.**11. List of Attached Documentation**

- Project Vicinity, Location, and APE Maps (*note which attachment(s) contains the maps*)
- Archaeological Survey Report (ASR)
- Attachment C: Hannah Ballard, M.A., Samantha Schell, B.A., Graham Dalldorf, M.A., Elena Reese, M.A., and Daniel Trout, B.A.; January 2015.
 - Peer Reviewed by Erin Dwyer, January 2015
- Other (*Specify below*)
- Native American Consultation Documentation
 - Record Search Documentation

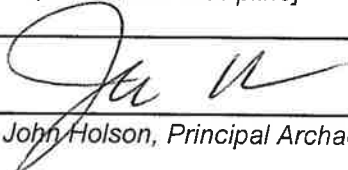
12. HPSR Preparation and Caltrans ApprovalPrepared by (*sign on line*):

District _____

PQS level and discipline]

Date _____

Caltrans PQS: _____

Prepared by: (*sign on line*)Consultant /
discipline:
John Holson, Principal Archaeologist

Date

Affiliation

Pacific Legacy, Inc.
900 Modoc St.
Berkeley, CA 94707Reviewed for
approval by: (*sign on line*)District 3 Caltrans
PQS discipline/level:Erin Dwyer
PQS: PI – Prehistoric and Historical
Archaeology

Date _____

Approved by: (*sign on line*)

District 3 EBC:

Susan D. Bauer
Environmental Management Branch,
M1

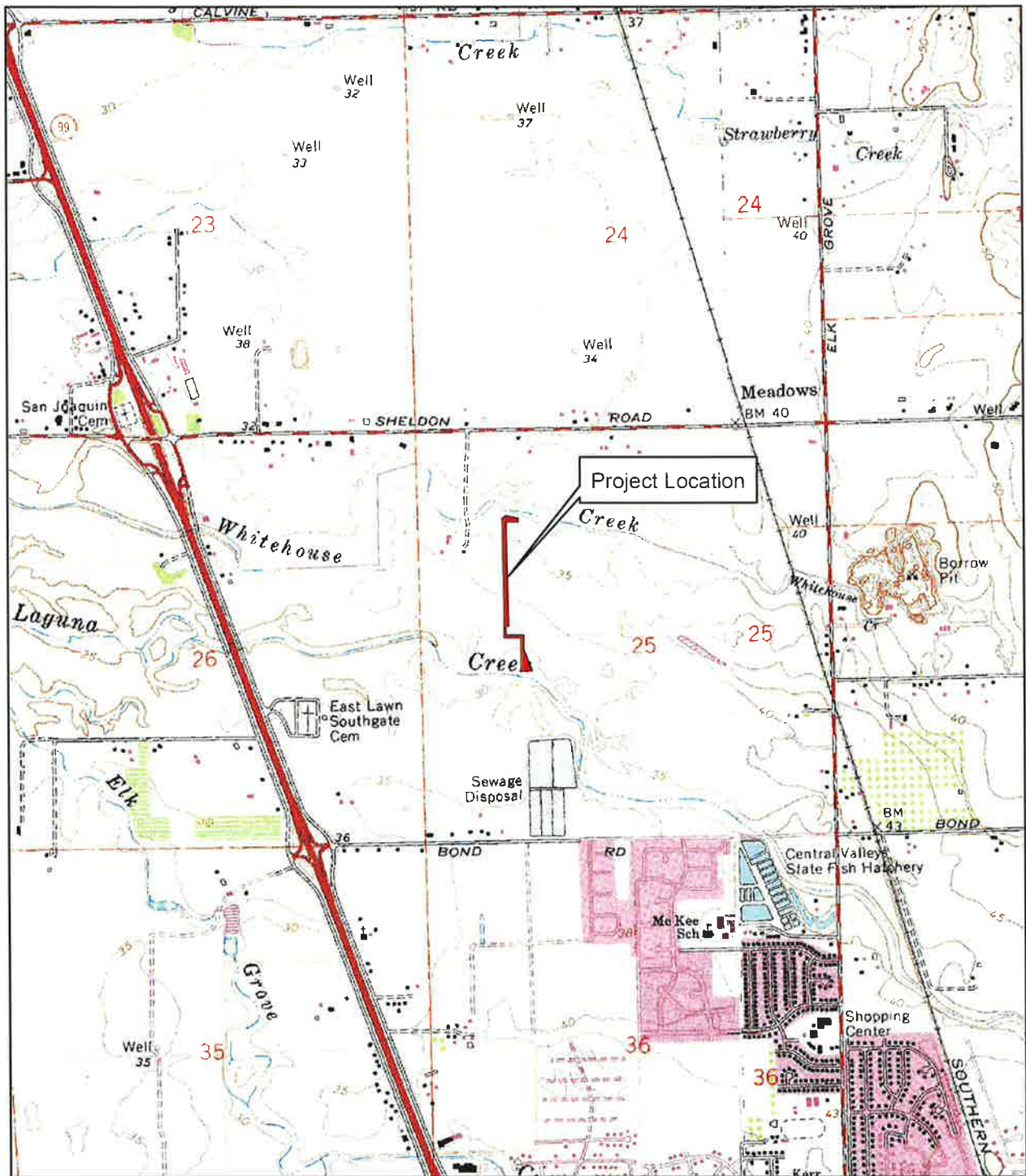
Date _____

ATTACHMENTS

ATTACHMENT A. FIGURES



Figure 1. Project Vicinity Map.



SOURCE: USGS 7.5" Florin, CA (1980) and Elk Grove, CA (1979).
 SCALE: 1:24,000.

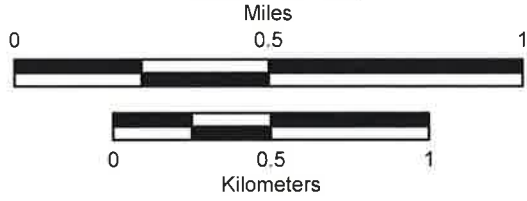


Figure 2. Project Location for Laguna Creek Trail-North Camden Spur



KING

WHITE PEACOCK WAY

PANAMINT CT

SPRING AZURE WAY

BECKINGTON DR

SHORTLINE LN

WHITE PEACOCK CT

KINGSLAND CT

SAINT ARVANT CT

STAFFORDSHIRE CT

CASTLEHAVEN CT

SHELDON CREEK DR

HYPERIA

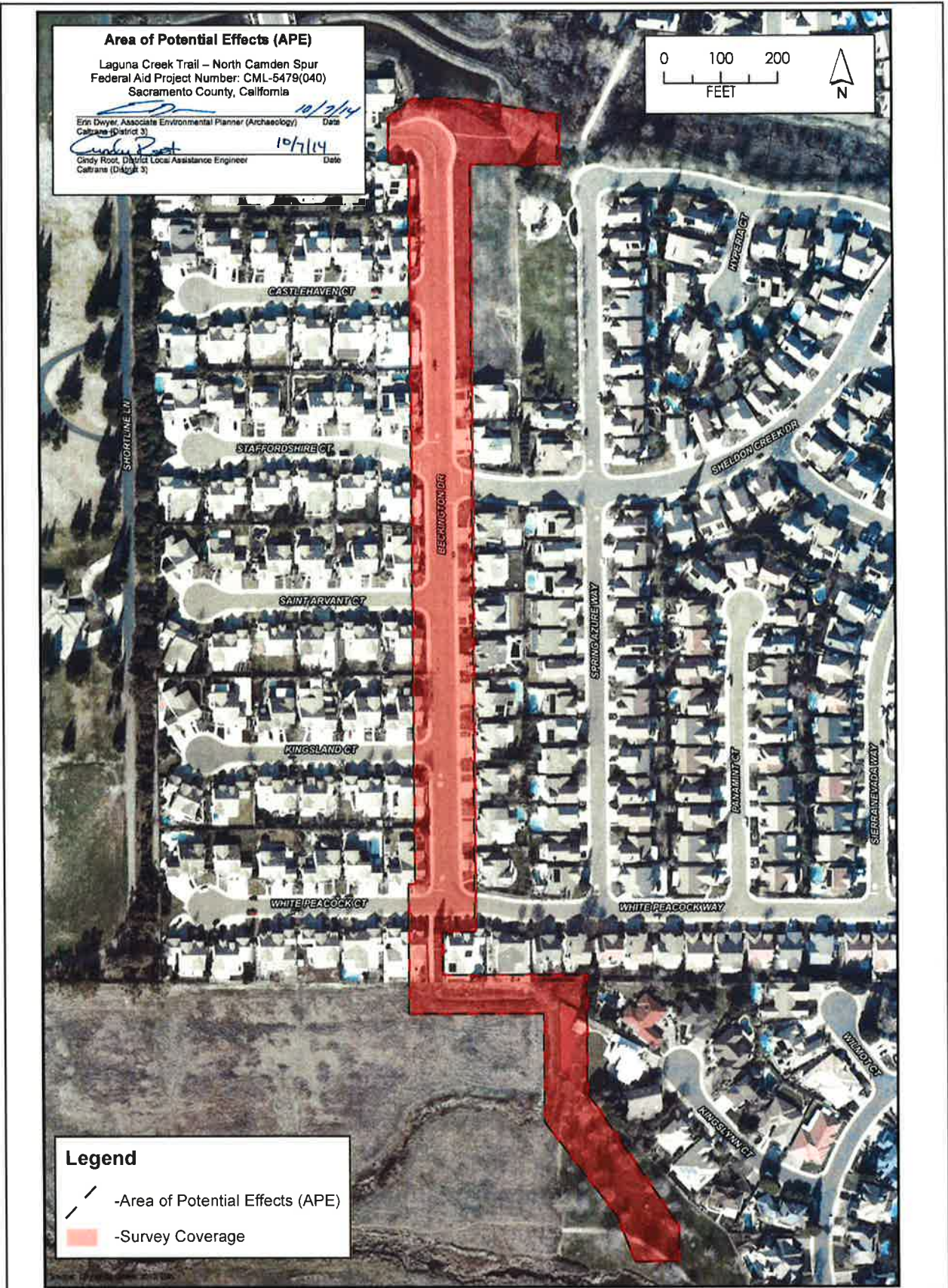


Figure 4. Survey Coverage

ATTACHMENT B. NATIVE AMERICAN CONSULTATION DOCUMENTATION



Fax

To: Cynthia Gomez From: Starla Lane

Company: Native American Heritage Commission Phone: (510) 524-3991

Phone: (916) 373-3710 Fax: (510) 524-4419

Fax: (916) 373-5471 Date: 12/21/2014

Re: Laguna Creek Trail North Camden Pages: 4
Spur, Elk Grove (PL-2478-02)

Inland Empire/Mojave Desert
44702 10th St. West
Lancaster, CA 93534
661.729.9395 Ph.
661.729.9417 Fax

Business Office
PO Box 6050
Arnold, CA 95223
209.795.4481 Ph.
209.795.1967 Fax

Pacific Basin
30 Aulike St. #301
Kailua, HI 96734
808.263.4800 Ph.
808.263.4300 Fax

Sierra/Central Valley
4919 Windplay Dr. #4
El Dorado Hills, CA 95762
916.358.5156 Ph.
916.358.5161 Fax

Southern California
PO Box 421282
San Diego, CA 92142
858.900.8024 Ph.
510.524.4419 Fax



October 21, 2014

Cynthia Gomez
Native American Heritage Commission
1550 Harbor Boulevard, Suite 100
West Sacramento, CA 95691

Re: Laguna Creek Trail North Camden Spur, Elk Grove (PL-2478-02)

Dear Ms. Gomez:

We have been retained by the PMC Environmental to conduct an archaeological assessment for a property located north of Laguna Creek, east of Highway 99 in Elk Grove, Sacramento County, California. We would like to request a review of the Sacred Lands Inventory file and a list of interested Native American groups for Sacramento County. We have attached a map of the project area for your review. If you have any questions, I can be reached at (510) 524-3991 ext 111. Thank you for your kind attention to this matter.

Sincerely,

Starla Lane
Archaeologist
Bay Area Division
900 Modoc St.
Berkeley, CA 94707
Ph. 510-524-3991, ext. 111
lane@pacificlegacy.com

Attachments: Sacred Lands File & Native American Contacts List Request
Project Location Map

Inland Empire/Mojave Desert
44702 10th St. West
Lancaster, CA 93534
661.729.9395 Ph.
661.729.9417 Fax

Business Office
PO Box 6050
Arnold, CA 95223
209.795.4481 Ph.
209.795.1967 Fax

Pacific Basin
30 Aulike St. #301
Kailua, HI 96734
808.263.4800 Ph.
808.263.4300 Fax

Sierra/Central Valley
4919 Windplay Dr. #4
El Dorado Hills, CA 95762
916.358.5156 Ph.
916.358.5161 Fax

Southern California
PO Box 421282
San Diego, CA 92142
858.900.8024 Ph.
510.524.4419 Fax



November 18, 2014

Cynthia Gomez
Native American Heritage Commission
1550 Harbor Boulevard, Suite 100
West Sacramento, CA 95691

Re: Laguna Creek Trail North Camden Spur, Elk Grove (PL-2478-02)

Dear Ms. Gomez:

We have been retained by the PMC Environmental to conduct an archaeological assessment for a property located north of Laguna Creek, east of Highway 99 in Elk Grove, Sacramento County, California. We would like to request a review of the Sacred Lands Inventory file and a list of interested Native American groups for Sacramento County. We have attached a map of the project area for your review. This request was originally submitted on October 21, 2014 as one part of a two part project. We received a response regarding the project's southern half on November 3, 2014; however we are resubmitting the request since we have not yet received a response regarding the northern half. If you have any questions, I can be reached at (510) 524-3991 ext 111. Thank you for your kind attention to this matter.

Sincerely,

Starla Lane
Archaeologist
Bay Area Division
900 Modoc St.
Berkeley, CA 94707
Ph. 510-524-3991, ext. 111
lane@pacificlegacy.com

Attachments: Sacred Lands File & Native American Contacts List Request
Project Location Map

Inland Empire/Mojave Desert
44702 10th St. West
Lancaster, CA 93534
661.729.9395 Ph.
661.729.9417 Fax

Business Office
PO Box 6050
Arnold, CA 95223
209.795.4481 Ph.
209.795.1967 Fax

Pacific Basin
30 Aulike St. #301
Kailua, HI 96734
808.263.4800 Ph.
808.263.4300 Fax

Sierra/Central Valley
4919 Windplay Dr. #4
El Dorado Hills, CA 95762
916.358.5156 Ph.
916.358.5161 Fax

Southern California
PO Box 421282
San Diego, CA 92142
858.900.8024 Ph.
510.524.4419 Fax



Bay Area Division
 900 Modoc Street
 Berkeley, CA 94707

Phone: 510.524.3991
 Fax: 510.524.4419
 www.pacificlegacy.com

Sacred Lands File & Native American Contacts List Request

NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Boulevard
 West Sacramento, CA 95691
 (916) 373-3710
 (916) 373-5471 -- Fax
 nahc@pacbell.net

Information Below is Required for a Sacred Lands File Search

Project: Laguna Creek Trail North Camden Spur, Elk Grove (PL-2478-02)

County: Sacramento

USGS Quadrangle Name: Florin, CA (1980), 7.5'

Township: 7N Range: 5E Section(s): 25

Company/Firm/Agency: Pacific Legacy, Inc.

Contact Person: Starla Lane

Street Address: 900 Modoc St.

City: Berkeley, CA

Zip: 94707

Phone: (510) 524-3991 ext. 111

Fax: (510) 524-4419

Email: lane@pacificlegacy.com

Project Description:

The City of Elk Grove proposes to extend a bicycle and pedestrian trail from the west end of the existing Laguna Creek Trail, at the northern tip of Camden Park, to MacDonald Park via Beckington Drive. This extension is the north half of a two-project proposal to improve the trail system in Elk Grove.

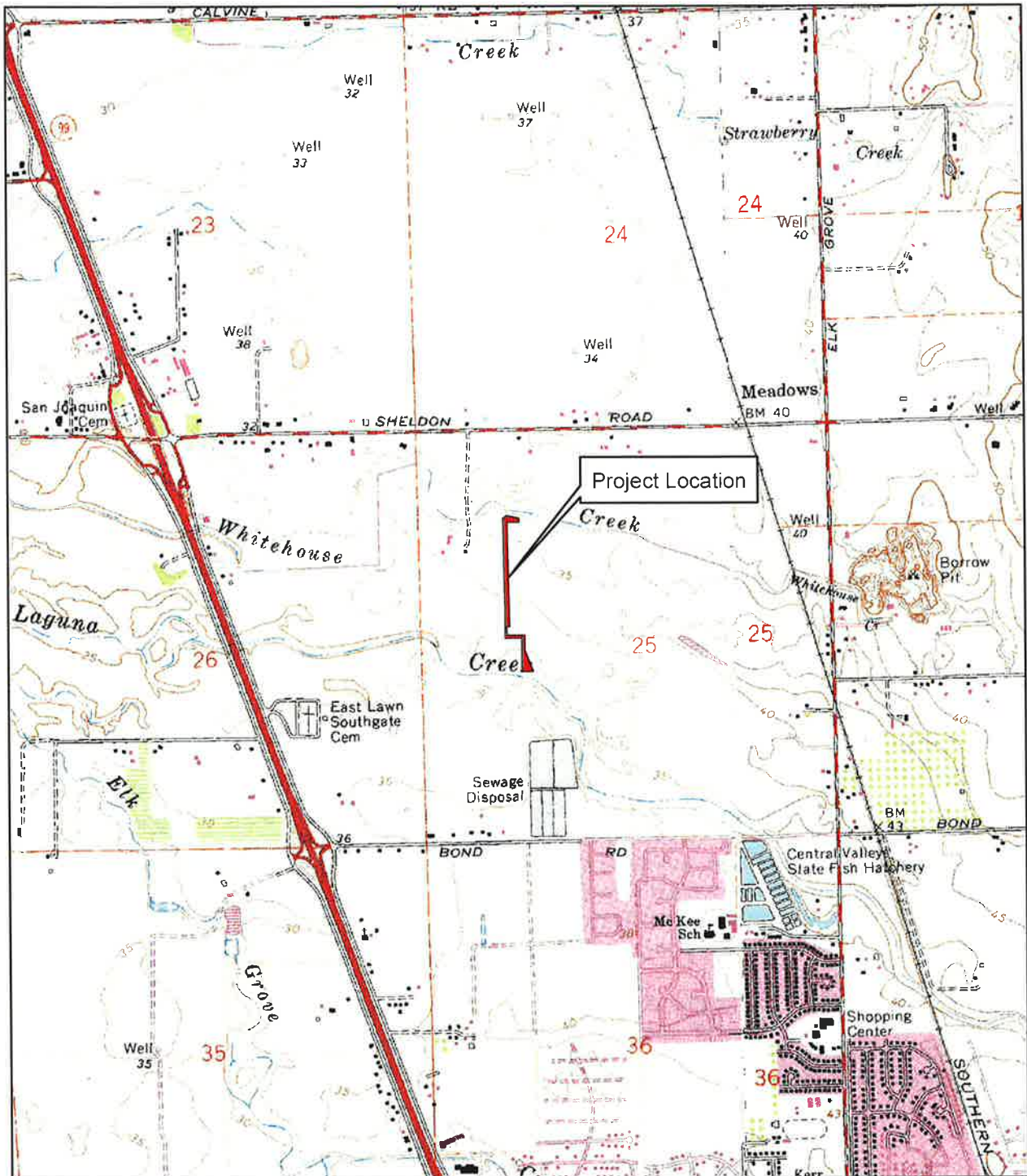
Inland Empire/Mojave Desert
 44702 10th St. West
 Lancaster, CA 93534
 661.729.9395 Ph.
 661.729.9417 Fax

Business Office
 PO Box 6050
 Arnold, CA 95223
 209.795.4481 Ph.
 209.795.1967 Fax

Pacific Basin
 30 Aulike St. #301
 Kailua, HI 96734
 808.263.4800 Ph.
 808.263.4300 Fax

Sierra/Central Valley
 4919 Windplay Dr. #4
 El Dorado Hills, CA 95762
 916.358.5156 Ph.
 916.358.5161 Fax

Southern California
 PO Box 421282
 San Diego, CA 92142
 858.900.8024 Ph.
 510.524.4419 Fax

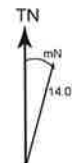
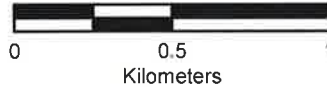
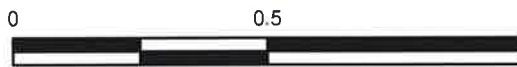


Project Location

SOURCE: USGS 7.5" Florin, CA (1980) and Elk Grove, CA (1979).

SCALE: 1:24,000.

Miles



Project: Laguna Creek Trail-North Camden Spur, Elk Gove, CA (PL 2478-2)



NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Blvd.
West Sacramento, CA 95891
(916) 373-3710
Fax (916) 373-5471



November 21, 2014

Starla Lane
PACIFIC LEGACY INC
900 Modoc St
Berkeley, CA 94707

3 Pages

FAX: 510-524-4419

RE: Laguna Creek Trail North Camden Spur project, Sacramento County

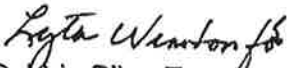
Ms. Lane;

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 373-3713.

Sincerely,


Debbie Pilas-Treadway
Environmental Specialist III

004

**Native American Contacts
Sacramento County
November 24, 2014**

Randy Yonemura
1305 - 39th Avenue Miwok
Sacramento , CA 95824
andy_yonemura@yahoo.com
916) 421-1600
916) 601-4069 Cell

Shingle Springs Band of Miwok Indians
Nicholas Fonseca, Chairperson
P.O. Box 1340 Miwok
Shingle Springs , CA 95682 Maidu
nfonseca@ssband.org
(530) 676-8010 Office
(530) 676-8033 Fax

Buena Vista Rancheria
Rhonda Morningstar Pope, Chairperson
418 20th Street, Suite 200 Me-Wuk / Miwok
Sacramento , CA 95811
rhonda@buenavistatribe.com
916) 491-0011 Office
916) 491-0012 Fax

Shingle Springs Band of Miwok Indians
Daniel Fonseca, Cultural Resource Director
P.O. Box 1340 Miwok
Shingle , CA 95682 Maidu
(530) 676-8010 Office
(530) 676-8033 Fax

Shingle Springs Band of Miwok Indians
Lynne Miller, Chairperson
P.O. Box 699 Miwok
Shingle Springs , CA 95669
ladministrator@ionemiwok.org
(916) 245-5800 Office
(916) 245-3112 Fax

United Auburn Indian Community of the Auburn Rancheria
Gene Whitehouse, Chairperson
10720 Indian Hill Road Maidu
Auburn , CA 95603 Miwok
(530) 883-2390 Office
(530) 883-2380 Fax

Shingle Springs Band of Miwok Indians Cultural Committee
Anthony Burris, Chairperson
P.O. Box 699 Miwok
Shingle Springs , CA 95669
(916) 245-5800 Office
(916) 245-3112 Fax

United Auburn Indian Community of the Auburn Rancheria
Marcos Guerrero, Tribal Preservation Committee
10720 Indian Hill Road Maidu
Auburn , CA 95603 Miwok
mguerrero@auburnrancheria.com
(530) 883-2364 Office
(530) 883-2320 Fax

Shingle Springs Band of Miwok Indians
Armando Olano, Vice Chairperson
P.O. Box 1340 Miwok
Shingle Springs , CA 95682 Maidu
olano@ssband.org
(530) 676-8010 Office
(530) 676-8033 Fax

United Auburn Indian Community of the Auburn Rancheria
Jason Camp, THPO
10720 Indian Hill Road Maidu
Auburn , CA 95603 Miwok
jcamp@auburnrancheria.com
(916) 316-3772 Cell
(530) 883-2390
(530) 888-5476 - Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Laguna Creek Trail North Camden Spur project, Sacramento County

**Native American Contacts
Sacramento County
November 24, 2014**

Wilton Rancheria
Raymond Hitchcock, Chairperson
3728 Kent Street Miwok
Elk Grove CA 95624
hitchcock@wiltonrancheria-nsn.gov
916) 683-6000 Office
916) 683-6015 Fax

Wilton Rancheria
Steven Hutchason, Executive Director Environmental Resources
728 Kent Street Miwok
Elk Grove CA 95624
hutchason@wiltonrancheria-nsn.gov
916) 683-6000, Ext. 2006
916) 683-6015 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Laguna Creek Trail North Camden Spur project, Sacramento County

DEPARTMENT OF TRANSPORTATION

DISTRICT 3

703 B Street

Marysville, CA 95901

PHONE (530) 741-7113

FAX (530) 741-4457

TTY 711

www.dot.ca.gov/dist3

*Serious drought
Help save water!*

November 18, 2014

Mr. Randy Yonemura
4305 39th Avenue
Sacramento, CA 95824

Re: Invitation to Begin Section 106 Consultation for the Laguna Creek Trail, North Camden Spur Project, City of Elk Grove, Sacramento County, California

Dear Mr. Yonemura:

The California Department of Transportation (Caltrans) will be assisting the City of Elk Grove as they initiate a local project to build a bicycle-pedestrian trail between Camden Point and Camden Estates residential areas to schools and commercial areas using along or south of Bond Road (see attached map). This project is the northern half of two projects to improve the trail system in Elk Grove by connecting existing segments of the Laguna Creek Trail. The proposed project will involve minor improvements, striping along existing public right of ways and streets, and the construction of new sections of trail at the either end.

Pacific Legacy, Inc. archaeologist, Hannah Ballard, is a consultant representing the City of Elk Grove. Ms. Ballard will be contacting you to initiate Native American consultation. Ms. Ballard will be requesting information you may have regarding sites, traditional cultural properties, values, or other cultural resource considerations within the project area so this information may be incorporated into the planning phase of the project.

A records search was conducted and no previously recorded cultural resources are located within a quarter of a mile of the project area. Areas adjacent to the project area have been previously studied. The southern portion of the proposed trail segment is within the project area of two previous studies. One of these studies was a reconnaissance survey of the Laguna Creek. None of these studies identified cultural resources within or adjacent to the current project area. The project area extends between two waterways (Whitehouse and Laguna Creeks) located adjacent to a creek in a floodplain. The nature of this project requires a Phase I investigation, consisting of archaeological survey, to identify any cultural resources within the project's area of potential effect (APE).

Caltrans will serve as the federal lead agency for the project as a result of the Federal Highway Administration (FHWA) assignment of its National Environmental Policy (NEPA) Act responsibilities under Title 23 USC 326 and 327. Caltrans will have review and approval authority for compliance with Section 106 of the National Historic Preservation Act as well as other federal laws and regulations.

Your comments and concerns will be important to the City of Elk Grove as they move forward with their project, and to Caltrans. If you have any questions or concerns with the project, please contact Hannah Ballard via email (ballard@pacificlegacy.com) or at her office (510-524-3991 extension 6). Ms. Ballard's mailing address is:

Hannah Ballard
Pacific Legacy, Inc.
900 Modoc Street
Berkeley, CA 94707

If you have questions regarding the content of this letter you can contact me at sue.bauer@dot.ca.gov or 530-741-7113 or the Associate Environmental Planner (Archaeology) for this project, Erin Dwyer at erin.dwyer@dot.ca.gov or 530-741-4538.

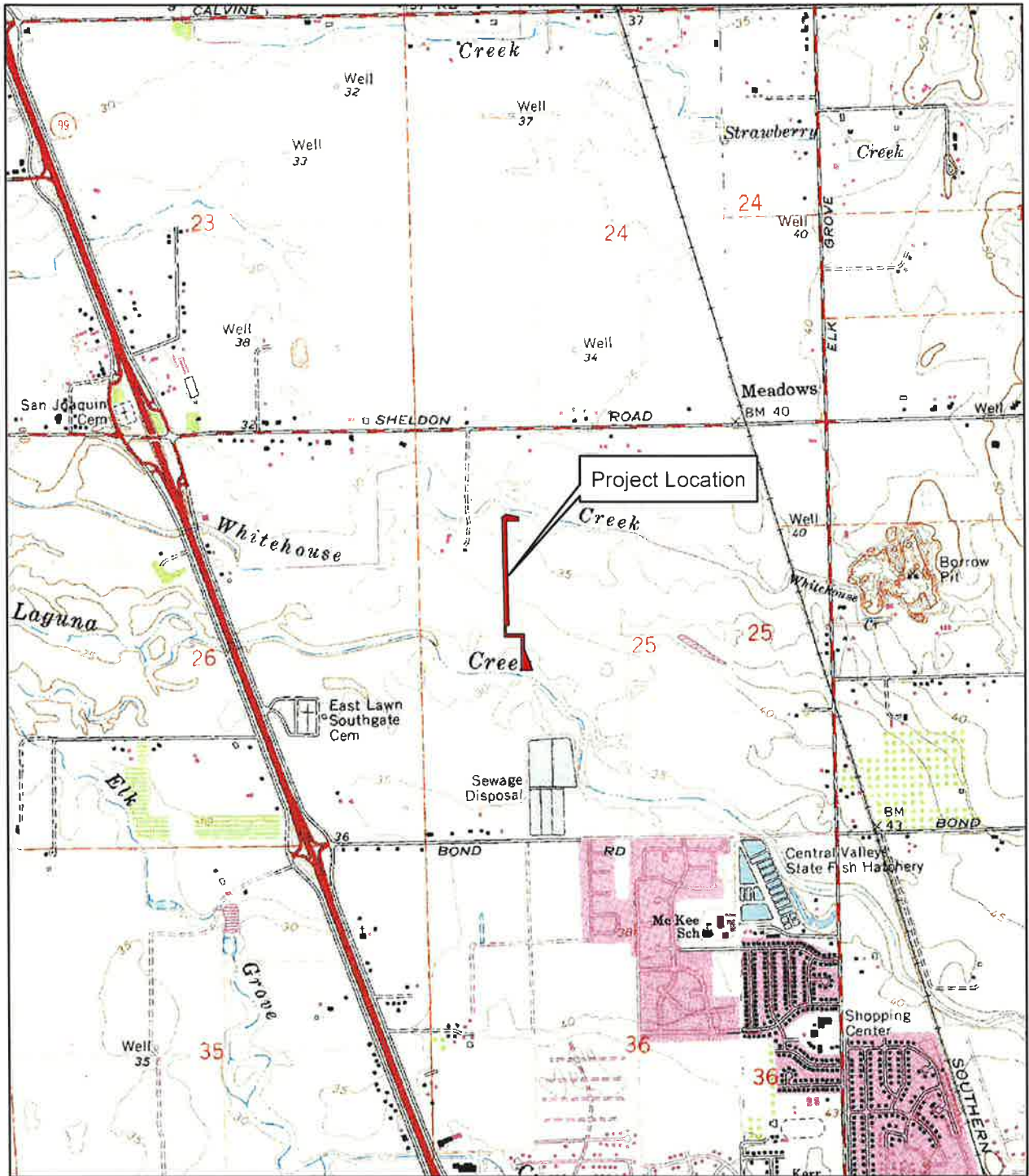
Sincerely,



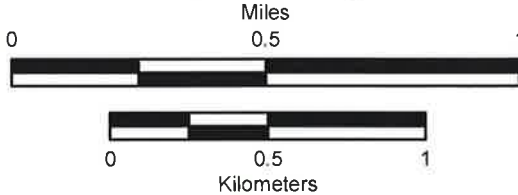
Susan D. Bauer
Senior Environmental Planner, M1
Caltrans, District 3

Attachments: Project Location map
Draft Area of Potential Effects map

cc: Erin Dwyer, Associate Environmental Planner (Archaeology)
Michael Karoly, Senior Project Manager, City of Elk Grove



SOURCE: USGS 7.5" Florin, CA (1980) and Elk Grove, CA (1979).
 SCALE: 1:24,000.



Project: Laguna Creek Trail-North Camden Spur, Elk Gove, CA (PL 2478-2)





WHITE PEACOCK WAY

WHITE PEACOCK CT

PANAMINT CT

KINGSLAND CT

SPRING AZURE WAY

SAINT ARVANT CT

BECKINGTON DR

STAFFORDSHIRE CT

SHELDON CREEK DR

SHORTLINE LN

HYPERIA

CASTLEHAVEN CT

KING



SHINGLE SPRINGS RANCHERIA
P.O. BOX 1340; SHINGLE SPRINGS, CA 95682
(530) 676-8010; FAX (530) 676-3582

December 1, 2014

Department of Transportation
DISTRICT 3
703 B Street
Marysville, CA 95901

RE: Laguna Creek Trail, North Camden Spur Project

Dear Susan D. Bauer

Thank you for your letter dated November 18, 2014 in regard to the Laguna Creek Trail, North Camden Spur Project, City of Elk Grove, Sacramento County, California. Based on the information provided, the Shingle Springs Band of Miwok Indians is not aware of any known cultural resources on this site. However, SSR would like to have continued consultation through updates, as the project progresses this will foster a greater communication between the Tribe and your agency.

SSR would also like to request any and all completed record searches and or surveys that were done in or around the project area up to and including environmental, archaeological and cultural reports.

If during the progress of the project new information or human remains are found we would like to be able to go over our process with you that we currently have in place to protect such important and sacred artifacts (especially near rivers and streams).

Please contact the following individuals if such finds are made:

Kara Perry, Administrative Assistant (530) 488-4049 kperry@ssband.org

And copy all communications to:

Andrew Godsey, Assistant Cultural Resource Director / NAI agodsey@ssband.org

Thank you for providing us with this notice and opportunity to comment.

Sincerely,

Daniel Fonseca
Cultural Resource Director
Tribal Historic Preservation Officer (THPO)
Most Likely Descendent (MLD)

Hannah Ballard

From: Hannah Ballard
Sent: Wednesday, December 03, 2014 2:51 PM
To: jcamp@auburnrancheria.com
Subject: Laguna Creek Trail North Camden Spur and South Camden Spur Projects
Attachments: Signed Consultation Letters Camden North_J Camp.pdf; Signed Consultation Letters Camden South_J Camp.pdf

Dear Mr. Camp,

Thank you for returning my call. I am attaching copies of the letters I sent you for the two Laguna Creek Trail Projects: North Camden Spur and South Camden Spur. I spoke briefly with Marcos Guerrero yesterday. He said that he was having his staff do a search for ethnographic sites within the Project Areas but the search was not yet complete. If you have any questions, comments or information you would like to share about these projects, please contact me either via email or phone.

Regards,
Hannah

Hannah Ballard

Senior Archaeologist

Pacific Legacy, Inc.

900 Modoc St.

Berkeley, CA 94707

Office: 510-524-3991, extension 6

Mobile: 510-821-0173

Native American Consultation Log for Laguna Creek Trail--North Camden Spur Project

Native American Contact Name	Native American Contact Group	Date of Initial Letter	Date of Follow-Up Phone Call	Response Received	Comment
Randy Yonemura	Miwok	11/19/14	12/1/14, phone message	None	
Rhonda Morningstar Pope, Chairperson;	Buena Vista Rancheria	11/19/14	12/1/14, phone message with receptionist	None	Receptionist said the Roselyn Lewenya, Environmental Director, is the individual who would respond to our request for Sec 106 consultation. Left message for Ms. Lewenya.
Roselyn Lewenya, Environmental Director	Buena Vista Rancheria	Initial letter sent to Rhonda Morningstar Pope (11/19/14)	12/1/14, phone message with receptionist	None	Receptionist said the Roselyn Lewenya, Environmental Director, is the individual who would respond to our request for Sec 106 consultation. Left message for Ms. Lewenya.
Judith Marks	Colfax-Todds Valley Consolidated Tribe	11/19/14	12/1/14, phone message	None	
Pamela Cubbler	Colfax-Todds Valley Consolidated Tribe	11/19/14	12/1/14, phone message	None	
Yvonne Miller, Chairperson	Ione Band of Miwok Indians	11/19/14	12/1/14, phone message	None	Administrative Assistant said that Anthony Burris was the most appropriate party to speak with, so a message was left for him.
Anthony Burris, Chairperson	Ione Band of Miwok Indians Cultural Committee	11/19/14	12/2/14, phone message with Admin Assistant	None	Administrative Assistant said that Anthony Burris was the most appropriate party to speak with, so a message was left for him.
Cosme Valdez, Interim Chief Executive	Nashville-El Dorado Miwok	11/19/14	12/2/14, phone message	None	
Hermo Olanio, Vice Chairperson	Shingle Springs Band of Miwok Indians	11/19/14	12/2/14, message with Administrative Assistant	None	
Nicholas Fonseca, Chairperson	Shingle Springs Band of Miwok Indians	11/19/14	12/2/14, message with Administrative Assistant	None	
Daniel Fonseca, Cultural Resource Director, THPO	Shingle Springs Band of Miwok Indians	11/19/14	12/2/14, message with Administrative Assistant	12/5/14	Received response letter via email from Kara Perry, Administrative Assistant in the Cultural Resource Department. Signed hard copy response sent via USPS to Caltrans. The response letter states that Shingle Spring is not aware of any known cultural resources within the project. Shingle Springs requests continued consultation through project updates from Caltrans. Shingle Springs also requests copies of all completed record searches and surveys completed in and around the APE as well as any

Native American Contact Name	Native American Contact Group	Date of Initial Letter	Date of Follow-Up Phone Call	Response Received	Comment
Gene Whitehouse, Chairperson	United Auburn Indian Community of Auburn Rancheria	11/19/14	12/2/14, phone message	None	archaeological, cultural or environmental reports completed as part of the project.
Marcos Guerrero, Tribal Preservation Committee	United Auburn Indian Community of Auburn Rancheria	11/19/14	12/2/14	12/2/14	Mr. Guerrero's staff was doing a search for ethnographic sites in the area. I informed him we had negative record search and survey results. His staff would likely send out a letter requesting a copy of the cultural resources report for the project.
Jason Camp, THPO	United Auburn Indian Community of Auburn Rancheria	11/19/14, 12/3/14 resent via email	12/2/14, phone message	12/3/14, phone message	At Mr. Camp's, request resent letters digitally via email.
Raymond Hitchcock, Chairperson	Wilton Rancheria	11/19/14	12/2/14, receptionist	None	Receptionist directed me to Steven Hutchason, left message on voice mail.
Steven Hutchason, Executive Director Environmental Resources	Wilton Rancheria	11/19/14	12/2/14, phone message	None	Receptionist directed me to Steven Hutchason, left message on voice mail

ATTACHMENT C. RECORD SEARCH RESULTS



December 07, 2010

Ms. Sally Torpy, Coordinator
North Central Information Center (NCIC)
California State University, Sacramento
6000 J Street, Adams Building, Suite #208
Sacramento, CA 95819-6100

Re: Records Search Request, Pacific Legacy Project Number: PL-2478-01

Dear Ms. Sally Torpy:

Pacific Legacy is conducting a cultural resources study and would like the North Central Information Center to complete a records search. The project area is indicated on the attached USGS map.

Project Information

Client: PMC Primary Contact: PMC

Client contact: Jed McLaughlin

Project Name: PMC Laguna Creek Trail Project, Elk Grove (PL-2478-01)

County: Sacramento

Description (including location and USGS 7.5' minute quad): Installation of a bike and pedestrian path measuring approximately one-third of a mile in length.

The project area is depicted on the Florin 7.5' USGS Quad: T07N, R05E, Section 25

Records Search Information:

- List and map of sites within project area and a ½ mile radius
- List and map studies within project area and a ½ mile radius
- Copies of site records
- Copies of Study/Survey Reports (Please give full copy of study/survey report if located in the immediate project location not in the ½ mile radius.)
- Bibliography of Study/Survey Reports

Sierra Central 3081 Alhambra Dr. #208 Cameron Park, CA 95682 530.677.9713 Ph. 530.677.9762 Fax	Southern California 42055 50 th St. #4 Quartz Hill, CA 93536 661.722.2556 Ph./Fax	Central Coast & Business Office 1525 Seabright Ave. Santa Cruz, CA 95062 831.423.0588 Ph. 831.423.0587 Fax	North Coast to Cascades 3760 Morrow Ln. #E Chico, CA 95928 530.899.8314 Ph. 530.899.8333 Fax	Pacific Basin 30 Aulike St. #301 Kailua, HI 96734 808.263.4800 Ph. 808.263.4300 Fax
--	---	--	--	---



Bay Area Division
900 Modoc Street
Berkeley, CA 94707

Phone: 510.524.3991
Fax: 510.524.4419
www.pacificlegacy.com

- NRHP Listing
- OHP Determination
- CRHR
- California Historic Landmarks
- California Points of Historical Interest
- California Inventory of Historic Resources
- Other Historic Inventories (local) if applicable
- Historic Maps (GLO, other BLM, Road As-Built, etc.)
- Caltrans Bridge Inventory

Thank you for your assistance. If you have any questions regarding this request, please do not hesitate to call me at 510-524-3991, extension 106.

Sincerely,

Starla Lane
Archaeologist
900 Modoc St
Berkeley, CA 94707
Ph. 510-524-3991

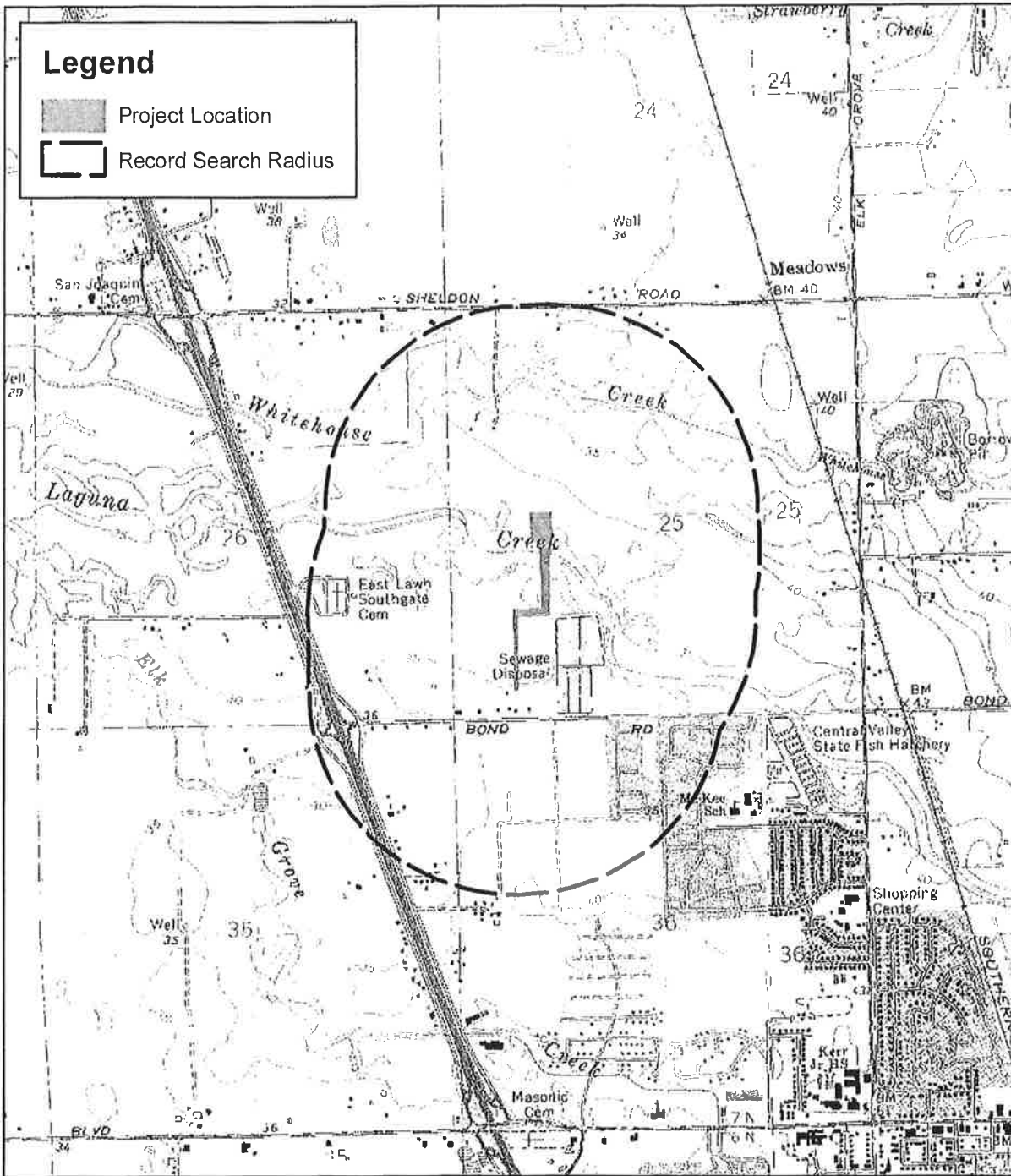
Sierra Central
3081 Alhambra Dr. #208
Cameron Park, CA 95682
530.677.9713 Ph.
530.677.9762 Fax

Southern California
42055 50th St. #4
Quartz Hill, CA 93536
661.722.2556 Ph./Fax

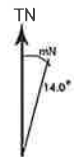
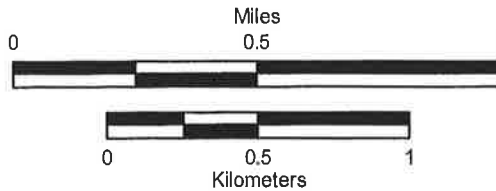
Central Coast & Business Office
1525 Seabright Ave.
Santa Cruz, CA 95062
831.423.0588 Ph.
831.423.0587 Fax

North Coast to Cascades
3760 Morrow Ln. #E
Chico, CA 95928
530.899.8314 Ph.
530.899.8333 Fax

Pacific Basin
30 Aulike St. #301
Kailua, HI 96734
808.263.4800 Ph.
808.263.4300 Fax



SOURCE: USGS 7.5" Florin, CA (1980) and Elk Grove, CA (1979).
SCALE: 1:24,000.



Project: PMC Laguna Creek Trail Project, Elk Grove (PL-2478-01)

NORTH CENTRAL INFORMATION CENTER

916-278-6217

ncic@csus.edu

FAX 916-278-5162

CSU-SACRAMENTO - 6000 J STREET, ADAMS BLDG. SUITE #208 - SACRAMENTO, CA 95819-6100

Amador, El Dorado, Nevada, Placer, Sacramento, and Yuba Counties

Records Search Results Summary

December 8, 2010

NCIC File No.: SAC-10-154

Starla Lane
Pacific Legacy
900 Modoc Street
Berkeley, CA 94707

Researcher: Ellen Bowden

Re: PMC Laguna Creek Trail Project, Elk Grove (PL-2478-01)
T 7N/R 5E, Section 25
USGS 7.5' Florin Quad, Sacramento County

- **NCIC Resources Within .50 mile Search Radius & Project Area:**

None

- **NCIC Reports Within .50 mile Search Radius & Project Area:** (11)

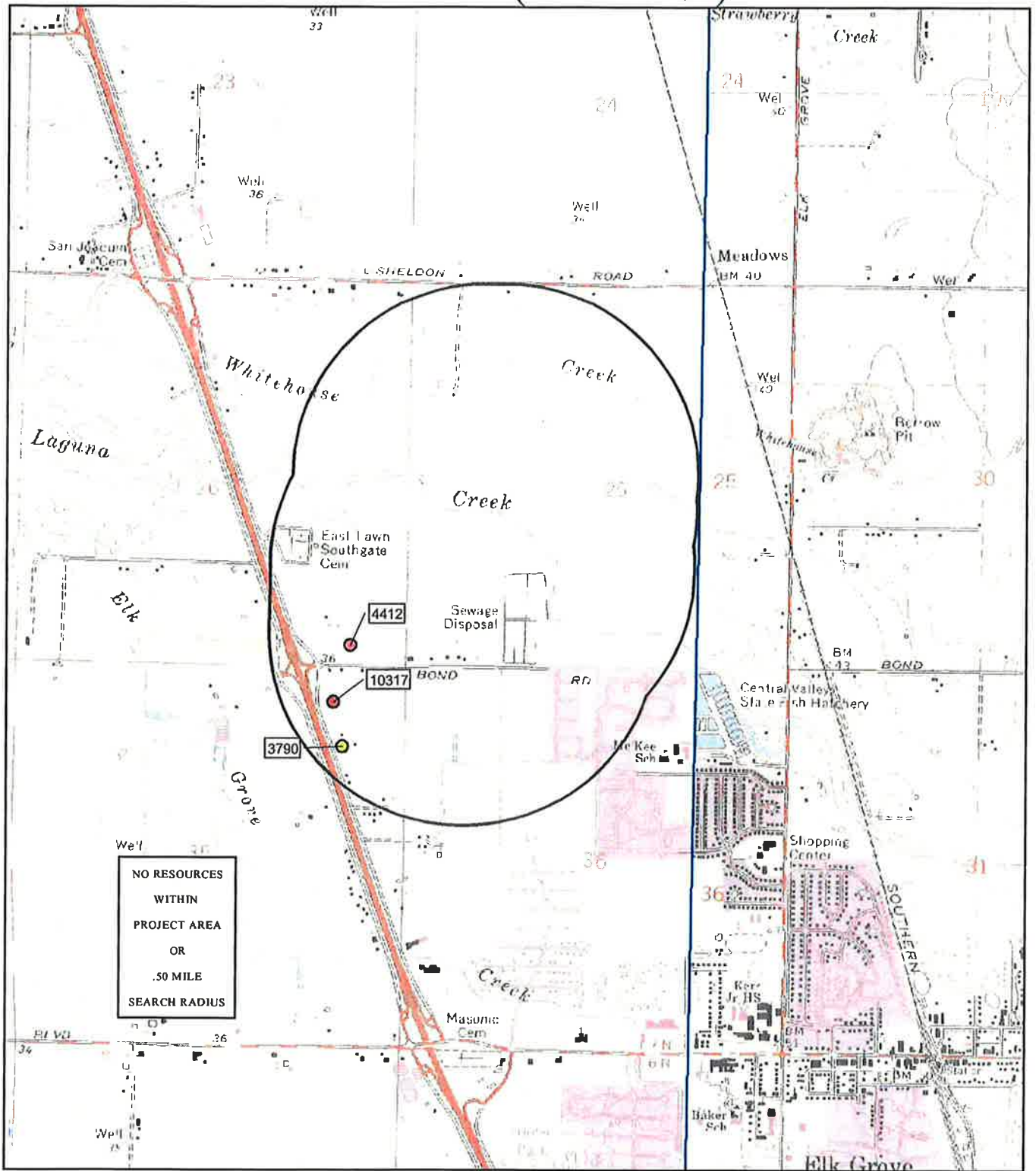
16
88
582
2529
3070
3790
4412
4473
6154
10317
10397

- **OHP Historic Property Data File (2010):** Nothing listed
- **Determination of Eligibility (2010):** Nothing listed
- **NRHP/CRHR listings (2008 & updates):** Nothing listed
- **California Inventory of Historic Resources (1976):** Nothing listed

- **California State Historical Landmarks (1996):** Nothing listed
- **Points of Historic Interest (1992):** Nothing listed
- **Caltrans Bridge Inventory:** Nothing listed
- **Historic Maps:**
1855 GLO PLAT
1909 USGS Florin Quadrangle
1953 US Army Corps of Engineers Florin Sheet

Thank you for using our services. An invoice/confidentiality agreement is enclosed; please sign and return a copy for our files.

PMC LAGUNA CREEK TRAIL PROJECT ELK GROVE (PL-2478-01)



NORTH CENTRAL INFORMATION CENTER

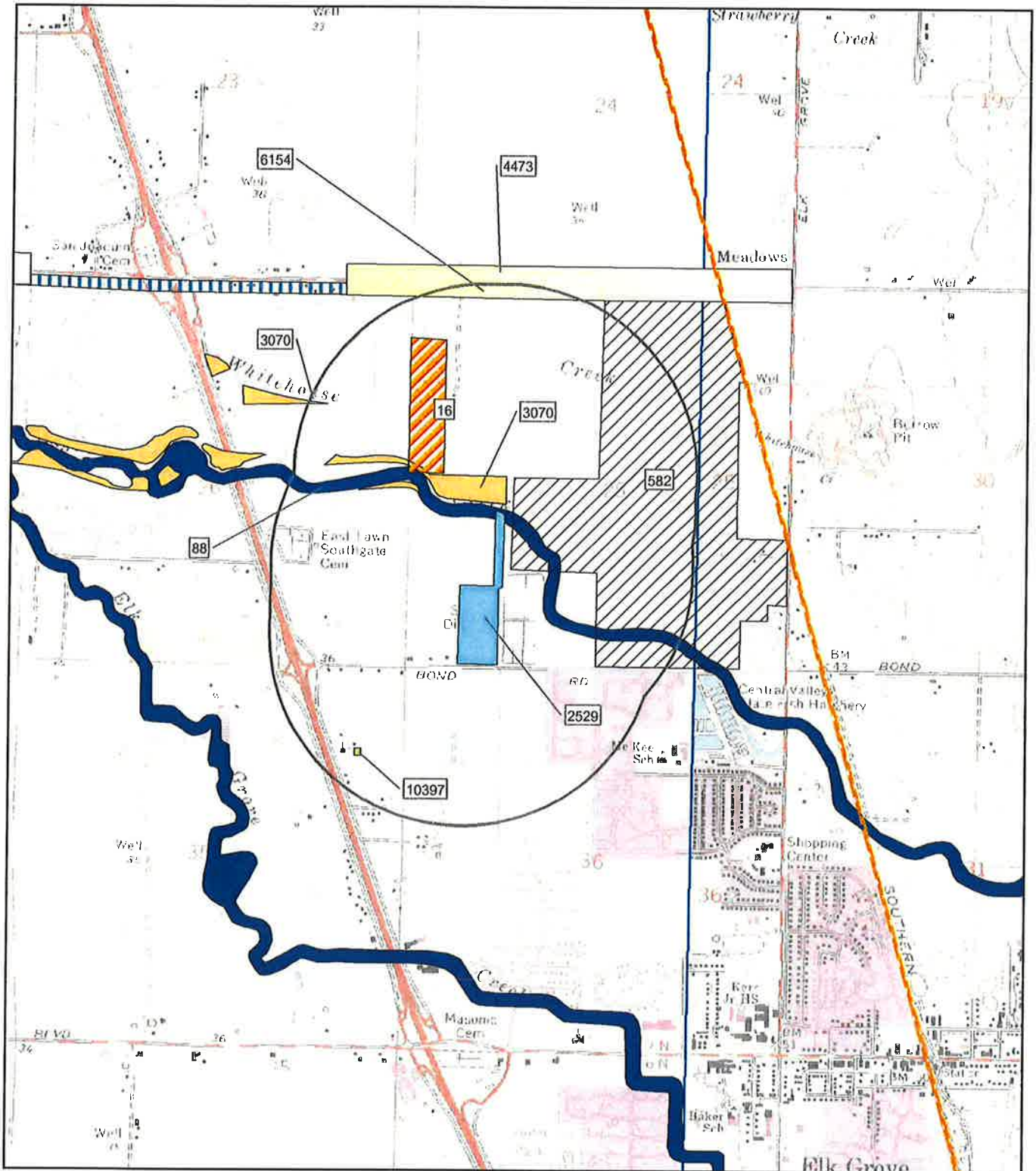
REPORTS

RECORDS SEARCH RESULTS

- 3790
- 4412
- 10317









*May depict confidential cultural resource locations.
Do not redistribute.*

PMC LAGUNA CREEK TRAIL PROJECT ELK GROVE (PL-2478-01)



NORTH CENTRAL INFORMATION CENTER

RECORDS SEARCH RESULTS

RECORDS SEARCH RESULTS		REPORTS	
	16		582
	88		2529
			3070
			4473
			6154
			10397

*May depict confidential cultural resource locations.
Do not redistribute.*

North Central Information Center Report Listing

Doc no.	Year	Author(s)	Title	Affiliation	Client
00016	1981	William E. Soule	Cultural Resources Survey Report, Application 26691, Bristow, Bush, Cantrell, and Wallace "A Partnership."	State Archaeologist II, Environmental Unit	Division of Water Rights, 77 Cadillac Drive, Sacramento, CA 95825.
00088	1974	Johnson, Jerald J.	Reconnaissance Archeological Survey of the Morrison Stream Group in Sacramento County, California.		U.S. Army Corps of Engineers, Sacramento District, 650 Capitol Mall, Sacramento, CA 95814.
00582	1980	Peak, Ann S. and Associates	Cultural Resource Assessment of the Proposed Waterford Grove Development, Sacramento County, California.		Terra Engineering, 936 Enterprise Drive, Sacramento, California 95825.
02529	1999	Childress, Mitchell	Cultural Resources Assessment for California Family Fitness Center on Bond Road, Sacramento County, California.		California Family Fitness Centers, 6100 Fair Oaks Blvd. Suite 3A, Carmichael, CA 95608
03070	1995	Maniery, Mary	Draft Environmental Impact Report, Lower Laguna Creek Drainage Master Plan		County of Sacramento, Department of Environmental Review and Assessment
03790	2001	Billat, Lorna Beth	Nextel Site CA-0222B / Elk Grove		Nextel Communications Wireless Telecommunications Service Facility
04412	2001	Peak, Melinda	Historic Resource Reconnaissance of a Proposed Surewest Tower in Sacramento Site # 203		SureWest Communications
04473	2003	Pacific Municipal Consultants	Archaeological and Historic Investigations for the Sheldon Road Widening Project		City of Elk Grove
06154	1995	Woodward-Clyde Consultants	Cultural Resources Inventory Report for the Proposed Mojave Northward Expansion Project		Mojave Pipeline Company, 5001 Commercenter Dr. Suite 300, Bakersfield, CA
10317	2009	Carolyn Losee	Cultural Resources Investigation for AT&T Wireless Site #CN1868-A "Hwy 99" 9260 East Stockton Boulevard, Elk Grove, Sacramento County, California 95624	Archaeological Resources Technology	EBI Consulting
10397	2009	Billat, Lorna	Big Horn CA-SAC0560: Collocation Submission Packet FCC FORM 621	EarthTouch Inc	Clearwire Wireless Broadband

North Central Information Center Report Detail Record: 16

Citation Information

Authors: William E. Soule
Year: 1981
Title: Cultural Resources Survey Report, Application 26691, Bristow, Bush, Cantrell, and Wallace "A Partnership."
Affiliation: State Archaeologist II, Environmental Unit
Client: Division of Water Rights, 77 Cadillac Drive, Sacramento, CA 95825.
No. Pages: 8
Report Type(s): Archaeological survey
Inventory Size: 12 acres
No. Sites: 0
No. Informal: 0
Collections: Unknown
Disclosure: Not for publication

Associated Resources

Notes

Location Info

County(ies): Sacramento
USGS 7.5' Quads: FLORIN
PLSS: Township/range Sections *BL/M or Land Grant*
T 7 N R 5 E 25 MDBM
Address:

Database Record Metadata

	<i>Date</i>	<i>User</i>	
<i>Entered:</i>	7/27/2000	Erin Snyder	
<i>Last Modified:</i>	2/17/2010	kate	
<i>IC Actions:</i>	<i>Date</i>	<i>User</i>	<i>Action taken</i>
	11/8/2006	jay	Added records from old Library database
	8/27/2009	Machiel	Survey plotted in GIS

North Central Information Center Report Detail Record: 88

Citation Information

Authors: Johnson, Jerald J.

Year: 1974

Title: Reconnaissance Archeological Survey of the Morrison Stream Group in Sacramento County, California.

Affiliation:

Client: U.S. Army Corps of Engineers, Sacramento District, 650 Capitol Mall, Sacramento, CA 95814.

No. Pages:

Report Type(s):

Inventory Size: Approx. 75-90 miles linear and 950+ acres

No. Sites:

No. Informal:

Collections:

Disclosure:

Associated Resources

<i>Primary No.</i>	<i>HRI No.</i>	<i>Trinomial</i>	<i>Name</i>
P-34-000048		CA-SAC-21	Hollister Mound
P-34-000075		CA-SAC-48	Azevedo Mound
P-34-000077		CA-SAC-50	Facunes Mound
P-34-000083		CA-SAC-56	Mosher
P-34-000084		CA-SAC-57	
P-34-000085		CA-SAC-58	
P-34-000086		CA-SAC-59	Edlinger
P-34-000087		CA-SAC-60	
P-34-000088		CA-SAC-61	
P-34-000089		CA-SAC-62	Robinson
P-34-000090		CA-SAC-63/H	Bloom Mound
P-34-000091		CA-SAC-64	Stone Lake Mound
P-34-000092		CA-SAC-65/H	
P-34-000098		CA-SAC-71	Green
P-34-000099		CA-SAC-72	Herzog Mound
P-34-000110		CA-SAC-83	
P-34-000111		CA-SAC-84	
P-34-000112		CA-SAC-85	Nicholaus Mound
P-34-000113		CA-SAC-86	
P-34-000114		CA-SAC-87/H	
P-34-000115		CA-SAC-88	Elliott Mound
P-34-000116		CA-SAC-89	
P-34-000117		CA-SAC-90	
P-34-000172		CA-SAC-145	South Stone Lake
P-34-000215		CA-SAC-188	
P-34-000229		CA-SAC-202	Mooney Site
P-34-000350		CA-SAC-323	
P-34-000351		CA-SAC-324	
P-34-000352		CA-SAC-325/H	
P-34-000353		CA-SAC-326	
P-34-000354		CA-SAC-327	

Notes

no clear project area USGS map

Location Info

County(ies): Sacramento

USGS 7.5' Quads: BRUCEVILLE
CARMICHAEL
CLARKSBURG
COURTLAND
ELK GROVE
FLORIN
SACRAMENTO EAST

North Central Information Center Report Detail Record: 88

<i>PLSS: Township/range</i>	<i>Sections</i>	<i>BL/M</i>	<i>or Land Grant</i>
T 6 N R 4 E	1, 2, 11-13	MDBM	
T 6 N R 4 E	13, 24-26, 35, 36	MDBM	
T 6 N R 4 E	2, 11	MDBM	
T 6 N R 4 E	26	MDBM	
T 6 N R 5 E	1	MDBM	
T 6 N R 5 E	1, 7	MDBM	
T 6 N R 5 E	18, 19, 30	MDBM	
T 6 N R 6 E	5, 6	MDBM	
T 7 N R 4 E	13, 24, 25, 35, 36	MDBM	
T 7 N R 4 E	35	MDBM	
T 7 N R 5 E	1, 12, 25, 36	MDBM	
T 7 N R 5 E	1-5, 7-27, 35, 36	MDBM	
T 7 N R 6 E	1-12, 15-17, 20-23, 28-32	MDBM	
T 8 N R 5 E	25	MDBM	
T 8 N R 5 E	25-28, 32, 33	MDBM	
T 8 N R 5 E	32	MDBM	
T 8 N R 6 E	21-24, 26-30, 32-34	MDBM	
T 8 N R 6 E	31, 32, 34	MDBM	

Address:

Database Record Metadata

<i>Date</i>	<i>User</i>	
<i>Entered:</i> 7/31/2000	Erin Snyder	
<i>Last Modified:</i> 12/17/2008	Machiel	
<i>IC Actions:</i> <i>Date</i>	<i>User</i>	<i>Action taken</i>
11/8/2006	jay	Added records from old Library database
12/17/2008	Machiel	GIS plotting in progress

North Central Information Center Report Detail Record: 582

Citation Information

Authors: Peak, Ann S. and Associates
Year: 1980
Title: Cultural Resource Assessment of the Proposed Waterford Grove Development, Sacramento County, California.
Affiliation:
Client: Terra Engineering, 936 Enterprise Drive, Sacramento, California 95825.
No. Pages:
Report Type(s):
Inventory Size: 287 acres
No. Sites:
No. Informal:
Collections:
Disclosure:

Associated Resources

Notes

Location Info

County(ies): Sacramento
USGS 7.5' Quads: ELK GROVE
FLORIN
PLSS: Township/range Sections *BL/M or Land Grant*
T 7 N R 6 E 25 MDBM
Address:

Database Record Metadata

	<i>Date</i>	<i>User</i>	
<i>Entered:</i>	9/5/2000	Erin Snyder	
<i>Last Modified:</i>	9/9/2009	Machiel	
<i>IC Actions:</i>	<i>Date</i>	<i>User</i>	<i>Action taken</i>
	11/8/2006	jay	Added records from old Library database
	9/9/2009	Machiel	Survey plotted in GIS

North Central Information Center Report Detail Record: 2529

Citation Information

Authors: Childress, Mitchell
Year: 1999
Title: Cultural Resources Assessment for California Family Fitness Center on Bond Road, Sacramento County, California.
Affiliation:
Client: California Family Fitness Centers, 6100 Fair Oaks Blvd. Suite 3A, Carmichael, CA 95608
No. Pages:
Report Type(s):
Inventory Size: 15.16 Acres
No. Sites:
No. Informal:
Collections:
Disclosure:

Associated Resources

Notes

Location Info

County(ies): Sacramento
USGS 7.5' Quads: FLORIN
PLSS: Township/range Sections *BLM or Land Grant*
T 7 N R 5 E 25 MDBM
Address:

Database Record Metadata

	<i>Date</i>	<i>User</i>	
<i>Entered:</i>	4/12/2001	Doniella Maher	
<i>Last Modified:</i>	9/24/2009	Machiel	
<i>IC Actions:</i>	<i>Date</i>	<i>User</i>	<i>Action taken</i>
	11/8/2006	jay	Added records from old Library database
	9/24/2009	Machiel	Survey plotted in GIS

North Central Information Center Report Detail Record: 3070

Citation Information

Authors: Maniery, Mary

Year: 1995

Title: Draft Environmental Impact Report, Lower Laguna Creek Drainage Master Plan

Affiliation:

Client: County of Sacramento, Department of Environmental Review and Assessment

No. Pages:

Report Type(s):

Inventory Size:

No. Sites:

No. Informal:

Collections:

Disclosure:

Associated Resources

<i>Primary No.</i>	<i>HRI No.</i>	<i>Trinomial</i>	<i>Name</i>
P-34-000707		CA-SAC-549H	Olen Ranch

Notes

Location Info

County(ies): Sacramento

USGS 7.5' Quads: FLORIN

<i>PLSS: Township/range</i>	<i>Sections</i>	<i>BL/M</i>	<i>or Land Grant</i>
T 7 N R 5 E	25, 26, 27	MDBM	

Address:

Database Record Metadata

	<i>Date</i>	<i>User</i>	
<i>Entered:</i>	11/28/2001	Courtney Chambers	
<i>Last Modified:</i>	10/7/2009	Machiel	
<i>IC Actions:</i>	<i>Date</i>	<i>User</i>	<i>Action taken</i>
	11/8/2006	Jay	Added records from old Library database
	10/7/2009	Machiel	Survey plotted in GIS

North Central Information Center Report Detail Record: 3790

Citation Information

Authors: Billat, Lorna Beth
Year: 2001
Title: Nextel Site CA-0222B / Elk Grove
Affiliation:
Client: Nextel Communications Wirelesss Telecommunications Service Facility
No. Pages:
Report Type(s):
Inventory Size: >1 acre
No. Sites:
No. Informal:
Collections:
Disclosure:

Associated Resources

Notes

Location Info

County(ies): Sacramento
USGS 7.5' Quads: FLORIN
PLSS: Township/range Sections *BL/M or Land Grant*
T 7 N R 5 E 35 MDBM
Address:

Database Record Metadata

	<i>Date</i>	<i>User</i>	
<i>Entered:</i>	9/18/2002	Kris Berry	
<i>Last Modified:</i>	10/22/2009	Machiel	
<i>IC Actions:</i>	<i>Date</i>	<i>User</i>	<i>Action taken</i>
	11/8/2006	jay	Added records from old Library database
	10/22/2009	Machiel	Survey plotted in GIS

North Central Information Center Report Detail Record: 4412

Citation Information

Authors: Peak, Melinda
Year: 2001
Title: Historic Resource Reconnaissance of a Proposed Surewest Tower In Sacramento Site # 203
Affiliation:
Client: SureWest Communications
No. Pages:
Report Type(s):
Inventory Size: less than 1 acre
No. Sites:
No. Informal:
Collections: Unknown
Disclosure: Not for publication

Associated Resources

Notes

Location Info

County(ies): Sacramento
Yuba
USGS 7.5' Quads: CITRUS HTS
ELK GROVE
FLORIN
GALT
LINCOLN
OLIVEHURST
RIO LINDA
SACRAMENTO EAST
TAYLOR MONUMENT
PLSS: Township/range Sections *BL/M or Land Grant*
T 9 N R 5 E 14 MDBM
Address:

Database Record Metadata

	<i>Date</i>	<i>User</i>	
<i>Entered:</i>	10/28/2003	Renee Carter	
<i>Last Modified:</i>	2/9/2010	kate	
<i>IC Actions:</i>	<i>Date</i>	<i>User</i>	<i>Action taken</i>
	11/8/2006	jay	Added records from old Library database
	12/4/2008	Machiel	Survey plotted in GIS

North Central Information Center Report Detail Record: 4473

Citation Information

Authors: Pacific Municipal Consultants
Year: 2003
Title: Archaeological and Historic Investigations for the Sheldon Road Widening Project
Affiliation:
Client: City of Elk Grove
No. Pages:
Report Type(s):
Inventory Size: linear: ~ 1.5 miles
No. Sites:
No. Informal:
Collections:
Disclosure:

Associated Resources

<i>Primary No.</i>	<i>HRI No.</i>	<i>Trinomial</i>	<i>Name</i>
P-34-001250			
P-34-001251			
P-34-001252			
P-34-001253			
P-34-001254			
P-34-001255			
P-34-001256			

Notes

Location Info

County(ies): Sacramento
USGS 7.5' Quads: ELK GROVE
FLORIN
PLSS: Township/range Sections BLM or Land Grant
T 7 N R 5 E 22-27 MDBM
Address:

Database Record Metadata

<i>Date</i>	<i>User</i>	
<i>Entered:</i> 6/16/2005	Gabe Aeschliman	
<i>Last Modified:</i> 10/28/2009	Machiel	
<i>IC Actions: Date</i>	<i>User</i>	<i>Action taken</i>
11/8/2006	jay	Added records from old Library database
10/28/2009	Machiel	Survey plotted in GIS

North Central Information Center Report Detail Record: 6154

Citation Information

Authors: Woodward-Clyde Consultants

Year: 1995

Title: Cultural Resources Inventory Report for the Proposed Mojave Northward Expansion Project

Affiliation:

Client: Mojave Pipeline Company, 5001 Commercenter Dr. Suite 300, Bakersfield, CA

No. Pages:

Report Type(s): Archaeological survey

Inventory Size: no area provided

No.Sites:

No. Informal:

Collections:

Disclosure:

Associated Resources

<i>Primary No.</i>	<i>HRI No.</i>	<i>Trinomial</i>	<i>Name</i>
P-34-001293			
P-34-001294		CA-SAC-817H	Central California Traction Company House
P-34-001295		CA-SAC-818H	Flood Control Barrier on Laguna Creek
P-34-001296		CA-SAC-819H	Residential Remnant, Sacramento County
P-34-001297			
P-34-001298			
P-34-001299			California Central Traction Co. Railroad
P-34-001300			SPRR- Ione Branch
P-34-001301			SPRR-Amador Branch
P-34-001302			SPRR San Joaquin Valley Mainline
P-34-001303			Galt Stockpile Area
P-34-001304			

Notes

no USGS map

Location Info

County(ies): Sacramento

USGS 7.5' Quads: BUFFALO CREEK
CARMICHAEL
CLAY
ELK GROVE
FLORIN
GALT
SACRAMENTO EAST
SLOUGHHOUSE

PLSS:

Address:

Database Record Metadata

	<i>Date</i>	<i>User</i>	
<i>Entered:</i>	6/22/2005	Gabe Aeschliman	
<i>Last Modified:</i>	3/2/2010	Machiel	
<i>IC Actions:</i>	<i>Date</i>	<i>User</i>	<i>Action taken</i>
	11/8/2006	jay	Added records from old Library database
	12/2/2008	kate	Clay portion plotted in GIS
	12/2/2008	kate	Sloughhouse portion plotted in GIS
	12/3/2008	kate	Sac East Portion plotted in GIS
	3/2/2010	Machiel	Florin portion plotted in GIS

North Central Information Center Report Detail Record: 10317

Citation Information

Authors: Carolyn Losee
Year: 2009
Title: Cultural Resources Investigation for AT&T Wireless Site #CN1868-A "Hwy 99" 9260 East Stockton Boulevard, Elk Grove, Sacramento County, California 95624
Affiliation: Archaeological Resources Technology
Client: EBI Consulting
No. Pages: 10
Report Type(s): Archaeological survey
Inventory Size:
No. Sites: 0
No. Informal:
Collections: Unknown
Disclosure: Not for publication

Associated Resources

Notes

Location Info

County(ies): Sacramento
USGS 7.5' Quads: FLORIN
PLSS: *Township/range* *Sections* *BL/M* *or Land Grant*
T 7 N R 5 E MDBM
Address: *Address* *City* *Assessor's parcel no.*
9260 East Stockton Boulevard Elk Grove

Database Record Metadata

Date *User*
Entered: 10/26/2009 pete
Last Modified: 12/16/2009 Pete
IC Actions:

North Central Information Center Report Detail Record: 10397

Citation Information

Authors: Billat, Lorna
Year: 2009
Title: Big Horn CA-SAC0560: Collocation Submission Packet FCC FORM 621
Affiliation: EarthTouch Inc
Client: Clearwire Wireless Broadband
No. Pages: 35
Report Type(s): Archaeological survey
Inventory Size: 10 ft x 10 ft
No. Sites:
No. Informal:
Collections: Unknown
Disclosure: Not for publication

Associated Resources

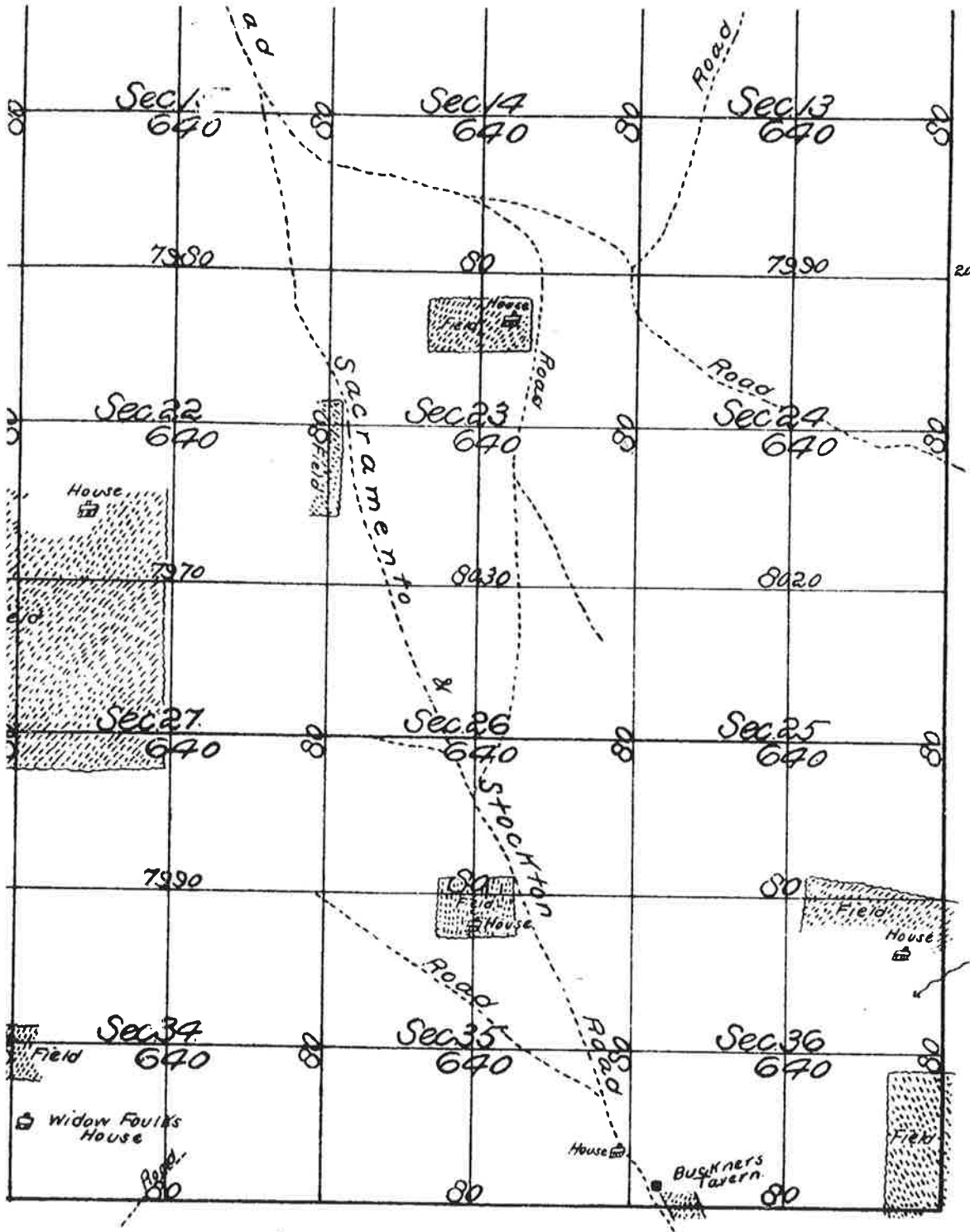
Notes

Location Info

County(ies): Sacramento
USGS 7.5' Quads: FLORIN
PLSS: *Township/range* *Sections* *BLM* *or Land Grant*
T 7 N R 5 E 36 MDBM
Address:

Database Record Metadata

	<i>Date</i>	<i>User</i>	
<i>Entered:</i>	1/14/2010	Ellen	
<i>Last Modified:</i>	1/14/2010	Ellen	
<i>IC Actions:</i>	<i>Date</i>	<i>User</i>	<i>Action taken</i>
	1/14/2010	Ellen	scanned
	1/14/2010	Ellen	digitized



1855
 G L O
 PLAT

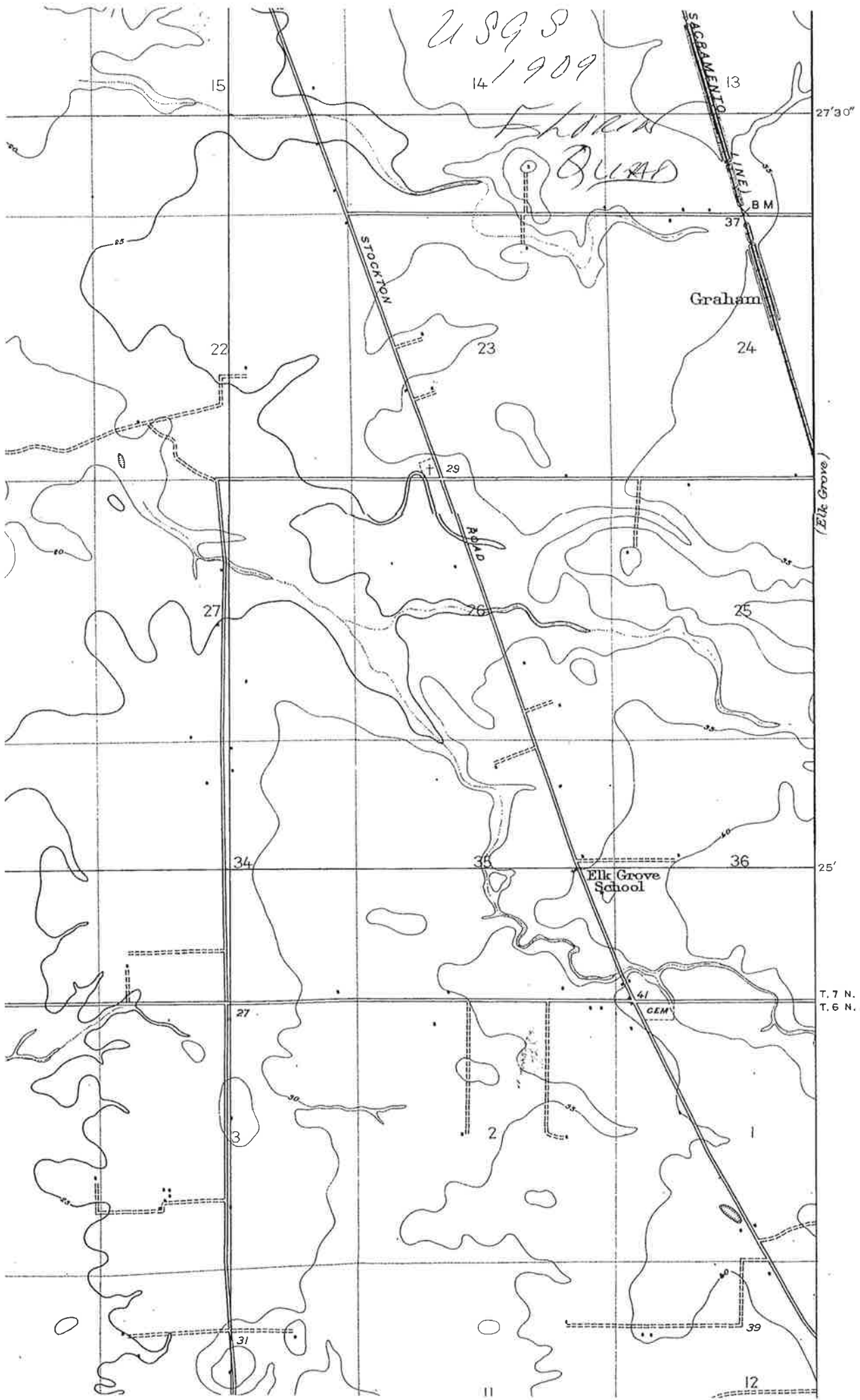
T 7 N
 R 5 E
 True Meridian
 Var 15° 25' East
 Aggreg
 Estimate

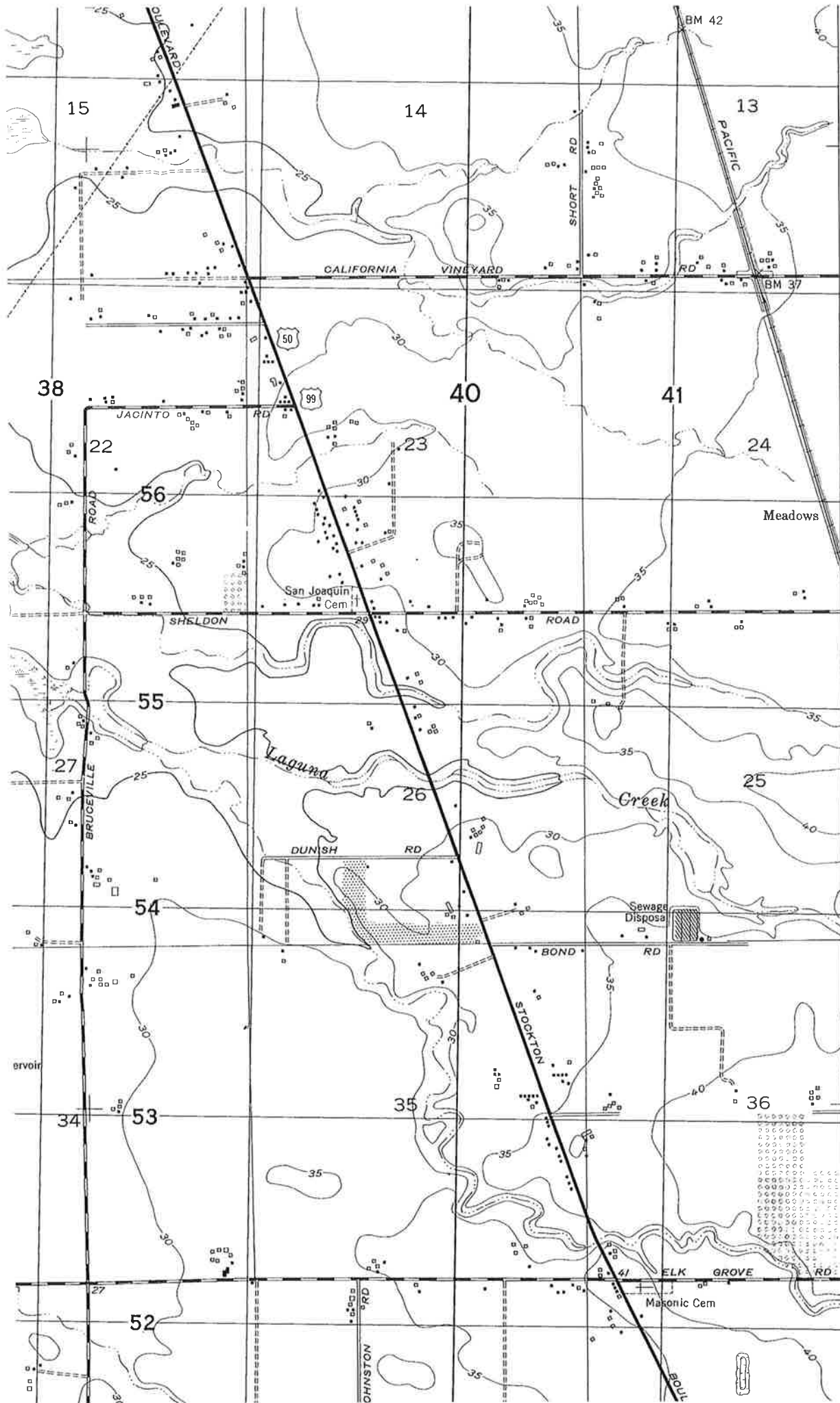
en Surveyed
April 1855
June "
" "

The above Map of Township No. 7 North, Range No. 5 East (Mount Diablo Meridian) is drawn to the field notes of the surveys thereof, on file in this Office, which have been examined by the Surveyor General's Office San Francisco California.
 August 15th 1855.

John C. [Signature]

Lawn Memorial Park Southgate	www.eastlawn.com Private East Lawn Elk Grove Memorial Park and Mortuary 9189 East Stockton Boulevard Elk Grove, CA 95624 (916) 732-2031	9189 East Stockton Boulevard Elk Grove, CA 95624	Active				38°
Elk Grove Cemetery	District/Public Elk Grove-Cosumnes Cemetery P.O. Box 533 Elk Grove CA 95759 (916) 686-5170	7901 Florin Road Sacramento	Active	Historic (Pioneer)	Good Neatly Maintained	Y	38°
Elk Grove Cemetery-Elk Grove	District/Public Elk Grove-Cosumnes Cemetery P.O. Box 533 Elk Grove CA 95759 (916) 686-5170	Elk Grove Blvd. & Highway 99 On the corner of Stockton Blvd. and W. Elk Grove Blvd, just before the freeway on the left (north)	Active	Historic (Pioneer) Fraternal (Masomic) California State Historical Landmark No. 719 Grave of Elitha Cumi Donner Wilder	Good Neatly Maintained	Y	
<i>in Carey, but not much formation found.</i>				Needs Investigation & Clarification See Carey p142			
	Public-City Fair Oaks Cemetery District 7780 Olive Street Fair Oaks, CA 95628 (916) 966-1613 www.FairOaksCemetery.com	7780 Olive Street Fair Oaks, CA 95628	Active		Good Neatly Maintained	Y	38°3
Elk Grove Cemetery Elk Grove ?	District/Public Elk Grove-Cosumnes Cemetery P.O. Box 533 Elk Grove CA 95759 (916) 686-5170	Hood-Franklin Road & Franklin Blvd Franklin CA	Active	Historic (Ethnic) Includes Chinese, German	Good Attractive, Neatly Maintained	Y	38°
		About 1-1/2 mi east of Freeport (Between Freeport & I-5?) 14180 Joy Drive Galt, CA 95632	Cleared- No physical evidence remains?	Historic (Pioneer)	Investigation Needed	Y	
Elk Grove Cemetery Elk Grove Cemetery Elk Grove Cemetery	District/Public Galt-Arno Cemetery District 14180 Joy Drive Galt, CA 95632 (916) 686-5170 www.GaltArnoCemDistrict.com	14180 Joy Drive Galt, CA 95632	Active	Historic (Pioneer) Fraternal (Odd Fellows)		Y	38° 1
	District/Public Galt-Arno Cemetery District 14180 Joy Drive Galt, CA 95632 (916) 686-5170 www.GaltArnoCemDistrict.com	Arno Rd. 1/8 mi. east of Highway 99 Galt, CA	Active	Historic (Pioneer) (Native American)	Good	Y	38° 1
Elk Grove Cemetery, Odd Fellows Cemetery	District/Public Elk Grove-Cosumnes Cemetery P.O. Box 533 Elk Grove CA 95759 (916) 686-5170	Waterman Road, east Elk Grove	Active	Fraternal (Odd Fellows)	Poor Appearance, Burial ID & Location	Y	
Elk Grove Cemetery, Jewish Cemetery	Private Home of Peace Cemetery El Paraiso Ave Blvd 5700	5700 El Paraiso Ave Sacramento, CA 95824	Active	Religious (Jewish)	Good Attractive, Neatly	Y	38° 3





U S
Army
Coops
of
ENGINEERS

1953

Floris

Sheet

LODI 22 MI.
STOCKTON 34 MI.

25'00"
4253
T. 7 N.

ELK GROVE 0.5 MI.

ATTACHMENT D. ARCHAEOLOGICAL SURVEY REPORT

EXHIBIT A-G

ATTACHMENT D. ARCHAEOLOGICAL SURVEY REPORT

PHASE I ARCHAEOLOGICAL SURVEY REPORT
FOR THE LAGUNA CREEK TRAIL-NORTH
CAMDEN SPUR PROJECT
ELK GROVE, CALIFORNIA

FINAL



Prepared for:

City of Elk Grove
8401 Laguna Palms Way
Elk Grove, CA 95758

Prepared by:

Hannah Ballard, M.A., Samantha Schell, B.A., Graham Dalldorf, M.A.,
Elena Reese, M.A., and Daniel Trout, B.A.

of

Pacific Legacy, Inc.
900 Modoc Street
Berkeley, CA 94707

February 2015


2478-02

**PHASE I ARCHAEOLOGICAL SURVEY REPORT
LAGUNA CREEK TRAIL - NORTH CAMDEN SPUR PROJECT
CITY OF ELK GROVE, SACRAMENTO COUNTY**

FEDERAL AID PROJECT NUMBER: CML-5479(040)

CONTRACT NUMBER: PL-2478-02

FEBRUARY 2015

Prepared by  Date 2/15/15
John Holson
Principal Investigator
Pacific Legacy, Inc.
Berkeley, CA

Reviewed by _____ Date _____
Erin Dwyer
Associate Environmental Planner (Archaeology) (PQS)
Environmental Branch M1, Caltrans District 3

Approved by _____ Date _____
Susan D. Bauer, Branch Chief
Environmental Branch M1, Caltrans District 3

CONFIDENTIAL INFORMATION

Archaeological and other heritage resources can be damaged or destroyed through uncontrolled public disclosure of information regarding their location. This document contains sensitive information regarding the nature and location of archaeological sites that should not be disclosed to unauthorized persons.

Information regarding the location, character or ownership of a historic resource is exempt from the Freedom of Information Act pursuant to 16 U.S.C. 470w-3 (National Historic Preservation Act) and 16 U.S.C. § 470hh (Archaeological Resources Protection Act) and California State Government Code, Section 6254.10.

If any information in this document is to be released for public review, all locational information associated with archaeological resources must be redacted before distribution.

SUMMARY OF FINDINGS

The City of Elk Grove (City), in cooperation with the California Department of Transportation (Caltrans), proposes to construct the Laguna Creek Trail–North Camden Spur trail segment between the northern tip of Camden Park to MacDonald Park via Beckington Drive. Laguna Creek Trail–North Camden Spur Project (Project) is located in the City of Elk Grove, in Sacramento County, California. Archaeological investigations were carried out under contract between Pacific Municipal Consultants (PMC) and Pacific Legacy, Inc. (Pacific Legacy). The purpose of this study was to identify historic period and/or prehistoric resources within the Area of Potential Effects (APE) that may be adversely affected by the Project.

This document was prepared to comply with historic preservation regulations, policies, and statutes, primarily Section 106 of the National Historic Preservation Act (NHPA), due to federal and state funding. Caltrans, acting as the lead agency under the delegated authority of the Federal Highway Administration (FHWA), is providing the Project oversight as federal funds are involved. The studies conducted for this Project are consistent with Caltrans responsibilities under the January 2014 *First Amended Programmatic Agreement Among Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of Federal-Aid Highway Program in California (PA)* for compliance with Section 106 of the NHPA.

The City of Elk Grove is also responsible for compliance with the California Environmental Quality Act (CEQA), which requires that California public agencies consider the consequences of their actions on the environment, including cultural resources. Public Resources Codes provide specific guidance that supports CEQA compliance. Such guidance includes the evaluation of resources in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using criteria outlined in Section 5024.1 of the California Public Resources Code to determine whether any cultural resources potentially affected by the project are historical resources for the purposes of CEQA.

The proposed Project would connect the two longest segments of the existing Laguna Creek Trail from the existing path at the northern tip of Camden Park for approximately 700 ft. of Class 1 facility to south of White Peacock Court/Beckington Drive, then along an approximately 1,050 ft. long Class 2 facility on Beckington Drive, and from White Peacock Court/Beckington Drive for approximately 200 ft. of Class 1 facility to the existing path at MacDonald Park. Approximately 115 ft. of existing Class 1 facility between homes facing White Peacock Court will require minor improvements and striping and the approximately 1,050 foot long Class 2 facility on Beckington Drive will require only striping. The proposed Project will be constructed generally within existing public right-of-ways and streets; however, minor acquisition and construction easements will be required. The project is consistent with the Elk Grove General Plan and the Elk Grove Bicycle, Pedestrian and Trails Master Plan. Each plan identifies the need for an off-street multi-use trail system providing connections throughout the City and the Sacramento region.

Phase I archaeological investigations for this Project included a review of environmental, ethnographic, prehistoric and historic data for the area, as well as a record and information search at the North Central Information Center. Native American consultation included a review of the NAHC's Sacred Land database and contacting 16 individuals. Pacific Legacy completed an intensive pedestrian survey of the Project APE. The record search, Native American Consultation, and pedestrian survey failed to reveal any cultural resources within or immediately adjacent to the Project APE.

It is Caltrans' policy to avoid cultural resources whenever possible. Further investigations may be needed if the site[s] cannot be avoided by the project. If buried cultural materials are encountered during construction, it is Caltrans' policy that work stop in that area until a qualified archaeologist can evaluate the nature and significance of the find. Additional survey will be required if the project changes to include areas not previously surveyed.

TABLE OF CONTENTS

SUMMARY OF FINDINGS	IV
1.0 INTRODUCTION	1
1.1 INTRODUCTION	1
1.2 PROJECT DESCRIPTION	1
1.3 REGULATORY COMPLIANCE.....	5
1.3 AREA OF POTENTIAL EFFECTS.....	5
1.4 PROJECT HISTORY.....	5
1.5 DATES OF FIELDWORK AND PERSONNEL	5
2.0 BACKGROUND	7
2.1 ENVIRONMENTAL SETTING.....	7
2.1.1 Geology, Hydrology, and Soils	7
2.1.2 Climate, Flora/Fauna, and Current Land Use	7
2.2 ETHNOGRAPHY	8
2.3 PREHISTORY	8
2.3.1 Windmill Pattern (4,500-3,000 B.P.).....	9
2.3.2 Berkeley Pattern (3,000-1,500 B.P.)	9
2.3.3 Augustine Pattern (1500-Contact Period).....	9
2.4 HISTORY	10
2.4.1 Spanish Period (1796-1822)	10
2.4.2 Mexican Period (1822-1848)	10
2.4.3 American Period (1848-Present)	11
2.5 POTENTIAL FOR BURIED ARCHAEOLOGICAL DEPOSITS.....	11
3.0 SOURCES CONSULTED.....	13
3.1 RECORDS AND INFORMATION SEARCH.....	13
3.2 NATIVE AMERICAN CONSULTATION.....	14
4.0 ARCHAEOLOGICAL SURVEY METHODS.....	17
5.0 STUDY FINDINGS AND CONCLUSIONS	19
6.0 REFERENCES CITED	20
Contact Period).....	10
2.4 HISTORY	10
2.4.1 Spanish Period (1796-1822)	10
2.4.2 Mexican Period (1822-1848)	11
2.4.3 American Period (1848-Present)	11
2.5 POTENTIAL FOR BURIED ARCHAEOLOGICAL DEPOSITS.....	12
3.0 SOURCES CONSULTED.....	13
3.1 RECORDS AND INFORMATION SEARCH.....	13
3.2 NATIVE AMERICAN CONSULTATION.....	14

4.0 ARCHAEOLOGICAL SURVEY METHODS	17
5.0 STUDY FINDINGS AND CONCLUSIONS	19
6.0 REFERENCES CITED	20

APPENDICES

APPENDIX A. RECORD SEARCH RESULTS
APPENDIX B. NATIVE AMERICAN CONSULTATION DOCUMENTATION
APPENDIX C. PHOTOGRAPHIC DOCUMENTATION

FIGURES

FIGURE 1. PROJECT VICINITY MAP	2
FIGURE 2. PROJECT LOCATION MAP.....	3
FIGURE 3. SIGNED APE MAP	4
FIGURE 4. SURVEY COVERAGE AND PROJECT APE	18

TABLES

TABLE 1. PREVIOUS STUDIES WITHIN ¼ MILE OF THE APE	13
TABLE 2. SUMMARY OF NATIVE AMERICAN CONSULTATION	15

1.0 INTRODUCTION

1.1 INTRODUCTION

The City of Elk Grove (City), in conjunction with California Department of Transportation (Caltrans), is proposing to build the Laguna Creek Trail–North Camden Spur trail segment between the northern tip of Camden Park to MacDonald Park via Beckington Drive. The Laguna Creek Trail–North Camden Spur Project (Project) is located in the City of Elk Grove, and depicted on the Florin (1980) 7.5-minute USGS Quadrangle (Township 7 North, Range 5 East, Section 25) (Figures 1 and 2). The Area of Potential Effects (APE) is approximately three acres long and surrounding the proposed trail segment (see Figure 3). Pacific Legacy, Inc. (Pacific Legacy) was retained by Pacific Municipal Consultants (PMC) to conduct Phase I archaeological survey of the Project APE. The purpose of this study was to identify historic period and/ or prehistoric resources within the Project APE that may be adversely impacted by the Project.

1.2 PROJECT DESCRIPTION

The proposed project is located in the City of Elk Grove (City), Sacramento County, California (Figures 1 and 2). The City of Elk Grove proposes to extend a 0.36 mile long multi-use trail from the west end of the existing Laguna Creek Trail at the northern tip of Camden Park to MacDonald Park via Beckington Drive. Laguna Creek Trail offers access to Old Town Elk Grove, Camden Lake, residential neighborhoods, and many retail centers and restaurants. Camden Park's main feature is Laguna Creek Trail, which is used as a scenic horse and jogging trail. MacDonald Park features a soccer field, open play area, and playground equipment. A trail along Whitehouse Creek is found just north of MacDonald Park. Currently, Laguna Creek Trail is split into three stretches – the longest extending for 2.25 miles from south of the Bond Road/Waterman Road intersection along Laguna Creek to the northern tip of Camden Park, the next longest extending for approximately 1 mile from east of Mix Park along Whitehouse Creek to just north of MacDonald Park, and the shortest extending for approximately one-third mile from Camden Lake to Whitehouse Creek.

The proposed project would connect the two longest segments of Laguna Creek Trail from the existing path at the northern tip of Camden Park for approximately 700 feet (ft.) of Class 1 facility to south of White Peacock Court/Beckington Drive, then along an approximately 1,050 ft. long Class 2 facility on Beckington Drive, and from White Peacock Court/Beckington Drive for approximately 200 ft. of Class 1 facility to the existing path at MacDonald Park. Approximately 115 ft. of existing Class 1 facility between homes facing White Peacock Court will require minor improvements and striping and the approximately 1,050 ft. long Class 2 facility on Beckington Drive will require only striping. The proposed project will be constructed generally within existing public right-of-ways and streets; however, minor acquisition and construction easements will be required. The project is consistent with the Elk Grove General Plan and the Elk Grove Bicycle, Pedestrian and Trails Master Plan. Each plan identifies the need for an off-street multi-use trail system providing connections throughout the city and the Sacramento region.



Figure 1. Project Vicinity Map.

Phase I Archaeological Survey Report

Investigations for the Laguna Creek Trail North Camden Spur Project, Elk Grove, California

February 2015

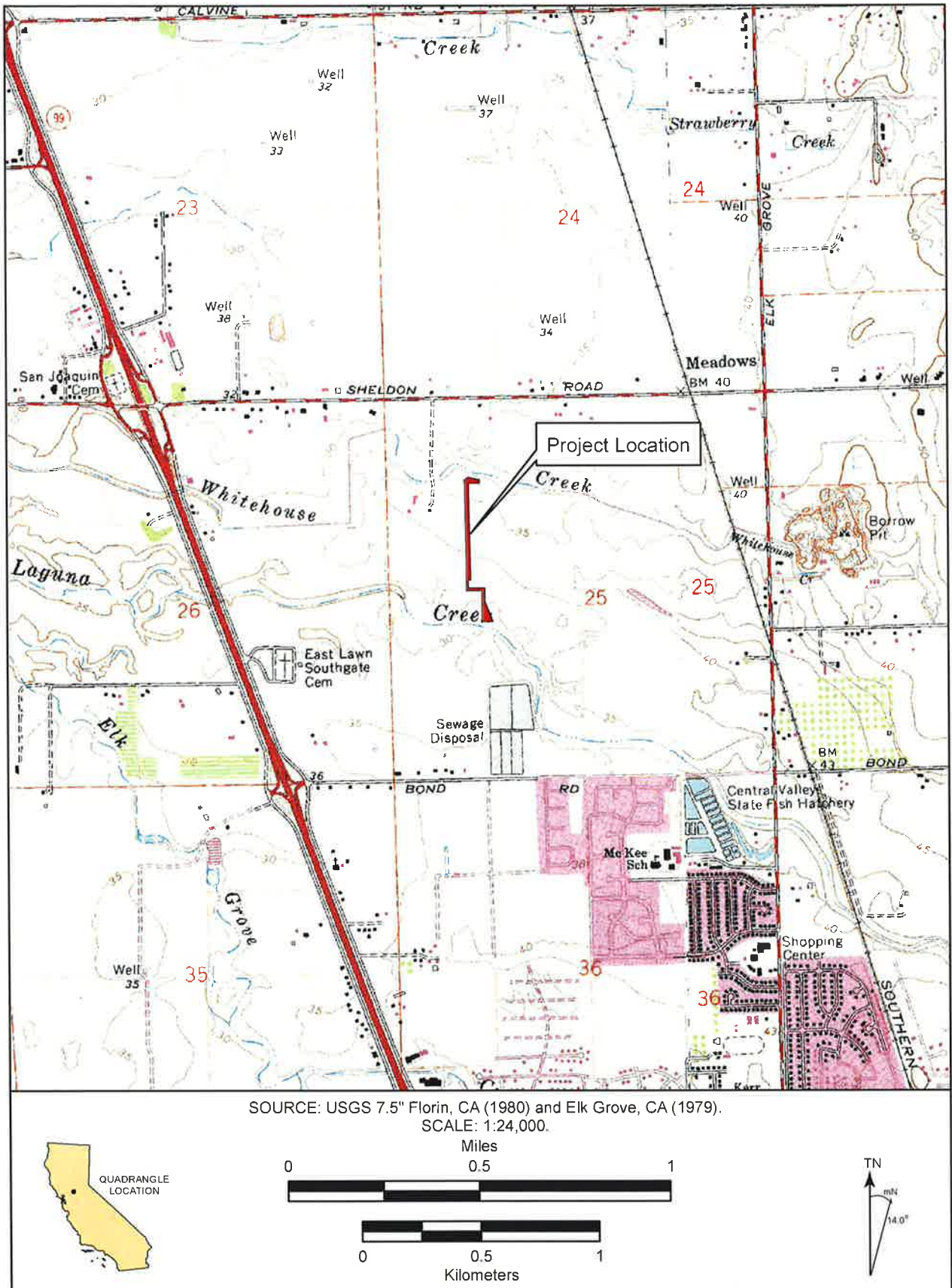


Figure 2. Project Location for Laguna Creek Trail-North Camden Spur

Phase I Archaeological Survey Report

Investigations for the Laguna Creek Trail North Camden Spur Project, Elk Grove, California

February 2015

SHORTLINE LN

CASTLEHAVEN CT

STAFFORDSHIRE CT

SAINT ARVANT CT

KINGSLAND CT

WHITE PEACOCK CT

BECKINGTON DR

SPRINGAZURE WAY

PANAMINT CT

WHITE PEACOCK WAY

HYPERIAC

SHELDON CREEK DR

KING



1.3 REGULATORY COMPLIANCE

This document was prepared to comply with historic preservation regulations, policies, and statutes, primarily Section 106 of the National Historic Preservation Act (NHPA), due to federal and state funding. Caltrans, acting as the lead agency under the delegated authority of the Federal Highway Administration (FHWA), is providing the Project oversight as federal funds are involved. The studies conducted for this Project are consistent with Caltrans responsibilities under the January 2014 *First Amended Programmatic Agreement Among Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of Federal-Aid Highway Program in California (PA)* for compliance with Section 106 of the NHPA. This report was prepared in accordance with Caltrans' (2013) *Standard Environmental Reference, Vol. 2: Cultural Resources*.

City of Elk Grove is also responsible for compliance with the California Environmental Quality Act (CEQA), which requires that California public agencies consider the consequences of their actions on the environment, including cultural resources. Public Resources Codes provide specific guidance that supports CEQA compliance. Such guidance includes the evaluation of resources in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using criteria outlined in Section 5024.1 of the California Public Resources Code to determine whether any cultural resources potentially affected by the project are historical resources for the purposes of CEQA.

1.3 AREA OF POTENTIAL EFFECTS

The APE includes all potential direct and indirect effects to cultural resources that may result from the proposed project (see Figure 3). Thus the APE, as defined by Caltrans, has both vertical and horizontal extents. The Project's horizontal APE consists of a linear, irregularly shaped corridor that extends from the point south of Whitehouse Creek and east of the northern corner of Beckington Drive, along Beckington Drive, south of White Peacock Court for approximately 700 ft. to the east and south through the open space behind the housing development to a point just north of Laguna Creek. Subsurface impacts will take place on the southern and northern ends of the proposed trail segment. In these locations the vertical APE extends a maximum depth of 2 ft. The portion of the proposed trail that follows existing roads will not have subsurface disturbance and so has a vertical APE of 0 ft.

The APE map was signed on October 7, 2014, by Erin Dwyer, Associate Environmental Planner (Archaeology) (PQS), and Cindy Root, District Local Assistance Engineer for Caltrans District 3.

1.4 PROJECT HISTORY

Pacific Legacy initially conducted archaeological investigations for the Laguna Creek Trail Project in 2010. This earlier iteration of the project had a different alignment from current Project. The project was conducted for the City of Elk Grove as a CEQA project and did not involve Caltrans oversight. As currently proposed the Laguna Creek Trail–North Camden Spur and South Camden Spur projects split the earlier Laguna Creek Trail Project into two separate projects with contiguous APEs with different alignments.

1.5 DATES OF FIELDWORK AND PERSONNEL

Pacific Legacy's cultural resources staff meets Caltrans' requirements as professionally qualified staff (equivalent) in the field of prehistoric and historical archaeology. Mr. John Holson served as Project Manager and Principal Investigator of Prehistoric Archaeology. Mr. Holson has a Master's Degree in Cultural Resource Management from the Sonoma State University and over 30 years experience in cultural resources management and California archaeology. Ms. Hannah Ballard, MA, served as Co-Principal Investigator for prehistoric and historical archaeology. Ms. Ballard has served as lead author of the ASR. Ms. Ballard has a Master's Degree in Cultural Resource Management from the Sonoma State University as well as over 20 years experience in California historical and prehistoric archaeology. Mr. Dan Trout served as field supervisor and

conducted the archaeological survey November 17, 2014. Mr. Trout has over 20 years experience in California archaeology. Graham Dalldorf, M.A., served as Project Geoarchaeologist and completed the buried sites analysis. Elena Reese, M.A. and Samantha Schell, B.A. contributed to the report.

2.0 BACKGROUND

2.1 ENVIRONMENTAL SETTING

2.1.1 GEOLOGY, HYDROLOGY, AND SOILS

The Project is situated within the broad expanse of the Sacramento Valley, which lies at the northern end of the Central, or Great Valley. The Central Valley is a long northwest-trending alluvial valley that consists of the Sacramento and San Joaquin Valleys, which meet at the Sacramento-San Joaquin Delta. The Sacramento Valley lies between the Sierra Nevada Range to the east and the Coast Ranges to the west, and is bounded in the north by the Klamath Mountains. The regional landscape evolved extensively during the Late Quaternary period. During the Pleistocene, the Delta area did not exist due to the lower sea levels. The region at that time was characterized by a broad inland valley traversed by well-defined and well-cut drainages. The combined Sacramento and San Joaquin Rivers flowed out to the Pacific Ocean shore near the Farallon Islands. As sea levels rose during the Holocene, the San Francisco Bay formed as coastal valleys were flooded. The downstream segments of rivers such as the Cosumnes and Mokelumne Rivers aggraded, causing repeated avulsions and widespread sediment deposition. As a result, the Pleistocene and Early Holocene surfaces in the region were overlain by thick deposits of younger alluvium that are generally younger than 5,000 years old (Dalldorf 2014:7-8).

Post Euro-American settlement land use changes, including reclamation efforts for conversion of land to agriculture, upstream mining activities, and channelization, have led to dramatic landscape changes in the lower Cosumnes River drainage. These changes include an increase of sedimentation rates up to 25mm/year from 1849 to ca. 1920 as a result of stream aggradation and deposition of historic alluvium including hydraulic mining wash. Subsequent levee construction and reclamation of land for agriculture from ca. 1920 to 1990 simplified channel morphometry and decreased sedimentation rates by limiting overbank flooding (Dalldorf 2014:8).

The Project vicinity currently is characterized by broad alluvial floodplains and shallow-cut drainages with remnants of earlier alluvial fans and terraces. Irrigated agricultural fields and grasslands separate the corridors of riparian vegetation along drainages outside the city limits of Elk Grove. Major rivers near the APE include the American, Cosumnes, and Sacramento Rivers. The Project is approximately three miles northwest of the Cosumnes River on the lower reaches of the Laguna Creek Watershed, which includes approximately 65 square miles of land that drains into Laguna Creek and its tributaries (Brown et al. 2009:2.1). In the nineteenth century, Laguna Creek was described as being dry in the summer, but carried sufficient water in the winter months to support agricultural activity (Thompson and West 1880).

The geology in the vicinity of the Project is comprised of Quaternary alluvial units. Detailed soil maps of the APE produced by the United States Department of Agriculture's Natural Resource Conservation Service (NRCS) are consistent with the existing surficial geologic maps. Soil map units delineated in the APE (NRCS 2012) belong to the San Joaquin and Bruella series, both of which have well developed soil profiles and are recognized as Pleistocene age soils (Meyer and Rosenthal 2008). San Joaquin series soils are located on undulating low terraces with slopes ranging from 0 to 9 percent. The series is formed in alluvium from mixed, but dominantly granitic sources. Bruella series soils are also located on low terraces and fans with slopes ranging from 0 to 5 percent. The Bruella series consists of very deep, well and moderately well drained soils formed in alluvium from granitic rock sources.

2.1.2 CLIMATE, FLORA/FAUNA, AND CURRENT LAND USE

The Project is situated within a region of Mediterranean climate that is characterized by hot dry summers and warm moist winters, and punctuated by periodic droughts. The climatic region's winter precipitation generally falls as rain with rare snowfalls. The average annual rainfall is about 20 inches during a rainy season that lasts from November to March. The temperatures range from 20 to 115 degrees Fahrenheit during the course of a

year. During the summer months, highs are usually in the 90s, whereas the winters are mostly above the freezing point. During the prehistoric period, the climate was moister and cooler than today (Major 1988; Sikes and Valasik 2014:10).

The natural vegetation habitat is classified as California Prairie in grasslands and Riparian Forest along perennial drainages (Küchler 1977). Fauna in the vicinity include several mammal and bird species. Common small mammals include brush rabbits, cottontail rabbits, deer, mice, voles, gophers, and ground squirrels. Large mammals include mountain lions and coyotes. Hawks and many other bird species, including waterfowl, inhabit the area on a seasonal basis (Dalldorf 2014:7).

The Project is within the Elk Grove city limits and the current land use is characterized by commercial, residential, and recreational development along the creek alignments. Historically, the entire area was agricultural land.

2.2 ETHNOGRAPHY

The following ethnographic context is taken from Barrett (1908), Bennyhoff (1977), Kroeber (1925), Levy (1978) and Merriam (1907). The Project lies within the ethnographic territory of the Eastern Miwok, although it is near the Eastern Miwok and Nisenan territorial border. Linguistically, the Eastern Miwok comprise one of two Miwokan subgroups of the Utian language family and is further subdivided into five languages and three distinct language groups: Plains Miwok; Bay Miwok; and a Sierra Miwok language group.

The primary political unit of the ethnographic Miwok was the tribelet, an independent entity that controlled its own territory and its natural resources. Each tribelet established permanent settlements within its territory, along with seasonal campsites used annually during resource procurement forays. Lineage was also politically important, as it denoted specific geographic localities and usually corresponded to permanent settlements.

Subsistence was based on a gathering and hunting economy involving annual rounds for resource procurement. Dietary staples included acorns, hard seeds, and roots, which were supplemented by fish and game meat. Acorns were harvested between May and August and were stored for the winter months. Hunting was conducted year round and was an important source of food in the winter when fresh plant resources were scarce.

The Miwok tool kit included bow and arrow technology. Flaked stone tools included projectile points, knives, and scrapers made primarily of chert and obsidian. The Eastern Miwok used mortars and pestles for processing acorns and other resources and manufactured both twined and coiled basketry for seed processing, cooking, and storing. The Eastern Miwok participated in a widespread east-west trade network that provided social and economic opportunities (Davis 1961).

Initial contact between Europeans and the indigenous Eastern Miwok groups occurred during the late eighteenth century as a result of Spanish explorations through the San Joaquin and Sacramento valleys. Subsequent establishment and expansion of the Spanish mission system greatly changed the Miwok's indigenous lifestyle. The Miwok were affected by increased population density from coastal and valley groups seeking escape from the missions, introduced diseases such as the malaria epidemic of 1833, and the overwhelming population increase due to the California Gold Rush. Some Miwok participated in the economic endeavors of the newcomers by working in the mining, agricultural, or ranching industries. By the early 1900s, most Miwok were scattered throughout their territory in "rancherias", resisting displacement to reservations established by the federal government.

2.3 PREHISTORY

The Central Valley prehistoric cultural chronology developed as a result of a long history of archaeological investigation in the Sacramento and San Joaquin Delta region. The dominant paradigm for Central Valley

prehistory has been the Central California Taxonomic System (CCTS), pioneered by Lillard et al. (1939), modified by Beardsley (1948), and refined by others (e.g., Bennyhoff 1994). The CCTS is defined by distinct material assemblages reflecting particular cultural adaptations and is organized according to time periods: Early (ca. 4500-2500 B.P.); Middle (ca. 2500-1300 B.P.), and Late (ca. 1300-100 B.P.).

The archaeology of this region is in a period of revision because new data are being collated, analyzed, and interpreted and older assumptions reexamined. The CCTS has given way to the system preferred by Fredrickson (1973), Moratto (1984), and others. Criticism of the CCTS centered on its decreased applicability with distance from its point of origin and the reduced explanatory power within its rigid framework. The focus of the new paradigm is the “pattern”, which Fredrickson (1973) defines as an essentially non-temporal, integrative cultural unit: the general way of life shared by people within a given geographic region. Specifically, three patterns - that overlap somewhat in adjoining areas - are recognized for central California: the Windmill, Berkeley, and Augustine Patterns.

2.3.1 WINDMILLER PATTERN (4500–3000 B.P.)

Windmill is the earliest identified pattern and extends from approximately 4500–3000 before present (B.P.). It has been identified primarily in the lower Central Valley and Delta regions, but also extends into the Sierra Nevada foothills to the east and to an as yet unknown distance up the valley to the north.

Windmill peoples are known to have hunted a wide variety of mammals, fish, and fowl, and to have gathered hard seeds. Their material culture assemblage includes large spear and projectile points; trident fish spears; at least two types of fish hooks; quartz crystals and a diversity of charm stone styles; and a baked clay industry that includes net sinkers, pecan-shaped fishline sinkers, and cooking balls. Groundstone items include both the handstone and milling stone and the mortar and pestle. The bone tool industry appears minimal, but includes awls, needles, and flakers. Utilitarian items were often acquired as finished products through trade with outlying localities.

Windmill groups buried their dead in formal cemeteries both within and separated from their villages in a ritual complex that included the use of red ochre, rich grave offerings, and the ventral extension of the body with a predominately western orientation, although other burial positions (e.g., dorsal extensions and flexed) and cremations are also known. The Windmill Pattern is said to reflect the influence of a lake or marsh adaptation. The economic stance of a marsh or lake culture is hypothesized to have pre-adapted the Windmill people to the environment of the lower Sacramento-San Joaquin Valley and Delta, suggesting they may have entered the region with such an economic and resource adaptation.

2.3.2 BERKELEY PATTERN (3000–1500 B.P.)

The Berkeley Pattern extends roughly from 3000–1500 B.P. and became more widespread, or at least more archaeologically visible, than the antecedent pattern. The Berkeley Pattern differs from the Windmill Pattern primarily in its greater emphasis on the exploitation of the acorn as a staple, as reflected in the relatively greater amount and variety of mortars and pestles. This pattern is also noted for its especially well-developed bone industry and such technological innovations as ribbon flaking of flaked stone artifacts. During this era, flexed burials replaced extended burials and the use of grave goods generally declined.

2.3.3 AUGUSTINE PATTERN (1500–CONTACT PERIOD)

The last complex in this sequence is the Augustine Pattern, which extended temporally from circa 1500 B.P. until European contact. The Augustine Pattern initially appears to be an outgrowth of the Berkeley Pattern, but is also hypothesized as a blend of Berkeley Pattern traits with those carried into the area by the migration (that would have begun approximately 1800 B.P.) of Wintun populations from the north. This pattern witnessed a great elaboration of ceremonial and social organization, including the development of social

stratification. Exchange became well developed and even more intensive emphasis was placed on the use of acorns as indicated by the use of shaped mortars and pestles and by numerous hopper mortars.

Other notable elements of the material culture assemblage include flanged tubular smoking pipes (cloud blowers), harpoons, and an especially elaborate baked clay industry that includes figures and pottery vessels (Cosumnes Brownware), clam shell disk beads, and the use of small projectile points, referred to as the Gunther Barbed series. The appearance of small projectile points suggests the use of the bow and arrow. Other traits include the introduction of pre-interment grave-pit burning of offerings during the mortuary ritual, increased fixed village sites, population growth, and a developing monetary economy in which beads were used as a standard of exchange.

2.4 HISTORY

The following historical summary draws from several existing histories and sources including: Hoover et al. (1990), Beck and Haase (1974), Thompson and West (1880), Davis (1890), and Reed (1923).

2.4.1 SPANISH PERIOD (1796–1822)

Spanish interest in Upper California began in the 1760s with rumors that Russia was planning to expand its colonial sphere of interest southward from Alaska. In response, Spain sent Father Junípero Serra, along with 300 priests, soldiers, sailors, laborers and retainers, to begin establishing a system of missions northward. In 1769, Mission San Diego and the first presidio were established. This success was followed by a string of settlements and missions northward which ended with Mission San Francisco Solano in Sonoma County in 1823 (Hoover et al. 1966).

The Sacramento River Delta area was discovered and named by several Spanish expeditions in the late eighteenth century; however, it was not explored until the early nineteenth century. The first expedition into the Sacramento Valley was led by Gabriel Moraga in 1808 (Beck and Haase 1974:18). He explored portions of the Mokelumne, Cosumnes, and American Rivers, as well as the Sacramento River. The most thorough exploration of the Sacramento River region by the Spanish occurred in 1817 and was led by Father Narisco Durán. This expedition was probably the first to pass the future location of the City of Sacramento (Hoover et al. 1990:286). The Spanish built their northernmost mission in San Rafael in 1817 and Sacramento County remained at the fringes of the Spanish colony (Hoover et al. 1990:174).

2.4.2 MEXICAN PERIOD (1822–1848)

In the 1822, Mexico gained its independence from Spain and built the last and northernmost mission in Sonoma in 1823 (Hoover et al. 1990:476). The Mexican government continued to consider the Sacramento Valley as the edges of Mexican territory and initially left it unsettled. In 1826, Jedediah Strong Smith, an American fur trapper, and his company made the first overland expedition into California and returned in 1827 to explore the San Joaquin and Sacramento Valleys. The Mexican government insisted he and his men leave, but the path into the Sacramento Valley had been opened (Hoover et al. 1990:286). In 1833, the Mexican government secularized the mission lands and transferred them to private ownership. Various governors issued large land grants throughout California to settle the territory.

In 1839, John A. Sutter, a German-Swiss immigrant, petitioned Governor Alvarado for a grant of land in the Sacramento Valley to build a colony. Since the Mexican government had been having trouble with interior Native American groups rustling coastal settlement cattle, the proposal of a buffer in the form of Sutter's colony was attractive (Davis 1890:7). In 1841, Governor Alvarado granted Sutter 11 leagues of land in Sacramento County and he established New Helvetia, also known as Sutter's Fort, which acted both as a safe haven and a trading post (Hoover et al. 1990:286). During the 1840s, Sutter's Fort became a shelter for immigrants entering California via the overland trail.

Along with John Sutter, the Mexican government granted several other ranchos to immigrants in the Sacramento Valley during the 1830s and 1840s. These grantees included J. B. R. Cooper (Rancho Río Ojotska), John Sinclair (Rancho del Paso), W. A. Leidesdorff (Rancho Río de los Americanos), and William Daylor and Jared Sheldon (Rancho Omochumnes) (Hoover et al. 1990:288). Rancho Omochumnes, located along the Cosumnes River, was granted in 1844 and encompassed modern Elk Grove and the APE (Hoover et al. 1990:289).

2.4.3 AMERICAN PERIOD (1848–PRESENT)

At the close of the Mexican-American War (1846–1848), the 1848 Treaty of Guadalupe Hidalgo brought Alta California under control of the United States. In that same year, James Marshall discovered gold on the American River and the California Gold Rush began. The discovery of gold brought tens of thousands of gold seekers from around the world. These newcomers pushed further into the California interior than had been the case during the Mexican era. The wealth and expanding population in California curtailed the usual territory phase and California became a state in 1850 (Hoover et al. 1990).

In 1849, the first California state capitol was established in San Jose. From there it moved to town of Vallejo and then Benicia. Finally, in 1854, the state capital was moved to Sacramento. Construction on the capitol building began in 1860 and completed in 1874 (Hoover et al. 1990).

Outside of Sacramento, mining camps sprung up along the American and Cosumnes Rivers. Most of these camps disappeared as the Gold Rush ended. With the development of roads and railroads in the 1850s-1870s, towns were established along these transportation routes. The towns of Folsom, Galt, and Elk Grove were among the communities that developed during this time. The original site of Elk Grove was located approximately one mile south of the current city. It started as a way station along Stockton Road in the 1850s (Reed 1923:127). The Project is located within the city limits of modern Elk Grove. In 1876, Elk Grove was established by J. Everson who founded the Elk Grove Building Company. The Elk Grove Building Company was a group of business people who wanted to develop a business center along the new Central Pacific railroad line. During the 1870s, this company built two hotels, a flour mill, a general store, a hardware store, a meat market, furniture manufactory, a carriage and wagon manufactory, dressmaker and milliner shops, and a grain warehouse. By 1880, the town was well established (Thompson and West 1880:234).

2.5 POTENTIAL FOR BURIED ARCHAEOLOGICAL DEPOSITS

The proposed Project is located in the lower reaches of the Laguna Creek watershed, along the southeastern margin of the Sacramento Valley. The landscape of the Sacramento Valley has undergone considerable change since humans first occupied the area ca. 13,500 years ago. In an effort to understand how these changes may have impacted the visibility, burial, and/or preservation of archaeological sites during the period of human occupation, Meyer and Rosenthal (2008) produced a thorough synthesis regarding regional landscape evolution during the late Quaternary. A number of causal factors have contributed this evolution, including climate change, Holocene sea level rise (eustasy), tectonics, and historic period mining operations, among others. Regardless of the cause, Meyer and Rosenthal (2008) posit that repeated cycles of deposition, erosion, and landscape stability have produced a mosaic of differently-aged landforms along the margins of the Sacramento and San Joaquin Valleys, and that landform age can be used to model the sensitivity for buried archaeological deposits using existing surficial geologic and soil maps, supplemented with radiocarbon dates and focused field investigations.

Existing surficial geologic maps show that the Project is located on a dissected alluvial fan belonging to the lower member of the Riverbank Formation (Helley and Harwood 1985). The lower Riverbank Formation dates to the middle Pleistocene (~450,000-130,000 years before present), and is grouped more generally with “older Pleistocene deposits” by Meyer and Rosenthal (2008). These older Pleistocene deposits are characterized by high gravel content, deeply weathered soil profiles (red to reddish brown), and subsurface

accumulations of clay and silica. More importantly, these deposits were emplaced prior to human occupation in the region, and are thus considered to have a very low potential for buried archaeological resources.

Detailed soil maps of the Project vicinity produced by the NRCS comport with the existing surficial geologic maps. Soil map units delineated in the Project vicinity (NRCS 2012) belong to the San Joaquin and Bruella series, both of which have well developed soil profiles and are recognized as Pleistocene age soils (Meyer and Rosenthal 2008). Based on this age assignment, these soil series have been assigned a very low potential for buried archaeological resources. Given the similar data provided by both existing surficial geologic and soil maps, the overall potential for buried archaeological resources to be present within the APE is estimated to be very low.

3.0 SOURCES CONSULTED

3.1 RECORDS AND INFORMATION SEARCH

On December 8, 2010, a record and information search (File No. SAC-10-154) was conducted by the staff at North Central Information Center (NCIC) of the California Historical Resources Information System, California State University, Sacramento. This record search was completed for an earlier Laguna Creek Trail project alignment. Based on consultation with Erin Dwyer, Caltrans PQS, the record search was not updated for the current Project. The record search documentation is included in Appendix A.

The record search consisted of a review of:

- the National Register of Historic Places *Directory of Determinations of Eligibility*, (National Park Service 2010);
- the National Register of Historic Places and California Register of Historical Resources listings (2008 and Updates) (National Park Service 2008; State of California 2008);
- the California Inventory of Historic Resources (State of California 1976);
- the *California Historical Landmarks* (State of California 1996);
- the California Points of Historical Interest listing (State of California 1992);
- the OHP Historic Property Data File (State of California 2010);
- the CALTRANS State and Local Bridge Survey (State of California 1989);
- Historic Maps including: 1855 GLO PLAT, 1909 USGS Florin Quadrangle, 1953 US Army Corps of Engineers Florin Sheet;
- the California Cemeteries Inventory; and,
- other pertinent historic data on file with *Pacific Legacy*.

The record and information search revealed that seven cultural resource studies have been conducted within ¼ mile radius. Among these only two studies (S-00088 and S-03070) included the portions of the APE. These studies investigated less than 0.25% of the total APE and are concentrated in the southern portion of the APE. All of the studies within yielded negative results within the APE and within ¼ mile of the APE. No cultural resources have been previously recorded within APE or within ¼ mile of the APE. Table 1 summarizes the previous studies conducted within ¼ mile of the APE.

Table 1. Previous Studies within ¼ Mile of the APE

NCIC Study Number	Author	Date	Type	Results	In APE?
S-00016	Soule	1981	Cultural Resource Survey	Negative	No
S-00088	Johnson	1974	Cultural Resource Survey	Negative in the APE	Yes
S-00582	Peak and Associates	1980	Cultural Resource Survey	Negative	No
S-02529	Childress	1999	Cultural Resource Survey	Negative	No
S-03070	Maniery	1995	Cultural Resource Survey	Negative in the APE	Yes
S-04473	PMC	2003	Cultural Resource Survey	Negative in ¼ mile of the APE	No
S-06154	Woodward Clyde Associates	1995	Cultural Resource Survey	Negative in the APE	No

3.2 NATIVE AMERICAN CONSULTATION

On behalf of Caltrans, Pacific Legacy conducted Native American consultation for the Project. Pacific Legacy sent a letter to the NAHC on October 21, 2014 requesting a search of their Sacred Lands Inventory for information regarding cultural resources within the APE and the greater Laguna Creek Trail–North Camden Spur APE (Pacific Legacy 2014). A response letter from Ms. Debbie Pilas-Treadway of the NAHC, dated November 21, 2014, was received via fax on November 24, 2014. Ms. Pilas-Treadway indicated that the search of the Sacred Lands File failed to indicate the presence of cultural resources “in the immediate Project Area.”

The NAHC provided a list of 12 tribal groups or individuals who may have knowledge of cultural resources in the APE or may have an interest in the Project. Letters signed by Susan Bauer, Senior Environmental Planner, M1, Caltrans District 3, were sent to these groups and three additional groups and individuals¹ on November 19, 2015. The letters provided a brief description of the current status of the Laguna Creek Trail–North Camden Spur Project and requested input on cultural resources in the APE. In December 2014, Hannah Ballard of Pacific Legacy made follow-up phone calls to all the parties on the NAHC list. Ballard spoke directly to six of the potentially interested Native Americans previously contacted by letter.

A written response was received from Daniel Fonseca Miwok/Maidu, Shingle Springs Rancheria Tribal Historic Preservation Officer (THPO) and Most Likely Descendent (MLD) requesting updated information on the Project in addition to copies of any and all record searches and/ or surveys in or around the APE. Documentation of the Native American consultation effort is provided in Table 2 and Appendix B.

¹ Response from the NAHC was received first for the Laguna Creek Trail–South Camden Spur project. In order to expedite the consultation process, letters were sent to the 16 individuals and groups listed by the NAHC. The NAHC letter for the North Camden Spur Project listed only 12 groups and individuals; however it was received after the letters were mailed. The list from the South Camden Spur Project is included in Appendix B.

Table 2. Summary of Native American Consultation

Native American Contact Name	Native American Contact Group	Date of Initial Letter	Date of Follow-up Phone Call	Date(s) Reply Received	Comment
Randy Yonemura	Miwok	11/19/14	12/1/14, phone message	None	
Rhonda Morningstar Pope, Chairperson	Buena Vista Rancheria	11/19/14	12/1/14, phone message with receptionist	None	Receptionist said the Roselyn Lewenya, Environmental Director, is the individual who would respond to our request for Sec 106 consultation. Left message for Ms. Lewenya.
Roselyn Lewenya, Environmental Director	Buena Vista Rancheria	Initial letter sent to Rhonda Morningstar Pope (11/19/14)	12/1/14, phone message with receptionist	None	Receptionist said the Roselyn Lewenya, Environmental Director, is the individual who would respond to our request for Sec 106 consultation. Left message for Ms. Lewenya.
Judith Marks	Colfax-Todds Valley Consolidated Tribe	11/19/14	12/1/14, phone message	None	
Pamela Cubbler	Colfax-Todds Valley Consolidated Tribe	11/19/14	12/1/14, phone message	None	
Yvonne Miller, Chairperson	Ione Band of Miwok Indians	11/19/14	12/1/14, phone message	None	Administrative Assistant said that Anthony Burris was the most appropriate party to speak with, so a message was left for him.
Anthony Burris, Chairperson	Ione Band of Miwok Indians Cultural Committee	11/19/14	12/2/14, message with Administrative Assistant	None	Administrative Assistant said that Anthony Burris was the most appropriate party to speak with, so a message was left for him.
Cosme Valdez, Interim Chief Executive	Nashville-El Dorado Miwok	11/19/14	12/2/14, phone message	None	
Hermo Olanio, Vice Chairperson	Shingle Springs Band of Miwok Indians	11/19/14	12/2/14, message with Administrative Assistant	None	
Nicholas Fonseca, Chairperson	Shingle Springs Band of Miwok Indians	11/19/14	12/2/14, message with Administrative Assistant	None	
Daniel Fonseca, Cultural Resource Director	Shingle Springs Band of Miwok Indians	11/19/14	12/2/14, message with Administrative Assistant	12/2/14	Spoke with Kara Perry, Administrative Assistant in the Cultural Resource Department who confirmed they received the letters and had sent a response via USPS. Received PDF of signed letter mailed to Caltrans. The response letter states that Shingle Spring is not aware of any known cultural resources within the project. Shingle Springs requests continued consultation through project updates from Caltrans. Shingle Springs also requests copies of all completed record searches and surveys completed in and around the APE as well as any

Native American Contact Name	Native American Contact Group	Date of Initial Letter	Date of Follow-up Phone Call	Date(s) Reply Received	Comment
Gene Whitehouse, Chairperson	United Auburn Indian Community of Auburn Rancheria	11/19/14	12/2/14, phone message	None	archaeological, cultural or environmental reports completed as part of the project.
Marcos Guerrero, Tribal Preservation Committee	United Auburn Indian Community of Auburn Rancheria	11/19/14	12/2/14	12/2/14	Mr. Guerrero's staff was doing a search for ethnographic sites in the area. I informed him we had negative record search and survey results. His staff would likely send out a letter requesting a copy of the cultural resources report for the project. To date, additional response has been received.
Jason Camp, THPO	United Auburn Indian Community of Auburn Rancheria	11/19/14, 12/3/14 resent via email	12/2/14, phone message	12/3/14, phone message	At Mr. Camp's, request resent letters digitally via email. No further response was received.
Raymond Hitchcock, Chairperson	Wilton Rancheria	11/19/14	12/2/14, receptionist	None	Receptionist directed me to Steven Hutchason, left message on voice mail.
Steven Hutchason, Executive Director Environmental Resources	Wilton Rancheria	11/19/14	12/2/14, phone message	None	Receptionist directed me to Steven Hutchason, left message on voice mail

4.0 ARCHAEOLOGICAL SURVEY METHODS

On November 17, 2014, a pedestrian survey of the APE was conducted by Pacific Legacy archaeologist Daniel Trout, B.A. The purpose of the archaeological survey was to identify cultural resources within the APE that may be affected by the Project. The APE was intensively surveyed in parallel transects spaced no more than 10 meters apart. The entire APE, which totals approximately three acres, was surveyed. Figure 4 depicts the survey coverage on the APE map. Photographs of the APE are included in Appendix C.

The Project is predominantly located in an area of residential and recreational development and exhibits a high level of disturbance throughout. To the northeast the APE includes a recreational area (a neighborhood park) that borders an east to west trending drainage and dry flood pond to its north. Turning to the south, the APE follows Beckington Drive through a developed residential neighborhood bordered by concrete sidewalks and manicured lawns. There are underground utilities along the sidewalks in both the residential and recreational areas including electrical, water, sewage, and storm drains. Ground visibility in the northern portion, along Beckington Drive, is poor (5-10%) because the majority of the area is covered in asphalt, concrete and thickly manicured lawns. Portions of the ground that were devoid of vegetation were examined for cultural material. The soil ranges from a dark brown clay loam in residential areas to brown silty loam in northeastern recreational area. The predominant vegetation consists of manicured lawns and ornamental shrubs.

The southern portion of the APE is outside (south) of the residential development and follows the backside of the development east for approximately 200 ft. This area has been disturbed by an underground storm drain and an adjacent ditch (approximately 2 ft. wide by 1 ft. deep), both of which trend east and empty into a manmade south trending, reed filled, drainage ditch. This ditch eventually empties into Laguna Creek. East of the south trending ditch, the APE passes through the backyard of a private residence and then into a grassy recreational area (Camden Park). Ground visibility in the southern portion varied between 90% behind the residential area and 10% in the reed filled drainage ditch. Portions of the APE with drainage embankments, patches barren of vegetation, and back dirt from rodent burrows were all examined for cultural material. The soil is an orange/ brown silty loam. Vegetation consists of manicured lawns and ornamental shrubs as well as numerous invasive weed species, reeds along the drainages and seasonal grasses. No prehistoric or historic period cultural materials or resources were identified in the APE during the Phase I survey.

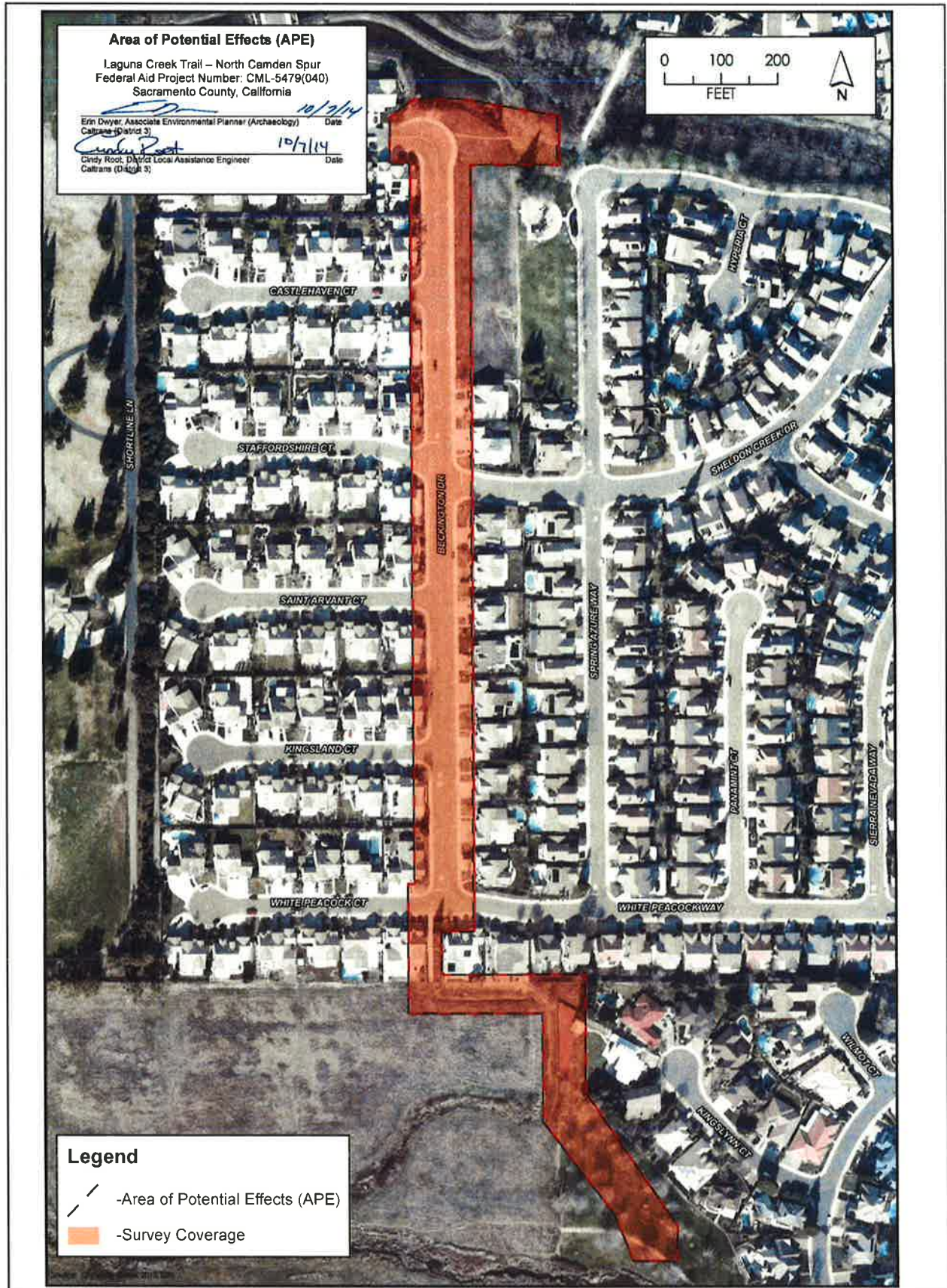


Figure 4. Survey Coverage

5.0 STUDY FINDINGS AND CONCLUSIONS

The records search and literature review revealed that no previously recorded ethnographic, historic, or archaeological sites were situated within a ¼ mile radius of the APE. The pedestrian survey of the APE did not identify prehistoric or historic period resources. The high degree of disturbance and the low potential for buried sites indicates that there is a low potential for archaeological resources to be encountered during Project construction related ground disturbing activities. It is our opinion that no further studies within the APE are necessary unless: 1) Project plans change to include unsurveyed areas; 2) Project plans change to include the construction of additional facilities; or 3) cultural materials are encountered during ground disturbing activities.

It is Caltrans' policy to avoid cultural resources whenever possible. Further investigations may be needed if the site[s] cannot be avoided by the project. If buried cultural materials are encountered during construction, it is Caltrans' policy that work stop in that area until a qualified archaeologist can evaluate the nature and significance of the find. Additional survey will be required if the project changes to include areas not previously surveyed.

If human remains are encountered during ground disturbing activities, work in that area must halt and the Sacramento County Coroner must be immediately notified. If the remains are determined to be Native American, then the NAHC is to be notified within 24 hours as required.

6.0 REFERENCES CITED

- Barrett, S.A.
1908 The Geography and Dialects of the Miwok Indians. University of California Publications in American Archaeology and Ethnology, Vol. 6. The University Press, Berkeley.
- Beardsley, R.
1948 Cultural Sequences in Central California Archaeology. *American Antiquity* 14:1-29.
- Beck, W.A, and Y. D. Haase
1974 Historical Atlas of California. University of Oklahoma Press, Norman Oklahoma.
- Bennyhoff, J.A.
1977 Ethnogeography of the Plains Miwok. Center for Archaeological Research at Davis Publications No. 5, Davis, California.

1994 Central California Augustine: Implications for Northern California Archaeology. In *Toward a New Taxonomic Framework for Central California Archaeology: Essays by James A. Bennyhoff and David A. Frederickson*, edited by R.A. Hughes, pp. 65-74. Contributions of the University of California Archaeological Research Facility, No. 52, Berkeley.
- Brown, Carmel, CKB Environmental Consulting Inc., Greg Suba, Environmental Education Services, EDAW, Inc., and Geosyntec Consultants
2009 Laguna Creek Watershed Management Action Plan. Document accessed 2014 online at: <http://lagunacreek.org/resource-library/>.
- Childress, Mitchell
1999 Cultural Resources Assessment for California Family Fitness Center on Bond Road, Sacramento County, California. Study #S-02529 on file at the North Central Information Center, California State University, Sacramento, Sacramento, California.
- Clifton, Robert T.
1970 *Barbs, Prongs, Points, Prickers, & Stickers: A Complete and Illustrated Catalogue of Antique Barbed Wire*. University of Oklahoma Press, Norman, Oklahoma.
- Dalldorf, G.
2014 Extended Phase I Geoarchaeological Investigations for the Sac-99 Seismic Retrofit Project, Sacramento County, California. Report prepared for California Department of Transportation, District 3, Marysville, CA.
- Davis, J. T.
1961 Trade Routes and Economic Exchange Among the Indians of California. Reports of the University of California Archaeological Survey No. 54., University of California, Berkeley.
- Davis, W. J.
1890 *An Illustrated History of Sacramento County*. The Lewis Publishing Company. Chicago, IL.
- Fredrickson, D.A.
1973 Early Cultures of the North Coast Range, California. Ph.D. Dissertation, Department of Anthropology, University of California, Davis.

General Land Office

1855 General Land Office Plat Map: Township 7 North, Range 5 East. On file at the North Central Information Center, California State University, Sacramento, Sacramento, California.

Helley, Edward J., and David S. Harwood

1985 Geologic map of the late Cenozoic deposits of the Sacramento Valley and Northern Sierran foothills, California. US Geological Survey. Miscellaneous Field Studies Map MF-1790, Scale 1:62,500.

Hoover, M. B., H. E. Hoover, E. G. Rensch, W. N. Abeloe, and D. E. Kyle

1990 Historic Spots in California. Stanford University Press, Stanford, California.

Kroeber, A. L.

1925 Handbook of the Indians of California. Bureau of American Ethnology Bulletin 78, Washington, D.C.

Küchler, A.W.

1977 The map of the natural vegetation of California. In, *Terrestrial Vegetation of California*, edited by M. G. Barbour and J. Major, pp. 909-938. John Wiley and Sons, New York.

Johnson, Jerald J.

1974 Reconnaissance Archaeological Survey of the Morrison Stream Group in Sacramento California. Study #S-00088 on file at the North Central Information Center, California State University, Sacramento, Sacramento, California.

Levy, R.

1978 Eastern Miwok. In Handbook of North American Indians, Volume 8, California, edited by R. F. Heizer, pp. 398-413. Smithsonian Institution, Washington D.C.

Lillard, J.B., R.F. Heizer, and F. Fenenga

1939 An Introduction to the Archaeology of Central California. Department of Anthropology Bulletin No. 2, Sacramento Junior College, Sacramento.

Major, J.

1988 California Climate in Relation to Vegetation. In *Terrestrial Vegetation of California*, edited by M. G. Barbour and J. Major, pp. 11-74. Special Publication No. 9, California Native Plant Society, Sacramento.

Maniery, Mary

1995 Draft Environmental Impact Report, Lower Laguna Creek Drainage Master Plan. Study #S-03070 on file at the North Central Information Center, California State University, Sacramento, Sacramento, California.

Merriam, C. H.

1907 Distribution and Classification of the Mewan Stock in California. *American Anthropologist* 9(2):338-357.

- Meyer, Jack, and Jeffrey S. Rosenthal
 2008 A Geoarchaeological Overview and Assessment of Caltrans District 3; Cultural Resources Inventory of Caltrans District 3 Rural Conventional Highways. Far Western Anthropological Research Group, Inc., Davis, California. Submitted to California Department of Transportation, District 3, Marysville.
- Moratto, M. J.
 1984 California Archaeology. Academic Press, Orlando. National Park Service
 2008 National Register of Historic Places. On file at the North Central Information Center, California State University, Sacramento, Sacramento, California.
 2010 National Register of Historic Places: Directory of Determinations of Eligibility. On file at the North Central Information Center, California State University, Sacramento, Sacramento, California.
- Natural Resource Conservation Service (NRCS)
 2014 Web Soil Survey. U.S. Department of Agriculture. Accessed online 2014 at: <http://websoilsurvey.nrcs.usda.gov/>. Pacific Municipal Consultants (PMC)
 2003 Archaeological and Historic Investigations for the Sheldon Road Widening Project. Study #S-04473 on file at the North Central Information Center, California State University, Sacramento, Sacramento, California.
- Peak, Ann S. and Associates
 1980 Cultural Resource Assessment of the Proposed Waterford Grove Development, Sacramento County, California. Study #S-00582 on file at the North Central Information Center, California State University, Sacramento, Sacramento, California.
- Reed, G. W.
 1923 History of Sacramento California with Biographical Sketches of the Leading Men and Women of the County who have been Identified with Its Growth and Development from the Early Days to the Present. Historic Record Company, Los Angeles, California.
- Sikes, N. E., and M. Valasik
 2014 Archaeological Survey Report for the Douglas Road and Grant Line Road Intersection Improvements Project, City of Rancho Cordova, Sacramento County, California. Report prepared for California Department of Transportation, District 3, Marysville, CA and the City of Rancho Cordova, CA.
- State of California
 1976 *California Inventory of Historic Resources*. On file at the North Central Information Center, California State University, Sacramento, Sacramento, California.
 1989 *Caltrans State and Local Bridge Survey*. On file at the North Central Information Center, California State University, Sacramento, Sacramento, California.
 1992 *California Points of Historical Interest*. On file at the North Central Information Center, California State University, Sacramento, Sacramento, California.
 1996 *California Historical Landmarks*. On file at the North Central Information Center, California State University, Sacramento, Sacramento, California.

- 2008 California Register of Historical Resources. On file at the North Central Information Center, California State University, Sacramento, Sacramento, California.
- 2010 OHP Historic Property Data File. On file at the North Central Information Center, California State University, Sacramento, Sacramento, California.
- Soule, William E.
- 1981 Cultural Resources Survey Report, Application 26691, Bristow, Bush, Cantrell, and Wallace "A Partnership." Study #S-00016 on file at the North Central Information Center, California State University, Sacramento, Sacramento, California.
- Thompson and West
- 1880 History of Sacramento County, California with Illustrations Descriptive of its Scenery. Thompson and West, Publishers. Oakland, CA.
- U.S. Army Corps of Engineers
- 1953 Florin Sheet, California. Scale Unknown. On file at the North Central Information Center, California State University, Sacramento, Sacramento, California.
- U.S. Department of Agriculture
- 2012 SSURGO database for Sacramento County, California. Accessed online at <http://soildatamart.nrcs.usda.gov/>, May 15, 2012.
- U.S. Geological Survey
- 1909 Florin Quadrangle, California. 1:31680. On file at the North Central Information Center, California State University, Sacramento, Sacramento, California.
- Woodward-Clyde Consultants
- 1995 Cultural Resources Inventory Report for the Proposed Mojave Northward Expansion Project. Study #S-06154 on file at the North Central Information Center, California State University, Sacramento, Sacramento, California.

APPENDICES

APPENDIX A. RECORD SEARCH RESULTS



Bay Area Division
 900 Modoc Street
 Berkeley, CA 94707

Phone: 510.524.3991
 Fax: 510.524.4419
 www.pacificlegacy.com

December 07, 2010

Ms. Sally Torpy, Coordinator
 North Central Information Center (NCIC)
 California State University, Sacramento
 6000 J Street, Adams Building, Suite #208
 Sacramento, CA 95819-6100

Re: Records Search Request, Pacific Legacy Project Number: PL-2478-01

Dear Ms. Sally Torpy:

Pacific Legacy is conducting a cultural resources study and would like the North Central Information Center to complete a records search. The project area is indicated on the attached USGS map.

Project Information

Client: PMC Primary Contact: PMC

Client contact: Jed McLaughlin

Project Name: PMC Laguna Creek Trail Project, Elk Grove (PL-2478-01)

County: Sacramento

Description (including location and USGS 7.5' minute quad): Installation of a bike and pedestrian path measuring approximately one-third of a mile in length.

The project area is depicted on the Florin 7.5' USGS Quad: T07N, R05E, Section 25

Records Search Information:

- List and map of sites within project area and a ½ mile radius
- List and map studies within project area and a ½ mile radius
- Copies of site records
- Copies of Study/Survey Reports (Please give full copy of study/survey report if located in the immediate project location not in the ½ mile radius.)
- Bibliography of Study/Survey Reports

<p>Sierra Central 3081 Alhambra Dr. #208 Cameron Park, CA 95682 530.677.9713 Ph. 530.677.9762 Fax</p>	<p>Southern California 42055 50th St. #4 Quartz Hill, CA 93536 661.722.2556 Ph./Fax</p>	<p>Central Coast & Business Office 1525 Seabright Ave. Santa Cruz, CA 95062 831.423.0588 Ph. 831.423.0587 Fax</p>	<p>North Coast to Cascades 3760 Morrow Ln. #E Chico, CA 95928 530.899.8314 Ph. 530.899.8333 Fax</p>	<p>Pacific Basin 30 Aulike St. #301 Kailua, HI 96734 808.263.4800 Ph. 808.263.4300 Fax</p>
---	---	---	---	--



Bay Area Division
900 Modoc Street
Berkeley, CA 94707

Phone: 510.524.3991
Fax: 510.524.4419
www.pacificlegacy.com

- NRHP Listing
- OHP Determination
- CRHR
- California Historic Landmarks
- California Points of Historical Interest
- California Inventory of Historic Resources
- Other Historic Inventories (local) if applicable
- Historic Maps (GLO, other BLM, Road As-Built, etc.)
- Caltrans Bridge Inventory

Thank you for your assistance. If you have any questions regarding this request, please do not hesitate to call me at 510-524-3991, extension 106.

Sincerely,

Starla Lane
Archaeologist
900 Modoc St
Berkeley, CA 94707
Ph. 510-524-3991

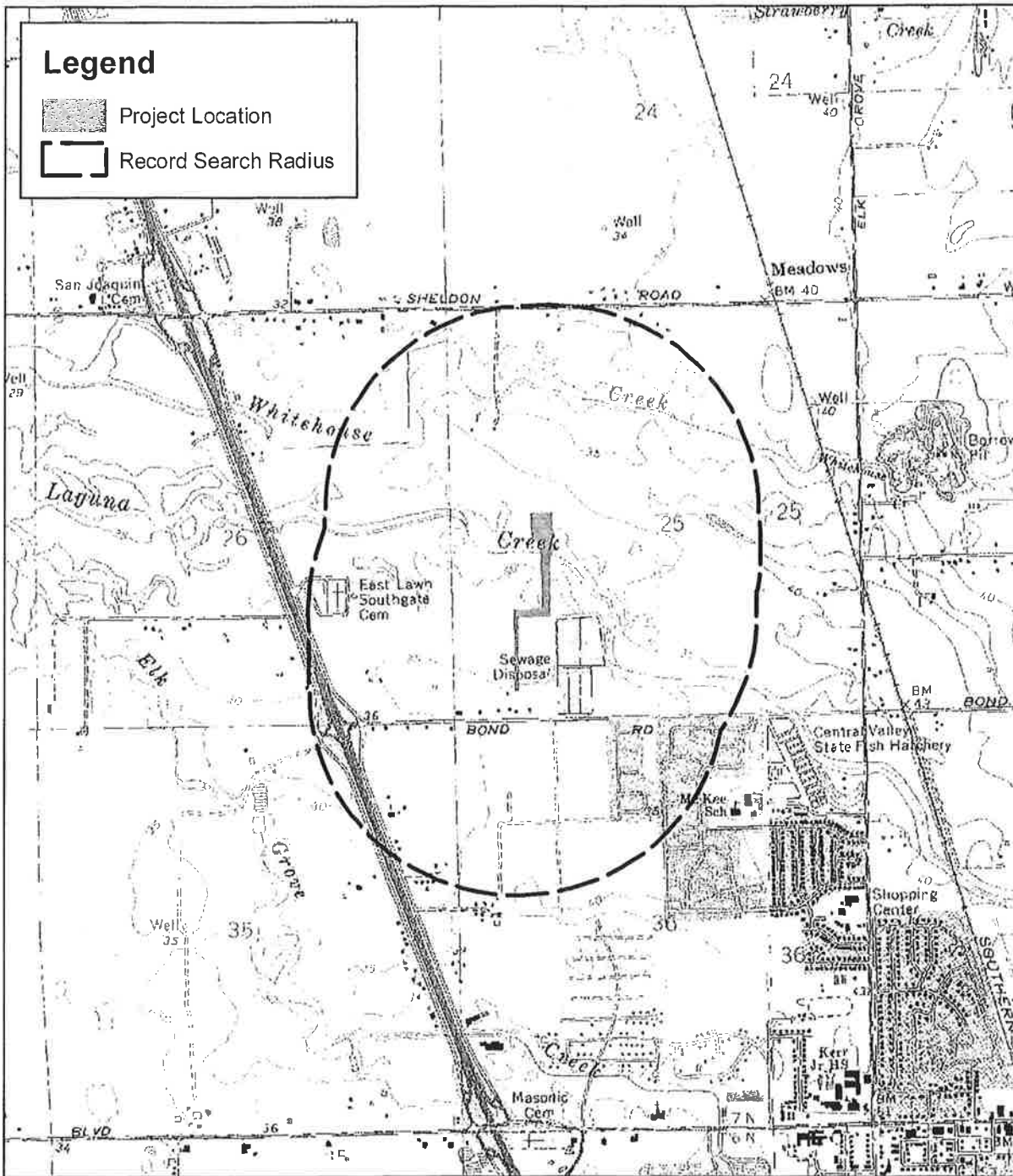
Sierra Central
3081 Alhambra Dr. #208
Cameron Park, CA 95682
530.677.9713 Ph.
530.677.9762 Fax

Southern California
42055 50th St. #4
Quartz Hill, CA 93536
661.722.2556 Ph./Fax

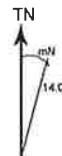
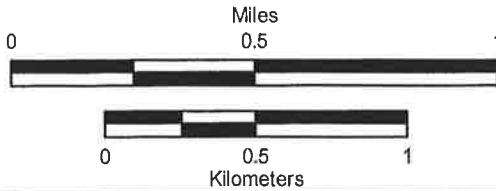
Central Coast & Business Office
1525 Seabright Ave.
Santa Cruz, CA 95062
831.423.0588 Ph.
831.423.0587 Fax

North Coast to Cascades
3760 Morrow Ln. #E
Chico, CA 95928
530.899.8314 Ph.
530.899.8333 Fax

Pacific Basin
30 Aulike St. #301
Kailua, HI 96734
808.263.4800 Ph.
808.263.4300 Fax



SOURCE: USGS 7.5" Florin, CA (1980) and Elk Grove, CA (1979).
 SCALE: 1:24,000.



Project: PMC Laguna Creek Trail Project, Elk Grove (PL-2478-01)



NORTH CENTRAL INFORMATION CENTER

916-278-6217

ncic@csus.edu

FAX 916-278-5162

CSU-SACRAMENTO - 6000 J STREET, ADAMS BLDG. SUITE #208 - SACRAMENTO, CA 95819-6100

Amador, El Dorado, Nevada, Placer, Sacramento, and Yuba Counties

Records Search Results Summary

December 8, 2010

NCIC File No.: SAC-10-154

Starla Lane
Pacific Legacy
900 Modoc Street
Berkeley, CA 94707

Researcher: Ellen Bowden

Re: PMC Laguna Creek Trail Project, Elk Grove (PL-2478-01)

T 7N/R 5E, Section 25

USGS 7.5' Florin Quad, Sacramento County

• **NCIC Resources Within .50 mile Search Radius & Project Area:**

None

• **NCIC Reports Within .50 mile Search Radius & Project Area:** (11)

16

88

582

2529

3070

3790

4412

4473

6154

10317

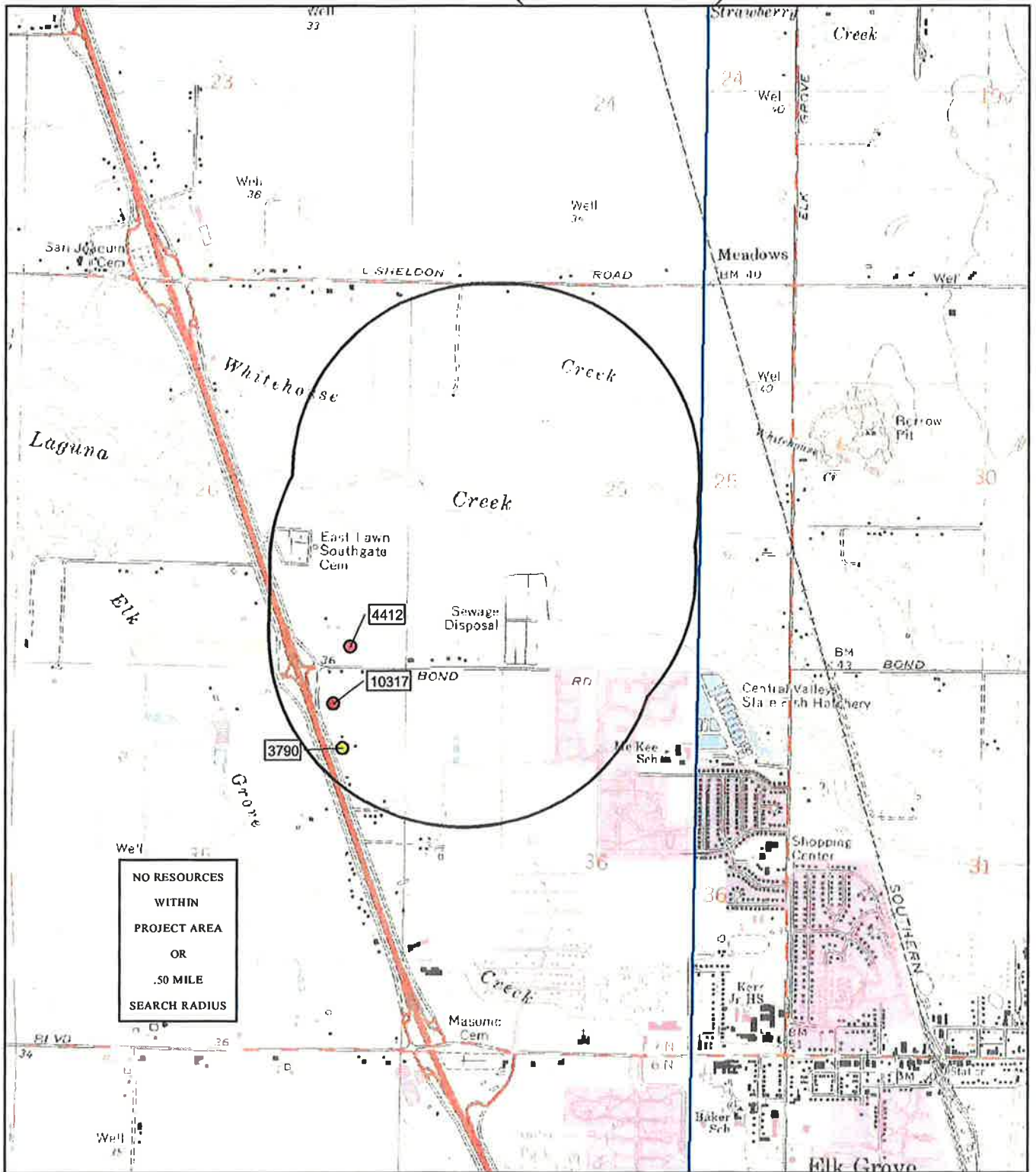
10397

- **OHP Historic Property Data File (2010):** Nothing listed
- **Determination of Eligibility (2010):** Nothing listed
- **NRHP/CRHR listings (2008 & updates):** Nothing listed
- **California Inventory of Historic Resources (1976):** Nothing listed

- **California State Historical Landmarks (1996):** Nothing listed
- **Points of Historic Interest (1992):** Nothing listed
- **Caltrans Bridge Inventory:** Nothing listed
- **Historic Maps:**
 - 1855 GLO PLAT
 - 1909 USGS Florin Quadrangle
 - 1953 US Army Corps of Engineers Florin Sheet

Thank you for using our services. An invoice/confidentiality agreement is enclosed; please sign and return a copy for our files.

PMC LAGUNA CREEK TRAIL PROJECT ELK GROVE (PL-2478-01)



NORTH CENTRAL INFORMATION CENTER

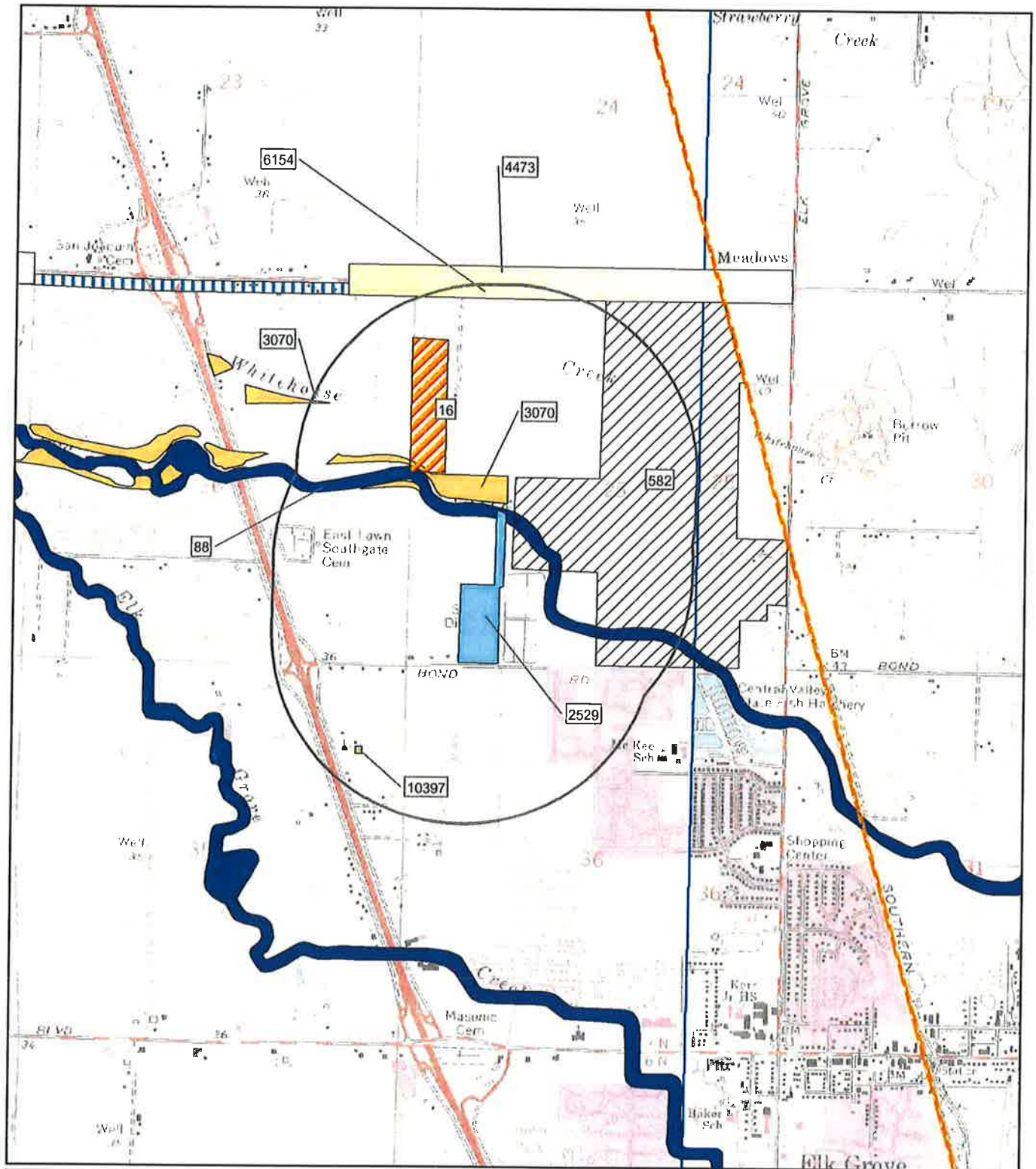
REPORTS

RECORDS SEARCH RESULTS

- 3790
- 4412
- 10317

*May depict confidential cultural resource locations.
Do not redistribute.*

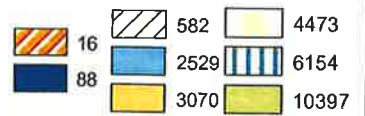
PMC LAGUNA CREEK TRAIL PROJECT ELK GROVE (PL-2478-01)



NORTH CENTRAL INFORMATION CENTER

RECORDS SEARCH RESULTS

REPORTS



*May depict confidential cultural resource locations.
Do not redistribute.*

North Central Information Center Report Listing

Doc no.	Year	Author(s)	Title	Affiliation	Client
00016	1981	William E. Soule	Cultural Resources Survey Report, Application 26691, Bristow, Bush, Cantrell, and Wallace "A Partnership."	State Archaeologist II, Environmental Unit	Division of Water Rights, 77 Cadillac Drive, Sacramento, CA 95825.
00088	1974	Johnson, Jerald J.	Reconnaissance Archeological Survey of the Morrison Stream Group in Sacramento County, California.		U.S. Army Corps of Engineers, Sacramento District, 650 Capitol Mall, Sacramento, CA 95814.
00582	1980	Peak, Ann S. and Associates	Cultural Resource Assessment of the Proposed Waterford Grove Development, Sacramento County, California.		Terra Engineering, 936 Enterprise Drive, Sacramento, California 95825.
02529	1999	Childress, Mitchell	Cultural Resources Assessment for California Family Fitness Center on Bond Road, Sacramento County, California.		California Family Fitness Centers, 6100 Fair Oaks Blvd. Suite 3A, Carmichael, CA 95608
03070	1995	Maniery, Mary	Draft Environmental Impact Report, Lower Laguna Creek Drainage Master Plan		County of Sacramento, Department of Environmental Review and Assessment
03790	2001	Billat, Lorna Beth	Nextel Site CA-0222B / Elk Grove		Nextel Communications Wireless Telecommunications Service Facility
04412	2001	Peak, Melinda	Historic Resource Reconnaissance of a Proposed Surewest Tower in Sacramento Site # 203		SureWest Communications
04473	2003	Pacific Municipal Consultants	Archaeological and Historic Investigations for the Sheldon Road Widening Project		City of Elk Grove
06154	1995	Woodward-Clyde Consultants	Cultural Resources Inventory Report for the Proposed Mojave Northward Expansion Project		Mojave Pipeline Company, 5001 Commercenter Dr. Suite 300, Bakersfield, CA
10317	2009	Carolyn Losee	Cultural Resources Investigation for AT&T Wireless Site #CN1868-A "Hwy 99" 9260 East Stockton Boulevard, Elk Grove, Sacramento County, California 95624	Archaeological Resources Technology	EBI Consulting
10397	2009	Billat, Lorna	Big Horn CA-SAC0560: Collocation Submission Packet FCC FORM 621	EarthTouch Inc	Clearwire Wireless Broadband

North Central Information Center Report Detail Record: 16

Citation Information

Authors: William E. Soule
Year: 1981
Title: Cultural Resources Survey Report, Application 26691, Bristow, Bush, Cantrell, and Wallace "A Partnership."
Affiliation: State Archaeologist II, Environmental Unit
Client: Division of Water Rights, 77 Cadillac Drive, Sacramento, CA 95825.
No. Pages: 8
Report Type(s): Archaeological survey
Inventory Size: 12 acres
No. Sites: 0
No. Informal: 0
Collections: Unknown
Disclosure: Not for publication

Associated Resources

Notes

Location Info

County(ies): Sacramento
USGS 7.5' Quads: FLORIN
PLSS: Township/range Sections *BLM or Land Grant*
T 7 N R 5 E 25 MDBM
Address:

Database Record Metadata

<i>Date</i>	<i>User</i>	
<i>Entered:</i> 7/27/2000	Erin Snyder	
<i>Last Modified:</i> 2/17/2010	kate	
<i>IC Actions: Date</i>	<i>User</i>	<i>Action taken</i>
11/8/2006	jay	Added records from old Library database
8/27/2009	Machlel	Survey plotted in GIS

North Central Information Center Report Detail Record: 88

Citation Information

Authors: Johnson, Jerald J.

Year: 1974

Title: Reconnaissance Archeological Survey of the Morrison Stream Group in Sacramento County, California.

Affiliation:

Client: U.S. Army Corps of Engineers, Sacramento District, 650 Capitol Mall, Sacramento, CA 95814.

No. Pages:

Report Type(s):

Inventory Size: Approx. 75-90 miles linear and 950+ acres

No. Sites:

No. Informal:

Collections:

Disclosure:

Associated Resources

<i>Primary No.</i>	<i>HRI No.</i>	<i>Trinomial</i>	<i>Name</i>
P-34-000048		CA-SAC-21	Hollister Mound
P-34-000075		CA-SAC-48	Azevedo Mound
P-34-000077		CA-SAC-50	Facunes Mound
P-34-000083		CA-SAC-56	Mosher
P-34-000084		CA-SAC-57	
P-34-000085		CA-SAC-58	
P-34-000086		CA-SAC-59	Edinger
P-34-000087		CA-SAC-60	
P-34-000088		CA-SAC-61	
P-34-000089		CA-SAC-62	Robinson
P-34-000090		CA-SAC-63/H	Bloom Mound
P-34-000091		CA-SAC-64	Stone Lake Mound
P-34-000092		CA-SAC-65/H	
P-34-000098		CA-SAC-71	Green
P-34-000099		CA-SAC-72	Herzog Mound
P-34-000110		CA-SAC-83	
P-34-000111		CA-SAC-84	
P-34-000112		CA-SAC-85	Nicholaus Mound
P-34-000113		CA-SAC-86	
P-34-000114		CA-SAC-87/H	
P-34-000115		CA-SAC-88	Elliott Mound
P-34-000116		CA-SAC-89	
P-34-000117		CA-SAC-90	
P-34-000172		CA-SAC-145	South Stone Lake
P-34-000215		CA-SAC-188	
P-34-000229		CA-SAC-202	Mooney Site
P-34-000350		CA-SAC-323	
P-34-000351		CA-SAC-324	
P-34-000352		CA-SAC-325/H	
P-34-000353		CA-SAC-326	
P-34-000354		CA-SAC-327	

Notes

no clear project area USGS map

Location Info

County(ies): Sacramento

USGS 7.5' Quads: BRUCEVILLE
CARMICHAEL
CLARKSBURG
COURTLAND
ELK GROVE
FLORIN
SACRAMENTO EAST

North Central Information Center Report Detail Record: 88

<i>PLSS: Township/range</i>	<i>Sections</i>	<i>BL/M</i>	<i>or Land Grant</i>
T 6 N R 4 E	1, 2, 11-13	MDBM	
T 6 N R 4 E	13, 24-26, 35, 36	MDBM	
T 6 N R 4 E	2, 11	MDBM	
T 6 N R 4 E	26	MDBM	
T 6 N R 5 E	1	MDBM	
T 6 N R 5 E	1, 7	MDBM	
T 6 N R 5 E	18, 19, 30	MDBM	
T 6 N R 6 E	5, 6	MDBM	
T 7 N R 4 E	13, 24, 25, 35, 36	MDBM	
T 7 N R 4 E	35	MDBM	
T 7 N R 5 E	1, 12, 25, 36	MDBM	
T 7 N R 5 E	1-5, 7-27, 35, 36	MDBM	
T 7 N R 6 E	1-12, 15-17, 20-23, 28-32	MDBM	
T 8 N R 5 E	25	MDBM	
T 8 N R 5 E	25-28, 32, 33	MDBM	
T 8 N R 5 E	32	MDBM	
T 8 N R 6 E	21-24, 26-30, 32-34	MDBM	
T 8 N R 6 E	31, 32, 34	MDBM	

Address:

Database Record Metadata

<i>Date</i>	<i>User</i>	
<i>Entered:</i> 7/31/2000	Erlh Snyder	
<i>Last Modified:</i> 12/17/2008	Machiel	
<i>IC Actions: Date</i>	<i>User</i>	<i>Action taken</i>
11/8/2006	jay	Added records from old Library database
12/17/2008	Machiel	GIS plotting in progress

North Central Information Center Report Detail Record: 582

Citation Information

Authors: Peak, Ann S. and Associates
Year: 1980
Title: Cultural Resource Assessment of the Proposed Waterford Grove Development, Sacramento County, California.
Affiliation:
Client: Terra Engineering, 936 Enterprise Drive, Sacramento, California 95825.
No. Pages:
Report Type(s):
Inventory Size: 287 acres
No. Sites:
No. Informal:
Collections:
Disclosure:

Associated Resources

Notes

Location Info

County(ies): Sacramento
USGS 7.5' Quads: ELK GROVE
FLORIN
PLSS: Township/range Sections *BL/M or Land Grant*
T 7 N R 6 E 25 MDBM
Address:

Database Record Metadata

	<i>Date</i>	<i>User</i>	
<i>Entered:</i>	9/5/2000	Erin Snyder	
<i>Last Modified:</i>	9/9/2009	Machiel	
<i>IC Actions:</i>	<i>Date</i>	<i>User</i>	<i>Action taken</i>
	11/8/2006	jay	Added records from old Library database
	9/9/2009	Machiel	Survey plotted in GIS

North Central Information Center Report Detail Record: 2529

Citation Information

Authors: Childress, Mitchell

Year: 1999

Title: Cultural Resources Assessment for California Family Fitness Center on Bond Road, Sacramento County, California.

Affiliation:

Client: California Family Fitness Centers, 6100 Fair Oaks Blvd. Suite 3A, Carmichael, CA 95608

No. Pages:

Report Type(s):

Inventory Size: 15.16 Acres

No. Sites:

No. Informal:

Collections:

Disclosure:

Associated Resources

Notes

Location Info

County(ies): Sacramento

USGS 7.5' Quads: FLORIN

PLSS: Township/range Sections

BL/M or Land Grant

T 7 N R 5 E 25

MDBM

Address:

Database Record Metadata

	<i>Date</i>	<i>User</i>	
<i>Entered:</i>	4/12/2001	Doniella Maher	
<i>Last Modified:</i>	9/24/2009	Machiel	
<i>IC Actions:</i>	<i>Date</i>	<i>User</i>	<i>Action taken</i>
	11/8/2006	jay	Added records from old Library database
	9/24/2009	Machiel	Survey plotted in GIS

North Central Information Center Report Detail Record: 3070

Citation Information

Authors: Maniery, Mary
Year: 1995
Title: Draft Environmental Impact Report, Lower Laguna Creek Drainage Master Plan
Affiliation:
Client: County of Sacramento, Department of Environmental Review and Assessment
No. Pages:
Report Type(s):
Inventory Size:
No. Sites:
No. Informal:
Collections:
Disclosure:

Associated Resources

<i>Primary No.</i>	<i>HRI No.</i>	<i>Trinomial</i>	<i>Name</i>
P-34-000707		CA-SAC-549H	Olen Ranch

Notes

Location Info

County(ies): Sacramento
USGS 7.5' Quads: FLORIN
PLSS: Township/range Sections *BL/M or Land Grant*
T 7 N R 5 E 25, 26, 27 MDBM
Address:

Database Record Metadata

<i>Date</i>	<i>User</i>	
<i>Entered:</i> 11/28/2001	Courtney Chambers	
<i>Last Modified:</i> 10/7/2009	Machiel	
<i>IC Actions: Date</i>	<i>User</i>	<i>Action taken</i>
11/8/2006	jay	Added records from old Library database
10/7/2009	Machiel	Survey plotted in GIS

North Central Information Center Report Detail Record: 3790

Citation Information

Authors: Billat, Lorna Beth
Year: 2001
Title: Nextel Site CA-0222B / Elk Grove
Affiliation:
Client: Nextel Communications Wirelesss Telecommunications Service Facility
No. Pages:
Report Type(s):
Inventory Size: >1 acre
No. Sites:
No. Informal:
Collections:
Disclosure:

Associated Resources

Notes

Location Info

County(ies): Sacramento
USGS 7.5' Quads: FLORIN
PLSS: Township/range Sections *BLM or Land Grant*
T 7 N R 5 E 35 MDBM
Address:

Database Record Metadata

	<i>Date</i>	<i>User</i>	
<i>Entered:</i>	9/18/2002	Kris Berry	
<i>Last Modified:</i>	10/22/2009	Machiel	
<i>IC Actions:</i>	<i>Date</i>	<i>User</i>	<i>Action taken</i>
	11/8/2006	jay	Added records from old Library database
	10/22/2009	Machiel	Survey plotted in GIS

North Central Information Center Report Detail Record: 4412

Citation Information

Authors: Peak, Melinda
Year: 2001
Title: Historic Resource Reconnaissance of a Proposed Surewest Tower in Sacramento Site # 203
Affiliation:
Client: SureWest Communications
No. Pages:
Report Type(s):
Inventory Size: less than 1 acre
No.Sites:
No. Informal:
Collections: Unknown
Disclosure: Not for publication

Associated Resources

Notes

Location Info

County(ies): Sacramento
Yuba
USGS 7.5' Quads: CITRUS HTS
ELK GROVE
FLORIN
GALT
LINCOLN
OLIVEHURST
RIO LINDA
SACRAMENTO EAST
TAYLOR MONUMENT
PLSS: Township/range Sections *BL/M or Land Grant*
T 9 N R 5 E 14 MDBM
Address:

Database Record Metadata

	<i>Date</i>	<i>User</i>	
<i>Entered:</i>	10/28/2003	Renee Carter	
<i>Last Modified:</i>	2/9/2010	kate	
<i>IC Actions:</i>	<i>Date</i>	<i>User</i>	<i>Action taken</i>
	11/8/2006	jay	Added records from old Library database
	12/4/2008	Machiel	Survey plotted in GIS

North Central Information Center Report Detail Record: 4473

Citation Information

Authors: Pacific Municipal Consultants

Year: 2003

Title: Archaeological and Historic Investigations for the Sheldon Road Widening Project

Affiliation:

Client: City of Elk Grove

No. Pages:

Report Type(s):

Inventory Size: linear: ~ 1.5 miles

No. Sites:

No. Informal:

Collections:

Disclosure:

Associated Resources

<i>Primary No.</i>	<i>HRI No.</i>	<i>Trinomial</i>	<i>Name</i>
P-34-001250			
P-34-001251			
P-34-001252			
P-34-001253			
P-34-001254			
P-34-001255			
P-34-001256			

Notes

Location Info

County(ies): Sacramento

USGS 7.5' Quads: ELK GROVE

FLORIN

PLSS: Township/range Sections

T 7 N R 5 E 22-27

BLM or Land Grant

MDBM

Address:

Database Record Metadata

	<i>Date</i>	<i>User</i>	
<i>Entered:</i>	6/16/2005	Gabe Aeschliman	
<i>Last Modified:</i>	10/28/2009	Machiel	
<i>IC Actions:</i>	<i>Date</i>	<i>User</i>	<i>Action taken</i>
	11/8/2006	jay	Added records from old Library database
	10/28/2009	Machiel	Survey plotted in GIS

North Central Information Center Report Detail Record: 6154

Citation Information

Authors: Woodward-Clyde Consultants

Year: 1995

Title: Cultural Resources Inventory Report for the Proposed Mojave Northward Expansion Project

Affiliation:

Client: Mojave Pipeline Company, 5001 Commercenter Dr. Suite 300, Bakersfield, CA

No. Pages:

Report Type(s): Archaeological survey

Inventory Size: no area provided

No.Sites:

No. Informal:

Collections:

Disclosure:

Associated Resources

<i>Primary No.</i>	<i>HRI No.</i>	<i>Trinomial</i>	<i>Name</i>
P-34-001293			
P-34-001294		CA-SAC-817H	Central California Traction Company Housi
P-34-001295		CA-SAC-818H	Flood Control Barrier on Laguna Creek
P-34-001296		CA-SAC-819H	Residential Remnant, Sacramento County
P-34-001297			
P-34-001298			
P-34-001299			California Central Traction Co. Railroad
P-34-001300			SPRR- Ione Branch
P-34-001301			SPRR-Amador Branch
P-34-001302			SPRR San Joaquin Valley Mainline
P-34-001303			Galt Stockpile Area
P-34-001304			

Notes

no USGS map

Location Info

County(ies): Sacramento

USGS 7.5' Quads: BUFFALO CREEK
CARMICHAEL
CLAY
ELK GROVE
FLORIN
GALT
SACRAMENTO EAST
SLOUGHHOUSE

PLSS:

Address:

Database Record Metadata

<i>Date</i>	<i>User</i>	
<i>Entered:</i> 6/22/2005	Gabe Aeschliman	
<i>Last Modified:</i> 3/2/2010	Machiel	
<i>IC Actions:</i>	<i>Date</i>	<i>User</i>
	11/8/2006	jay
	12/2/2008	kate
	12/2/2008	kate
	12/3/2008	kate
	3/2/2010	Machiel

Action taken
Added records from old Library database
Clay portion plotted in GIS
Sloughhouse portion plotted in GIS
Sac East Portion plotted in GIS
Florin portion plotted in GIS

North Central Information Center Report Detail Record: 10317

Citation Information

Authors: Carolyn Losee
Year: 2009
Title: Cultural Resources Investigation for AT&T Wireless Site #CN1868-A "Hwy 99" 9260 East Stockton Boulevard, Elk Grove, Sacramento County, California 95624
Affiliation: Archaeological Resources Technology
Client: EBI Consulting
No. Pages: 10
Report Type(s): Archaeological survey
Inventory Size:
No. Sites: 0
No. Informal:
Collections: Unknown
Disclosure: Not for publication

Associated Resources

Notes

Location Info

County(ies): Sacramento
USGS 7.5' Quads: FLORIN
PLSS: Township/range Sections *BL/M or Land Grant*
T 7N R 5E MDBM
Address: Address *City* *Assessor's parcel no.*
9260 East Stockton Boulevard Elk Grove

Database Record Metadata

Date *User*
Entered: 10/26/2009 pete
Last Modified: 12/16/2009 Pete
IC Actions:

North Central Information Center Report Detail Record: 10397

Citation Information

Authors: Billat, Lorna
Year: 2009
Title: Big Horn CA-SAC0560: Collocation Submission Packet FCC FORM 621
Affiliation: EarthTouch Inc
Client: Clearwire Wireless Broadband
No. Pages: 35
Report Type(s): Archaeological survey
Inventory Size: 10 ft x 10 ft
No. Sites:
No. Informal:
Collections: Unknown
Disclosure: Not for publication

Associated Resources

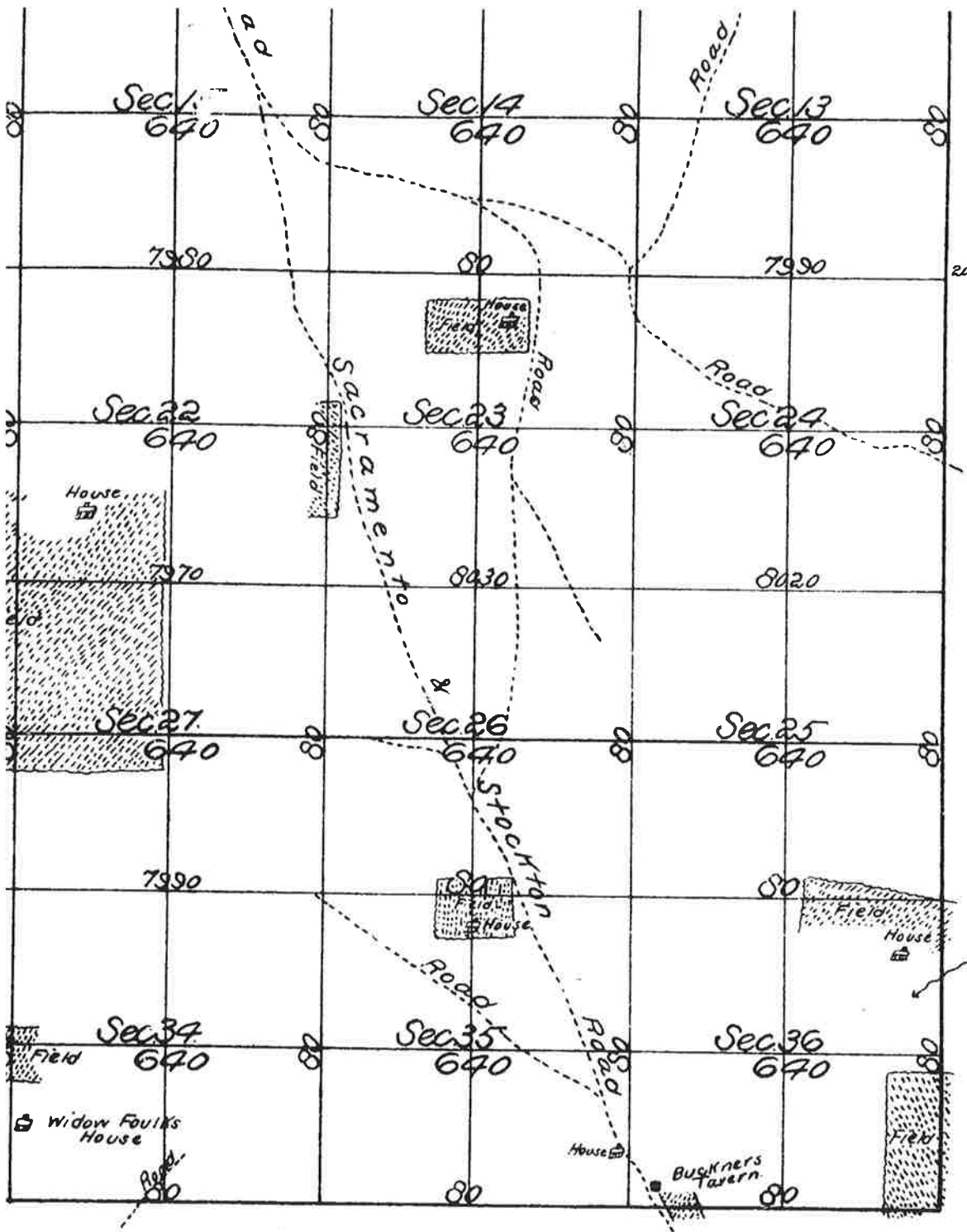
Notes

Location Info

County(ies): Sacramento
USGS 7.5' Quads: FLORIN
PLSS: Township/range Sections *BL/M or Land Grant*
T 7 N R 5 E 36 MDBM
Address:

Database Record Metadata

	<i>Date</i>	<i>User</i>	
<i>Entered:</i>	1/14/2010	Ellen	
<i>Last Modified:</i>	1/14/2010	Ellen	
<i>IC Actions:</i>	<i>Date</i>	<i>User</i>	<i>Action taken</i>
	1/14/2010	Ellen	scanned
	1/14/2010	Ellen	digitized



1855

GLO

PLAT

T7N

R5E

True Meridian

Var 15° 25' East

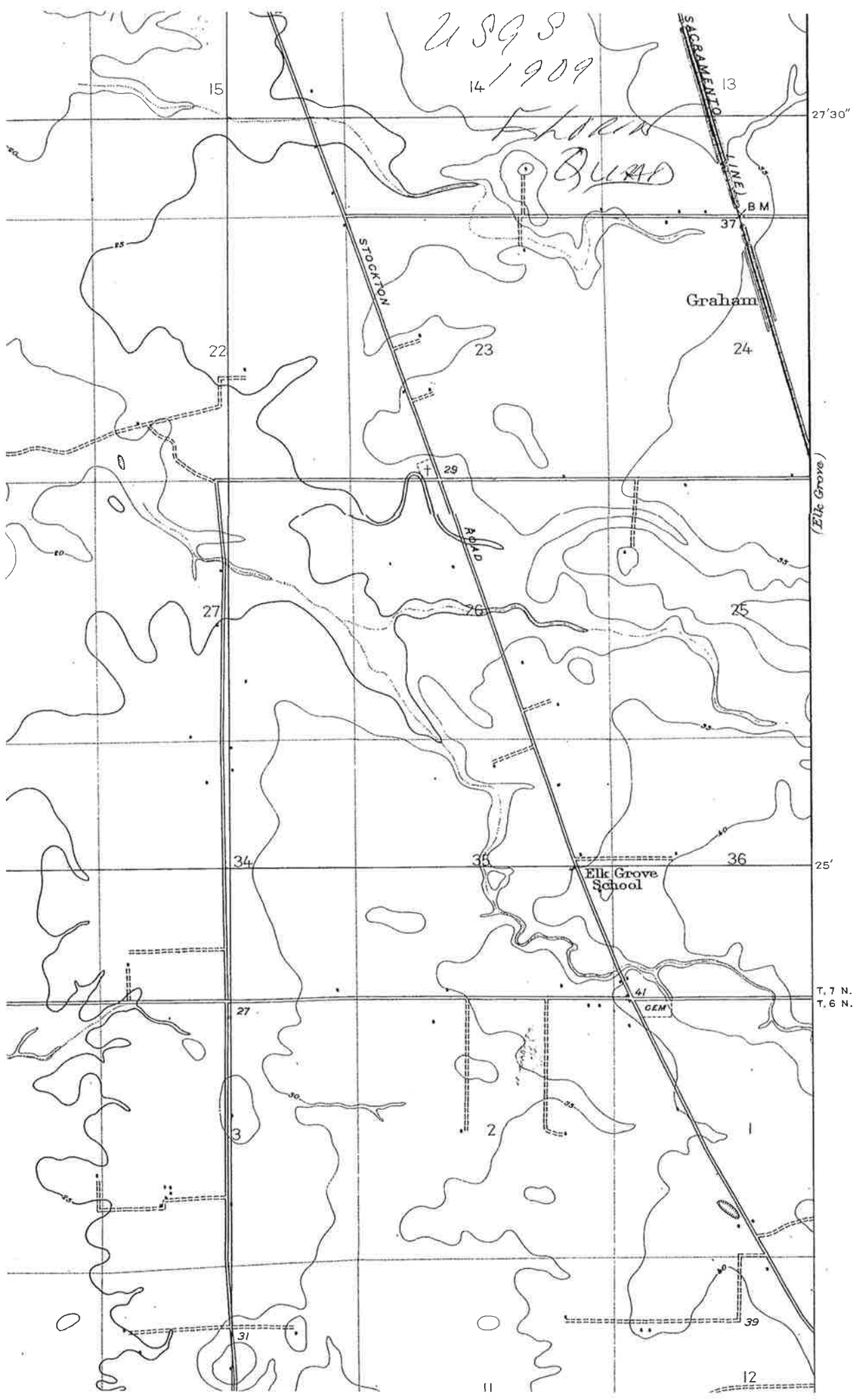
Aggreg
Estimate

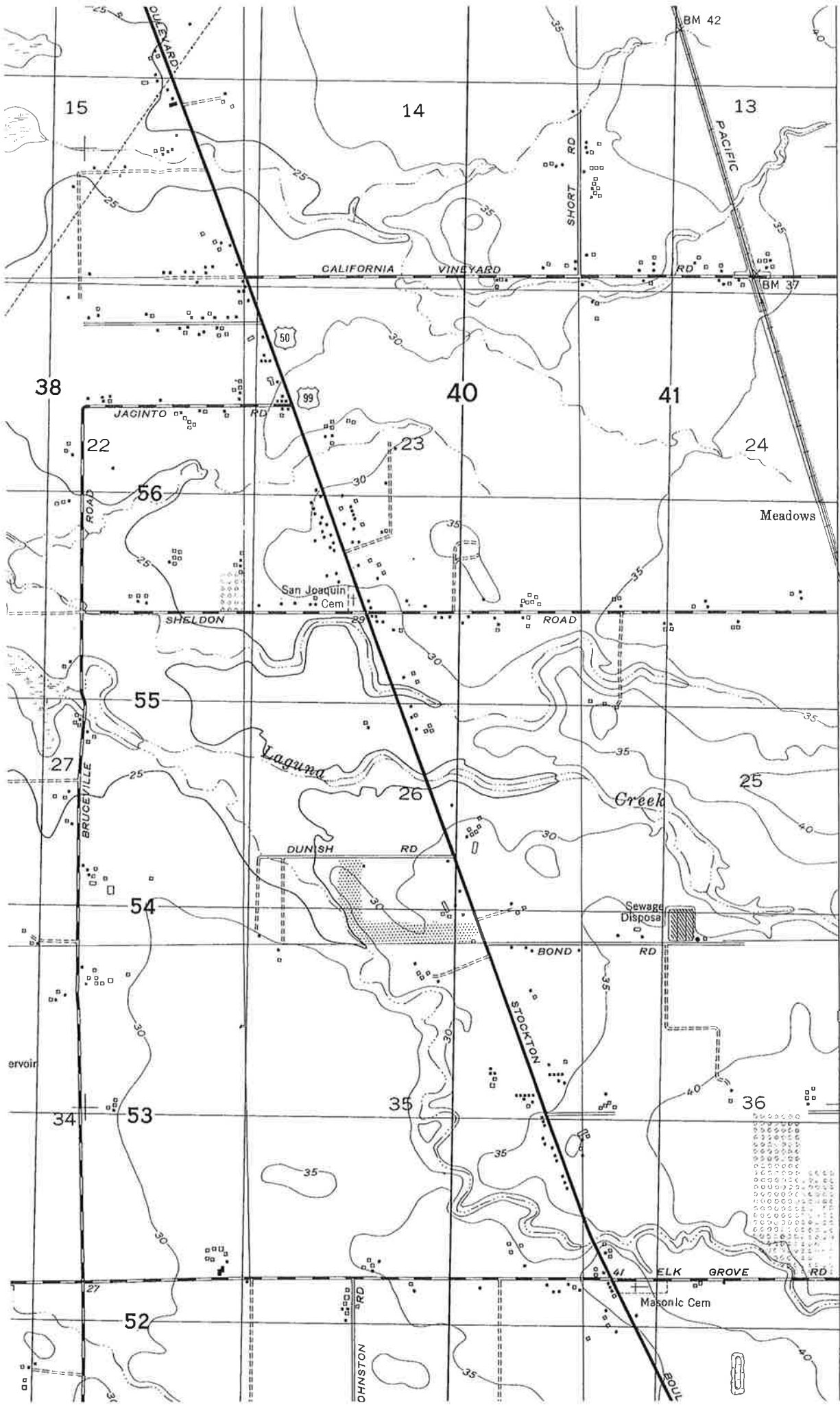
en Surveyed
April 1855
June "
" "

The above Map of Township No. 7 North, Range No. 5 East (Mount Diablo Meridian) is drawn to the field notes of the surveys thereof, on file in this Office, which have been examined by the Surveyor General's Office, San Francisco California.
August 15th 1855.

John C.

Lawn Memorial Park	www.eastlawn.com Private East Lawn Elk Grove Memorial Park and Mortuary 9189 East Stockton Boulevard Elk Grove, CA 95624 (916) 732-2031	9189 East Stockton Boulevard Elk Grove, CA 95624	Active				38° 2'
Southgate	District/Public Elk Grove-Cosumnes Cemetery District P.O. Box 533 Elk Grove CA 95759 (916) 686-5170	7901 Florin Road Sacramento	Active	Historic (Pioneer)	Y	Good Neatly Maintained	38° 3'
Elk Grove Cemetery	District/Public Elk Grove-Cosumnes Cemetery District P.O. Box 533 Elk Grove CA 95759 (916) 686-5170	Elk Grove Blvd. & Highway 99 On the corner of Stockton Blvd. and W. Elk Grove Blvd, just before the freeway on the left (north)	Active	Historic (Pioneer) Fraternal (Masonic) California State Historical Landmark No. 719 Grave of Elitha Cumi Donner Wilder	Y	Good Neatly Maintained	38° 3'
Elk Grove Cemetery	Public-City Fair Oaks Cemetery District 7780 Olive Street Fair Oaks, CA 95628 (916) 966-1613 www.FairOaksCemetery.com	7780 Olive Street Fair Oaks, CA 95628	Active		Y	Good Neatly Maintained	38° 3'
Elk Grove Cemetery	District/Public Elk Grove-Cosumnes Cemetery District P.O. Box 533 Elk Grove CA 95759 (916) 686-5170	Hood-Franklin Road & Franklin Blvd Franklin CA	Active	Historic (Ethnic) Includes Chinese, German	Y	Good Attractive, Neatly Maintained	38° 2'
Elk Grove Cemetery	District/Public Galt-Arno Cemetery District 14180 Joy Drive Galt, CA 95632 (916) 686-5170 www.GaltArnoCemDistrict.com	About 1-1/2 mi east of Freeport (Between Freeport & I-5?) 14180 Joy Drive Galt, CA 95632	Cleared- No physical evidence remains?	Historic (Pioneer)	Y	Investigation Needed	38° 1'
Elk Grove Cemetery	District/Public Galt-Arno Cemetery District 14180 Joy Drive Galt, CA 95632 (916) 686-5170 www.GaltArnoCemDistrict.com	Arno Rd. 1/8 mi. east of Highway 99 Galt, CA	Active	Historic (Pioneer) Fraternal (Odd Fellows)	Y	Good	38° 1'
Elk Grove Cemetery	District/Public Elk Grove-Cosumnes Cemetery District P.O. Box 533 Elk Grove CA 95759 (916) 686-5170	Waterman Road, east Elk Grove	Active	Fraternal (Odd Fellows)	Y	Poor Appearance, Burial ID & Location	38° 3'
Elk Grove Cemetery	Private Home of Peace Cemetery El Paraiso Ave Blvd El Paraiso Ave Blvd Jewish 5700	5700 El Paraiso Ave Sacramento, CA 95824	Active	Religious (Jewish)	Y	Good Attractive, Neatly	38° 3'





4258
 27°30'
 U S
 Army
 Corps
 of
 ENGINEERS

4256
 1953

4255
 FLOREN

4254
 SHEET

25°00'
 4253
 T. 7 N.

4252
 ELK GROVE 0.5 MI.

APPENDIX B. NATIVE AMERICAN CONSULTATION DOCUMENTATION



Bay Area Division
900 Modoc Street
Berkeley, CA 94707

Phone: 510.524.3991
Fax: 510.524.4419
www.pacificlegacy.com

October 21, 2014

Cynthia Gomez
Native American Heritage Commission
1550 Harbor Boulevard, Suite 100
West Sacramento, CA 95691

Re: Laguna Creek Trail North Camden Spur, Elk Grove (PL-2478-02)

Dear Ms. Gomez:

We have been retained by the PMC Environmental to conduct an archaeological assessment for a property located north of Laguna Creek, east of Highway 99 in Elk Grove, Sacramento County, California. We would like to request a review of the Sacred Lands Inventory file and a list of interested Native American groups for Sacramento County. We have attached a map of the project area for your review. If you have any questions, I can be reached at (510) 524-3991 ext 111. Thank you for your kind attention to this matter.

Sincerely,

Starla Lane
Archaeologist
Bay Area Division
900 Modoc St.
Berkeley, CA 94707
Ph. 510-524-3991, ext. 111
lane@pacificlegacy.com

Attachments: Sacred Lands File & Native American Contacts List Request
Project Location Map

**Inland Empire/Mojave
Desert**
44702 10th St. West
Lancaster, CA 93534
661.729.9395 Ph.
661.729.9417 Fax

Business Office
PO Box 6050
Arnold, CA 95223
209.795.4481 Ph.
209.795.1967 Fax

Pacific Basin
30 Aulike St. #301
Kailua, HI 96734
808.263.4800 Ph.
808.263.4300 Fax

Sierra/Central Valley
4919 Windplay Dr. #4
El Dorado Hills, CA 95762
916.358.5156 Ph.
916.358.5161 Fax

Southern California
PO Box 421282
San Diego, CA 92142
858.900.8024 Ph.
510.524.4419 Fax



Bay Area Division
900 Modoc Street
Berkeley, CA 94707

Phone: 510.524.3991
Fax: 510.524.4419
www.pacificlegacy.com

November 18, 2014

Cynthia Gomez
Native American Heritage Commission
1550 Harbor Boulevard, Suite 100
West Sacramento, CA 95691

Re: Laguna Creek Trail North Camden Spur, Elk Grove (PL-2478-02)

Dear Ms. Gomez:

We have been retained by the PMC Environmental to conduct an archaeological assessment for a property located north of Laguna Creek, east of Highway 99 in Elk Grove, Sacramento County, California. We would like to request a review of the Sacred Lands Inventory file and a list of interested Native American groups for Sacramento County. We have attached a map of the project area for your review. This request was originally submitted on October 21, 2014 as one part of a two part project. We received a response regarding the project's southern half on November 3, 2014; however we are resubmitting the request since we have not yet received a response regarding the northern half. If you have any questions, I can be reached at (510) 524-3991 ext 111. Thank you for your kind attention to this matter.

Sincerely,

Starla Lane
Archaeologist
Bay Area Division
900 Modoc St.
Berkeley, CA 94707
Ph. 510-524-3991, ext. 111
lane@pacificlegacy.com

Attachments: Sacred Lands File & Native American Contacts List Request
Project Location Map

Inland Empire/Mojave Desert
44702 10th St. West
Lancaster, CA 93534
661.729.9395 Ph.
661.729.9417 Fax

Business Office
PO Box 6050
Arnold, CA 95223
209.795.4481 Ph.
209.795.1967 Fax

Pacific Basin
30 Aulike St. #301
Kailua, HI 96734
808.263.4800 Ph.
808.263.4300 Fax

Sierra/Central Valley
4919 Windplay Dr. #4
El Dorado Hills, CA 95762
916.358.5156 Ph.
916.358.5161 Fax

Southern California
PO Box 421282
San Diego, CA 92142
858.900.8024 Ph.
510.524.4419 Fax



Bay Area Division
 900 Modoc Street
 Berkeley, CA 94707

Phone: 510.524.3991
 Fax: 510.524.4419
 www.pacificlegacy.com

Sacred Lands File & Native American Contacts List Request

NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Boulevard
 West Sacramento, CA 95691
 (916) 373-3710
 (916) 373-5471 – Fax
 nahc@pacbell.net

Information Below is Required for a Sacred Lands File Search

Project: Laguna Creek Trail North Camden Spur, Elk Grove (PL-2478-02)

County: Sacramento

USGS Quadrangle Name: Florin, CA (1980), 7.5'

Township: 7N Range: 5E Section(s): 25

Company/Firm/Agency: Pacific Legacy, Inc.

Contact Person: Starla Lane

Street Address: 900 Modoc St.

City: Berkeley, CA

Zip: 94707

Phone: (510) 524-3991 ext. 111

Fax: (510) 524-4419

Email: lane@pacificlegacy.com

Project Description:

The City of Elk Grove proposes to extend a bicycle and pedestrian trail from the west end of the existing Laguna Creek Trail, at the northern tip of Camden Park, to MacDonald Park via Beckington Drive. This extension is the north half of a two-project proposal to improve the trail system in Elk Grove.

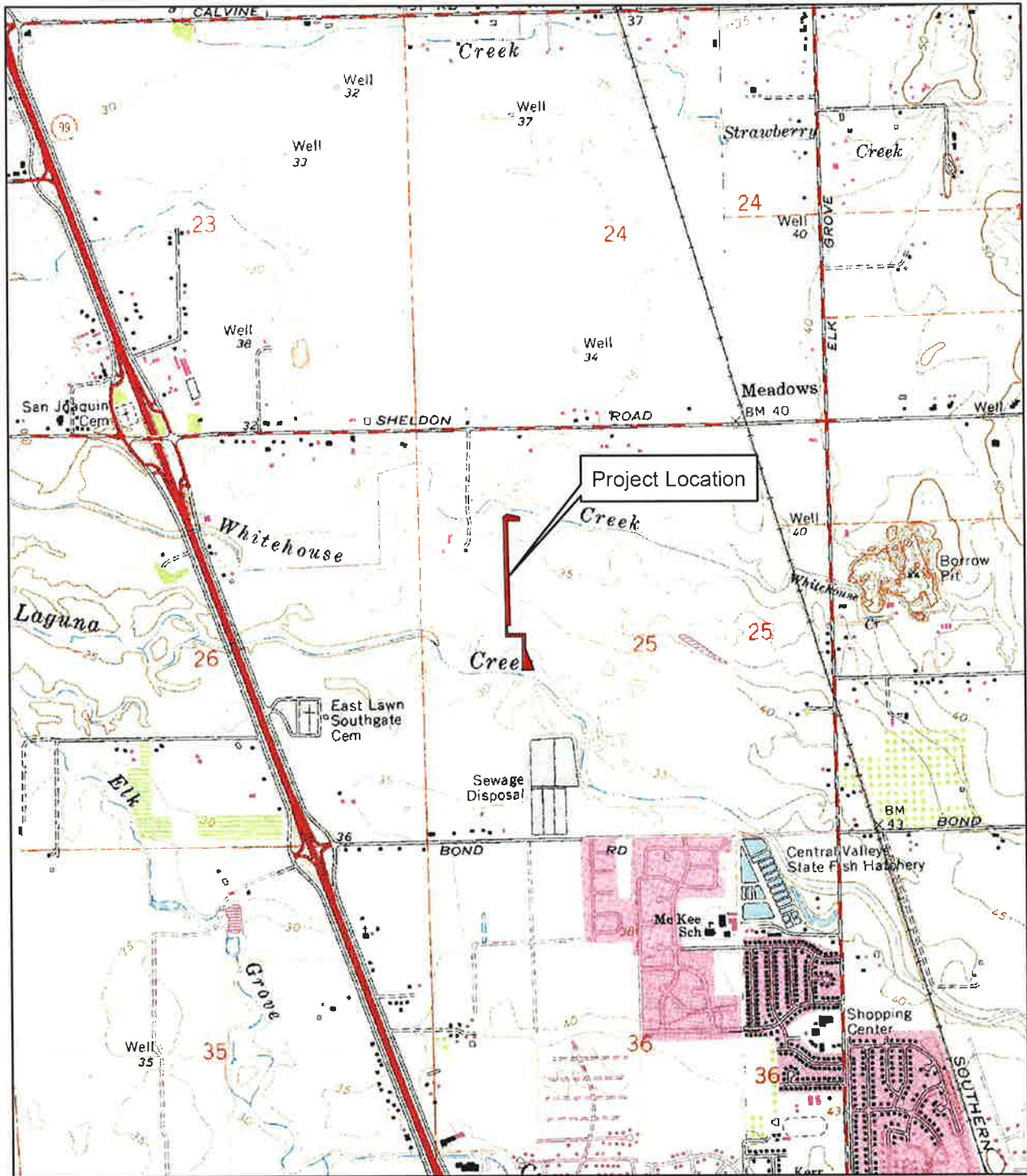
Inland Empire/Mojave Desert
 44702 10th St. West
 Lancaster, CA 93534
 661.729.9395 Ph.
 661.729.9417 Fax

Business Office
 PO Box 6050
 Arnold, CA 95223
 209.795.4481 Ph.
 209.795.1967 Fax

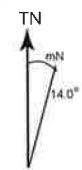
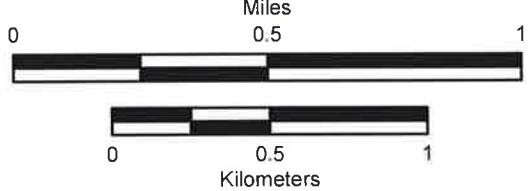
Pacific Basin
 30 Aulike St. #301
 Kailua, HI 96734
 808.263.4800 Ph.
 808.263.4300 Fax

Sierra/Central Valley
 4919 Windplay Dr. #4
 El Dorado Hills, CA 95762
 916.358.5156 Ph.
 916.358.5161 Fax

Southern California
 PO Box 421282
 San Diego, CA 92142
 858.900.8024 Ph.
 510.524.4419 Fax



SOURCE: USGS 7.5" Florin, CA (1980) and Elk Grove, CA (1979).
 SCALE: 1:24,000.



NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Blvd.
West Sacramento, CA 95891
(916) 373-3710
Fax (916) 373-5471



November 21, 2014

Starla Lane
PACIFIC LEGACY INC
900 Modoc St
Berkeley, CA 94707

3 Pages
FAX: 510-524-4419
RE: Laguna Creek Trail North Camden Spur project, Sacramento County

Ms. Lane;

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 373-3713.

Sincerely,


Debbie Pilas-Treadway
Environmental Specialist III

0004

**Native American Contacts
Sacramento County
November 24, 2014**

Randy Yonemura
1305 - 39th Avenue Miwok
Sacramento , CA 95824
andy_yonemura@yahoo.com
916) 421-1600
916) 601-4069 Cell

Shingle Springs Band of Miwok Indians
Nicholas Fonseca, Chairperson
P.O. Box 1340 Miwok
Shingle Springs , CA 95682 Maidu
nfonseca@ssband.org
(530) 676-8010 Office
(530) 676-8033 Fax

Buena Vista Rancheria
Rhonda Morningstar Pope, Chairperson
418 20th Street, Suite 200 Me-Wuk / Miwok
Sacramento , CA 95811
rhonda@buenavistatribe.com
916) 491-0011 Office
916) 491-0012 Fax

Shingle Springs Band of Miwok Indians
Daniel Fonseca, Cultural Resource Director
P.O. Box 1340 Miwok
Shingle Springs , CA 95682 Maidu
(530) 676-8010 Office
(530) 676-8033 Fax

Shingle Springs Band of Miwok Indians
Lynne Miller, Chairperson
P.O. Box 699 Miwok
Lynchburg , CA 95669
ladministrator@ionemiwok.org
(909) 245-5800 Office
(909) 245-3112 Fax

United Auburn Indian Community of the Auburn Rancheria
Gene Whitehouse, Chairperson
10720 Indian Hill Road Maidu
Auburn , CA 95603 Miwok
(530) 883-2390 Office
(530) 883-2380 Fax

Shingle Springs Band of Miwok Indians Cultural Committee
Anthony Burris, Chairperson
P.O. Box 699 Miwok
Lynchburg , CA 95669
(909) 245-5800 Office
(909) 245-3112 Fax

United Auburn Indian Community of the Auburn Rancheria
Marcos Guerrero, Tribal Preservation Committee
10720 Indian Hill Road Maidu
Auburn , CA 95603 Miwok
mguerrero@auburnrancheria.com
(530) 883-2364 Office
(530) 883-2320 Fax

Shingle Springs Band of Miwok Indians
Armando Olanio, Vice Chairperson
P.O. Box 1340 Miwok
Shingle Springs , CA 95682 Maidu
olanio@ssband.org
(530) 676-8010 Office
(530) 676-8033 Fax

United Auburn Indian Community of the Auburn Rancheria
Jason Camp, THPO
10720 Indian Hill Road Maidu
Auburn , CA 95603 Miwok
jcamp@auburnrancheria.com
(916) 316-3772 Cell
(530) 883-2390
(530) 888-5476 - Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Laguna Creek Trail North Camden Spur project, Sacramento County

**Native American Contacts
Sacramento County
November 24, 2014**

Wilton Rancheria
Raymond Hitchcock, Chairperson
3728 Kent Street · Miwok
Elk Grove, CA 95624
hitchcock@wiltonrancheria-nsn.gov
916) 683-6000 Office
916) 683-6015 Fax

Wilton Rancheria
Steven Hutchason, Executive Director Environmental Resources
3728 Kent Street · Miwok
Elk Grove, CA 95624
hutchason@wiltonrancheria-nsn.gov
916) 683-6000, Ext. 2006
916) 683-6015 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Laguna Creek Trail North Camden Spur project, Sacramento County

DEPARTMENT OF TRANSPORTATION

DISTRICT 3

703 B Street

Marysville, CA 95901

PHONE (530) 741-7113

FAX (530) 741-4457

TTY 711

www.dot.ca.gov/dist3

*Serious drought
Help save water!*

November 18, 2014

Mr. Randy Yonemura
4305 39th Avenue
Sacramento, CA 95824

Re: Invitation to Begin Section 106 Consultation for the Laguna Creek Trail, North Camden Spur Project, City of Elk Grove, Sacramento County, California

Dear Mr. Yonemura:

The California Department of Transportation (Caltrans) will be assisting the City of Elk Grove as they initiate a local project to build a bicycle-pedestrian trail between Camden Point and Camden Estates residential areas to schools and commercial areas using along or south of Bond Road (see attached map). This project is the northern half of two projects to improve the trail system in Elk Grove by connecting existing segments of the Laguna Creek Trail. The proposed project will involve minor improvements, striping along existing public right of ways and streets, and the construction of new sections of trail at the either end.

Pacific Legacy, Inc. archaeologist, Hannah Ballard, is a consultant representing the City of Elk Grove. Ms. Ballard will be contacting you to initiate Native American consultation. Ms. Ballard will be requesting information you may have regarding sites, traditional cultural properties, values, or other cultural resource considerations within the project area so this information may be incorporated into the planning phase of the project.

A records search was conducted and no previously recorded cultural resources are located within a quarter of a mile of the project area. Areas adjacent to the project area have been previously studied. The southern portion of the proposed trail segment is within the project area of two previous studies. One of these studies was a reconnaissance survey of the Laguna Creek. None of these studies identified cultural resources within or adjacent to the current project area. The project area extends between two waterways (Whitehouse and Laguna Creeks) located adjacent to a creek in a floodplain. The nature of this project requires a Phase I investigation, consisting of archaeological survey, to identify any cultural resources within the project's area of potential effect (APE).

Caltrans will serve as the federal lead agency for the project as a result of the Federal Highway Administration (FHWA) assignment of its National Environmental Policy (NEPA) Act responsibilities under Title 23 USC 326 and 327. Caltrans will have review and approval authority for compliance with Section 106 of the National Historic Preservation Act as well as other federal laws and regulations.

Your comments and concerns will be important to the City of Elk Grove as they move forward with their project, and to Caltrans. If you have any questions or concerns with the project, please contact Hannah Ballard via email (ballard@pacificlegacy.com) or at her office (510-524-3991 extension 6). Ms. Ballard's mailing address is:

Hannah Ballard
Pacific Legacy, Inc.
900 Modoc Street
Berkeley, CA 94707

If you have questions regarding the content of this letter you can contact me at sue.bauer@dot.ca.gov or 530-741-7113 or the Associate Environmental Planner (Archaeology) for this project, Erin Dwyer at erin.dwyer@dot.ca.gov or 530-741-4538.

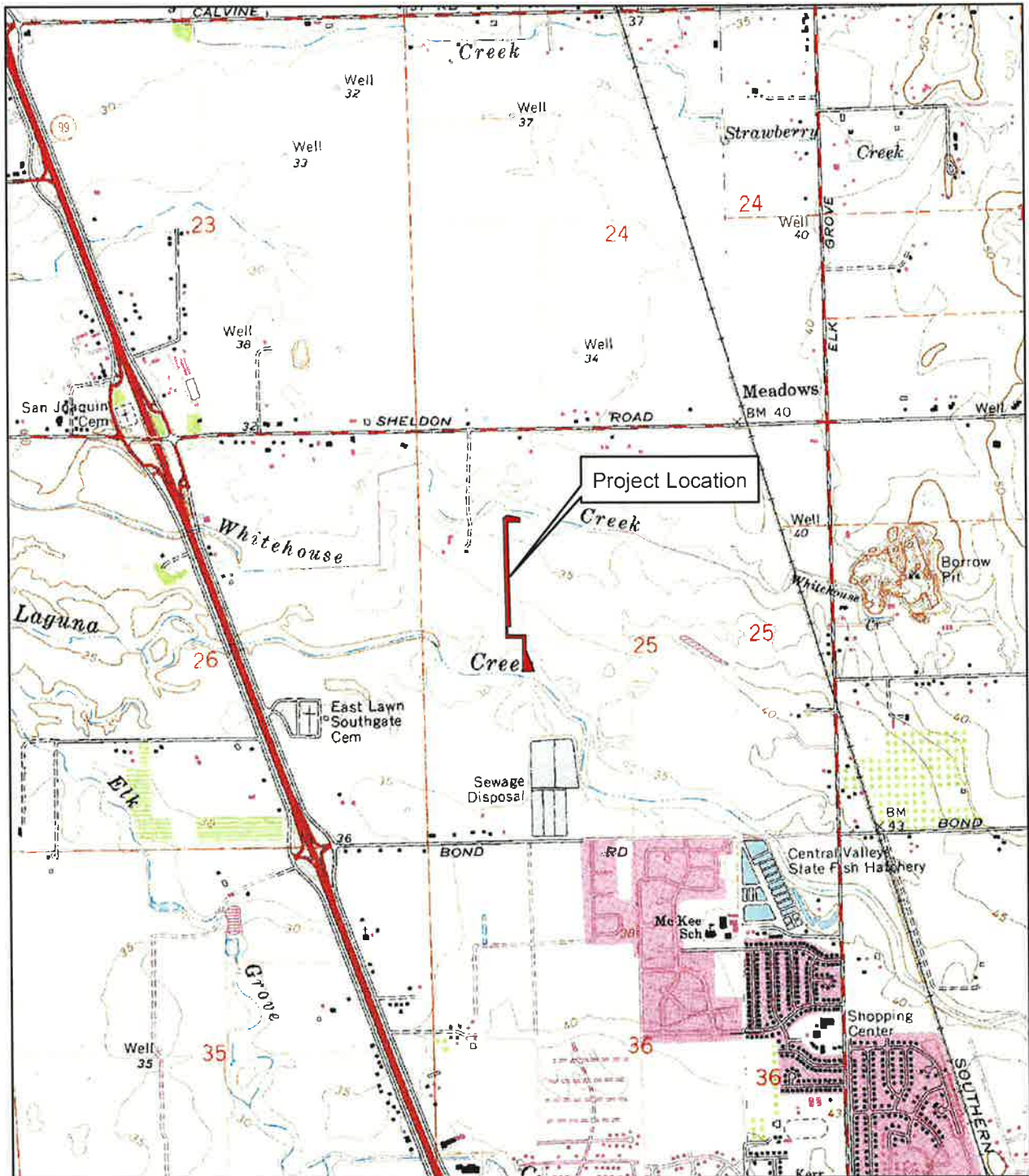
Sincerely,



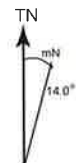
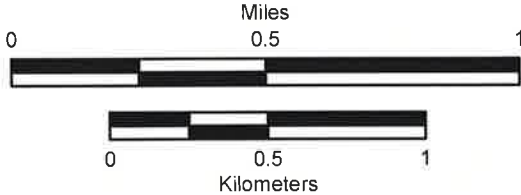
Susan D. Bauer
Senior Environmental Planner, M1
Caltrans, District 3

Attachments: Project Location map
 Draft Area of Potential Effects map

cc: Erin Dwyer, Associate Environmental Planner (Archaeology)
 Michael Karoly, Senior Project Manager, City of Elk Grove



SOURCE: USGS 7.5" Florin, CA (1980) and Elk Grove, CA (1979).
 SCALE: 1:24,000.



Project: Laguna Creek Trail-North Camden Spur, Elk Gove, CA (PL 2478-2)



SHORTLINE LN

CASTLEHAVEN CT

STAFFORDSHIRE CT

SAINT ARVANT CT

KINGSLAND CT

WHITE PEACOCK CT

BECKINGTON DR

SPRING AZURE WAY

WHITE PEACOCK WAY

PANAMINT CT

SHELDON CREEK DR

HYPERIA C

KING





SHINGLE SPRINGS RANCHERIA
P.O. BOX 1340; SHINGLE SPRINGS, CA 95682
(530) 676-8010; FAX (530) 676-3582

December 1, 2014

Department of Transportation
DISTRICT 3
703 B Street
Marysville, CA 95901

RE: Laguna Creek Trail, North Camden Spur Project

Dear Susan D. Bauer

Thank you for your letter dated November 18, 2014 in regard to the Laguna Creek Trail, North Camden Spur Project, City of Elk Grove, Sacramento County, California. Based on the information provided, the Shingle Springs Band of Miwok Indians is not aware of any known cultural resources on this site. However, SSR would like to have continued consultation through updates, as the project progresses this will foster a greater communication between the Tribe and your agency.

SSR would also like to request any and all completed record searches and or surveys that were done in or around the project area up to and including environmental, archaeological and cultural reports.

If during the progress of the project new information or human remains are found we would like to be able to go over our process with you that we currently have in place to protect such important and sacred artifacts (especially near rivers and streams).

Please contact the following individuals if such finds are made:

Kara Perry, Administrative Assistant (530) 488-4049 kperry@ssband.org

And copy all communications to:

Andrew Godsey, Assistant Cultural Resource Director / NAI agodsey@ssband.org

Thank you for providing us with this notice and opportunity to comment.

Sincerely,

Daniel Fonseca
Cultural Resource Director
Tribal Historic Preservation Officer (THPO)
Most Likely Descendent (MLD)

Hannah Ballard

From: Hannah Ballard
Sent: Wednesday, December 03, 2014 2:51 PM
To: jcamp@auburnrancheria.com
Subject: Laguna Creek Trail North Camden Spur and South Camden Spur Projects
Attachments: Signed Consultation Letters Camden North_J Camp.pdf; Signed Consultation Letters Camden South_J Camp.pdf

Dear Mr. Camp,

Thank you for returning my call. I am attaching copies of the letters I sent you for the two Laguna Creek Trail Projects: North Camden Spur and South Camden Spur. I spoke briefly with Marcos Guerrero yesterday. He said that he was having his staff do a search for ethnographic sites within the Project Areas but the search was not yet complete. If you have any questions, comments or information you would like to share about these projects, please contact me either via email or phone.

Regards,
Hannah

Hannah Ballard

Senior Archaeologist

Pacific Legacy, Inc.

900 Modoc St.

Berkeley, CA 94707

Office: 510-524-3991, extension 6

Mobile: 510-821-0173

Native American Consultation Log for Laguna Creek Trail-North Camden Spur Project

Native American Contact Name	Native American Contact Group	Date of Initial Letter	Date of Follow-Up Phone Call	Response Received	Comment
Randy Yonemura	Miwok	11/19/14	12/1/14, phone message	None	
Rhonda Morningstar Pope, Chairperson;	Buena Vista Rancheria	11/19/14	12/1/14, phone message with receptionist	None	Receptionist said the Roselyn Lewenya, Environmental Director, is the individual who would respond to our request for Sec 106 consultation. Left message for Ms. Lewenya.
Roselyn Lewenya, Environmental Director	Buena Vista Rancheria	Initial letter sent to Rhonda Morningstar Pope (11/19/14)	12/1/14, phone message with receptionist	None	Receptionist said the Roselyn Lewenya, Environmental Director, is the individual who would respond to our request for Sec 106 consultation. Left message for Ms. Lewenya.
Judith Marks	Colfax-Todds Valley Consolidated Tribe	11/19/14	12/1/14, phone message	None	
Pamela Cubbler	Colfax-Todds Valley Consolidated Tribe	11/19/14	12/1/14, phone message	None	
Yvonne Miller, Chairperson	Ione Band of Miwok Indians	11/19/14	12/1/14, phone message	None	Administrative Assistant said that Anthony Burris was the most appropriate party to speak with, so a message was left for him.
Anthony Burris, Chairperson	Ione Band of Miwok Indians Cultural Committee	11/19/14	12/2/14, phone message with Admin Assistant	None	Administrative Assistant said that Anthony Burris was the most appropriate party to speak with, so a message was left for him.
Cosme Valdez, Interim Chief Executive	Nashville-El Dorado Miwok	11/19/14	12/2/14, phone message	None	
Hermo Olanio, Vice Chairperson	Shingle Springs Band of Miwok Indians	11/19/14	12/2/14, message with Administrative Assistant	None	
Nicholas Fonseca, Chairperson	Shingle Springs Band of Miwok Indians	11/19/14	12/2/14, message with Administrative Assistant	None	
Daniel Fonseca, Cultural Resource Director, THPO	Shingle Springs Band of Miwok Indians	11/19/14	12/2/14, message with Administrative Assistant	12/5/14	Received response letter via email from Kara Perry, Administrative Assistant in the Cultural Resource Department. Signed hard copy response sent via USPS to Caltrans. The response letter states that Shingle Spring is not aware of any known cultural resources within the project. Shingle Springs requests continued consultation through project updates from Caltrans. Shingle Springs also requests copies of all completed record searches and surveys completed in and around the APE as well as any

Native American Contact Name	Native American Contact Group	Date of Initial Letter	Date of Follow-Up Phone Call	Response Received	Comment
Gene Whitehouse, Chairperson	United Auburn Indian Community of Auburn Rancheria	11/19/14	12/2/14, phone message	None	archaeological, cultural or environmental reports completed as part of the project.
Marcos Guerrero, Tribal Preservation Committee Chairperson	United Auburn Indian Community of Auburn Rancheria	11/19/14	12/2/14	12/2/14	Mr. Guerrero's staff was doing a search for ethnographic sites in the area. I informed him we had negative record search and survey results. His staff would likely send out a letter requesting a copy of the cultural resources report for the project.
Jason Camp, THPO	United Auburn Indian Community of Auburn Rancheria	11/19/14, 12/3/14 resent via email	12/2/14, phone message	12/3/14, phone message	At Mr. Camp's, request resent letters digitally via email.
Raymond Hitchcock, Chairperson	Wilton Rancheria	11/19/14	12/2/14, receptionist	None	Receptionist directed me to Steven Hutchason, left message on voice mail.
Steven Hutchason, Executive Director Environmental Resources	Wilton Rancheria	11/19/14	12/2/14, phone message	None	Receptionist directed me to Steven Hutchason, left message on voice mail

APPENDIX C. PHOTOGRAPHIC DOCUMENTATION

Attachment C: Pacific Legacy Photographic Documentation

Client: Pacific Municipal Consultants
Location: Laguna Creek Trail North Camden Spur,
Elk Grove, Sacramento County

Prepared by: Daniel Trout
Photographer: Daniel Trout
Photograph Date: November 17, 2014

Photograph No. 0044

Direction:
North

Description:
Overview of the APE, view to
the north along Beckington
Dr. from White Peacock Way.



Photograph No. 0046

Direction:
Northeast

Description:
Overview of APE, view from
the north end of Beckington
Dr. towards the recreational
area to the NE.



Attachment C: Pacific Legacy Photographic Documentation

Client: Pacific Municipal Consultants
Location: Laguna Creek Trail North Camden Spur,
Elk Grove, Sacramento County

Prepared by: Daniel Trout
Photographer: Daniel Trout
Photograph Date: November 17, 2014

Photograph No. 0047

Direction:
South

Description:
Overview of the Project Area,
view from the north end of
Beckington Dr. to the south
along Beckington Dr. towards
White Peacock Way.



Photograph No. 0050

Direction:
East

Description:
Overview of the Project Area,
view from the north end of
Beckington Dr. east towards
the north end of the
recreational area with a water
valve box (center) and the
edge of a dry flood pond
(left).



Attachment C: Pacific Legacy Photographic Documentation

Client: Pacific Municipal Consultants
Location: Laguna Creek Trail North Camden Spur,
Elk Grove, Sacramento County

Prepared by: Daniel Trout
Photographer: Daniel Trout
Photograph Date: November 17, 2014

Photograph No. 0057

Direction:
South

Description:
View from the north end of Beckington Dr. to the south along Beckington Dr. and the recreational area towards White Peacock Way with a SMUD utility box at center.



Photograph No. 0096

Direction:
North

Description:
Overview of the Project Area, view from the south end of the project area towards the north with a residential backyard (right) and reed filled ditch (left and center).



Attachment C: Pacific Legacy Photographic Documentation

Client: Pacific Municipal Consultants
Location: Laguna Creek Trail North Camden Spur,
Elk Grove, Sacramento County

Prepared by: Daniel Trout
Photographer: Daniel Trout
Photograph Date: November 17, 2014

Photograph No. 0098

Direction:
West

Description:
View of the ditch and
underground storm drain
(dirt mound on right) to the
west along the back side of
residences.



Photograph No. 0099

Direction:
North

Description:
View from the back side of the
residences north towards
White Peacock Way with
storm drain manhole on the
left.



EXHIBIT A-H

SUMMARY FLOODPLAIN ENCROACHMENT REPORT*

Dist. 03 Co. SAC Rte: n/a P.M. n/a

Project No.: CML-5479(040) Bridge No. n/a

Limits: Located in Elk Grove, Camden Park, west end of Park, starts at west end of existing path and constructs new path in a northerly direction up to the level of the existing residential housing.

Floodplain Description: The flood plain is shown as Zone AE on FIRM Map 06067C0317H, (Panel 317 of 705 Sacramento County). Project location is generally west of Allister Way and south of White Peacock Way in Laguna Creek. BFE is shown as 37 on the map near the project location.

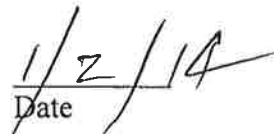
- | | No | Yes |
|--|-------------------------------------|-----|
| 1. Is the proposed action a longitudinal encroachment of the base floodplain? The finished surface of the new pedestrian and bicycle pathway will be placed near the existing ground level to minimize and longitudinal encroachment. | <input checked="" type="checkbox"/> | |
| 2. Are the risks associated with the implementation of the proposed action significant? | <input checked="" type="checkbox"/> | |
| 3. Will the proposed action support probable incompatible floodplain development? | <input checked="" type="checkbox"/> | |
| 4. Are there any significant impacts on natural and beneficial floodplain values? | <input checked="" type="checkbox"/> | |
| 5. Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain. | <input checked="" type="checkbox"/> | |
| 6. Does the proposed action constitute a significant floodplain encroachment as defined in 23 CFR, Section 650.105(q). | <input checked="" type="checkbox"/> | |
| 7. Are Location Hydraulic Studies that document the above answers on file? If not explain.
The finish elevation of the new pedestrian and bicycle pathway is being placed near the existing elevation of the ground surface in the flood way area such that any adverse impact will be minimized. The existing land surface in the vicinity of the pathway (within the existing floodway) is a landscaped park. There is minimal impact to naturally occurring and beneficial flood-plain values. | <input checked="" type="checkbox"/> | |

PREPARED BY:



By Michael Karoly, PE, Sr. Project Mgr.

Willdan Engineering for City of Elk Grove Public Works Dept.


Date

Signature - Dist. Environmental Branch Chief

Date

MITIGATION MONITORING AND REPORTING PROGRAM

INTRODUCTION

The California Environmental Quality Act (CEQA) Guidelines, Section 15097, requires public agencies, as part of the certification of an environmental impact report or mitigated negative declaration, to adopt a reporting and monitoring program to ensure that changes made to the project as conditions of project approval to mitigate or avoid significant environmental effects are implemented. The Mitigation Monitoring and Reporting Program (MMRP) contained herein is intended to satisfy the requirements of CEQA as they relate to the Laguna Creek Trail – North Camden Spur Project (Project) in the City of Elk Grove (City). The MMRP is intended to be used by City staff and mitigation monitoring personnel during implementation of the Project.

The MMRP will provide for monitoring of project activities as necessary, in-the-field identification and resolution of environmental concerns, and reporting to City staff. The MMRP will consist of the components described below.

COMPLIANCE CHECKLIST

Table 1 contains a compliance-monitoring checklist that identifies all newly adopted mitigation measures, identification of agencies responsible for enforcement and monitoring, and timing of implementation.

FIELD MONITORING OF MITIGATION MEASURE IMPLEMENTATION

During implementation of the Project, the City of Elk Grove's designated construction manager (CM) will be responsible for monitoring the implementation of mitigation measures. The CM will report to the City of Elk Grove Department of Public Works, and will be thoroughly familiar with all plans and requirements of the project. In addition, the CM will be familiar with construction contract requirements, construction schedules, standard construction practices, and mitigation techniques. Aided by Table 1, the CM will typically be responsible for the following activities:

1. On-site, day to day monitoring of project activities;
2. Reviewing construction plans to ensure conformance with adopted mitigation measures;
3. Ensuring contractor knowledge of and compliance with all appropriate conditions of project approval;
4. Evaluating the adequacy of construction impact mitigation measures, and proposing improvements (after consultation with appropriate environmental professionals) to the contractor and City staff;
5. Requiring correction of activities that violate project mitigation measures, or that represent unsafe or dangerous conditions. The CM shall have the ability and authority to secure compliance with these mitigation measures through the City of Elk Grove Public Works Department, if necessary;
6. Acting in the role of contact for property owners or any other affected persons who wish to register observations of violations of project mitigation measures, or unsafe or dangerous conditions. Upon receiving any complaints, the CM shall investigate and when appropriate direct the contractor to implement corrective measures. The CM shall be responsible for verifying any such observations and for developing any necessary corrective actions in

MITIGATION MONITORING AND REPORTING PROGRAM

consultation with the appropriate environmental professionals and the City of Elk Grove Public Works Department;

7. Maintaining prompt and regular communication with City staff;
8. Obtaining assistance as necessary from technical experts, such as archaeologists and wildlife biologists, to develop site-specific procedures for implementing the mitigation measures adopted by the City for the Project; and
9. Maintaining a log of all significant interactions, violations of permit conditions or mitigation measures, and necessary corrective measures.

PLAN CHECK

Many mitigation measures will be monitored via plan check during Project implementation. City staff will be responsible for monitoring plan check mitigation measures.

MITIGATION MONITORING AND REPORTING PROGRAM

MITIGATION MONITORING AND REPORTING PROGRAM

MM Number	Mitigation Measure	Timing/Implementation	Enforcement/Monitoring	Verification (date and Signature)
Initial Study Mitigation Measures:				
3.4.1	During Project development, the work area will be reduced to the smallest footprint feasible in sensitive habitat areas.	During Project development	City of Elk Grove Planning Department	
3.4.2	Work shall coincide with the driest time. If water is present at the time of construction, water shall be diverted around the work area and work shall resume after the site is dry. Work within the dewatered areas shall be timed with awareness of precipitation forecasts and likely increases in water flows and flood stages. Construction activities within jurisdictional features shall cease prior to storm events until all reasonable erosion control measures have been implemented. Construction equipment and material shall be removed from the floodplain if inundation is likely. Revegetation, restoration, and erosion control work shall not be confined to this time period.	During Project construction	City of Elk Grove Planning Department	
3.4.3	If work in the flowing portion of the creek/ditch is unavoidable, the entire flow shall be diverted around or through the work area during excavation and/or construction operations. Flows shall be diverted using gravity flow through temporary culverts/pipes or pumped around the work site with the use of hoses. When a temporary dam or other artificial obstruction is being constructed, maintained, or placed in operation, sufficient water shall at all times be allowed to pass downstream to maintain aquatic life below the dam pursuant to FGC Section 5937. Any temporary dam or other artificial obstruction constructed shall only be built from clean materials such as sandbags, gravel bags, water dams, or clean/washed gravel that will cause little or no siltation.	During Project excavation and construction	City of Elk Grove Planning Department	

MITIGATION MONITORING AND REPORTING PROGRAM

MM Number	Mitigation Measure	Timing/Implementation	Enforcement/Monitoring	Verification (date and Signature)
3.4.4	Prior to initiation of construction activities within jurisdictional features, construction best management practices (BMPs) shall be employed on-site to prevent degradation to on-site and off-site waters of the US. Methods shall include the use of appropriate measures to intercept and capture sediment prior to entering jurisdictional features, as well as erosion control measures along the perimeter of all work areas to prevent the displacement of fill material. All BMPs shall be in place prior to initiation of any construction activities and shall remain until construction activities are completed. All erosion control methods shall be maintained until all on-site soils are stabilized.	Prior to start of construction within jurisdictional features	City of Elk Grove Planning Department	
3.4.5	Standard staging area practices for sediment-tracking reduction shall be implemented where necessary and may include vehicle washing and street sweeping.	During Project construction	City of Elk Grove Planning Department	
3.4.6	All exposed/disturbed areas and access points left barren of vegetation as a result of construction activities shall be restored using locally native grass seeds, locally native grass plugs, and/or a mix of quick-growing sterile nonnative grass with locally native grass seeds. Seeded areas shall be covered with broadcast straw and/or jute netted (monofilament erosion blankets are not permitted).	During Project construction	City of Elk Grove Planning Department	
3.4.7	For the approximate 0.032 acre of Laguna Creek permanently affected by the proposed Project, the City shall replace the affected acreage at a 1:1 ratio (i.e., 1 acre for every 1 acre of impact), or another approved ratio as determined by the USACE. Impacts shall be offset through the dedication of approximately 0.032 shaded riverine aquatic mitigation credit(s) within a USACE-approved mitigation bank or through the payment of in-lieu fees to an approved conservation bank.	Prior to and during Project construction	City of Elk Grove Planning Department	

MITIGATION MONITORING AND REPORTING PROGRAM

MM Number	Mitigation Measure	Timing/ Implementation	Enforcement/ Monitoring	Verification (date and Signature)
3.4.8	For the approximate 0.005 acre of man-made ditch permanently affected by the proposed Project, the City shall replace the affected acreage at a 1:1 ratio, or another approved ratio as determined by the USACE. Impacts may be offset through the restoration and relocation of the ditch within the Project area, through the dedication of mitigation credit(s) within a USACE-approved mitigation bank, or through the payment of in-lieu fees to an approved conservation bank.	Prior to and during Project construction	City of Elk Grove Planning Department	
3.4.9	Prior to any vegetation removal or ground-disturbing activities, focused surveys shall be conducted to determine if special-status plants occur within the Project footprint and/or temporary construction zone. If no special-status plant species are found, then the Project will not have any impacts to the species and no additional mitigation measures are necessary.	Prior to vegetation removal or ground-disturbing activities	City of Elk Grove Planning Department	
3.4.10	If special-status species are located within the Biological Study Area (BSA) but outside the Project footprint, then the plants shall be avoided by installing protective fencing and by warning construction personnel of their presence.	During Project construction	City of Elk Grove Planning Department	
3.4.11	A Worker Environmental Awareness Program (WEAP) shall be implemented to educate construction workers about the presence of special-status species and sensitive biological resources in and/or near the Project work area and to instruct them on proper avoidance.	Prior to Project construction	City of Elk Grove Planning Department	
3.4.12	If any of the species are found on-site and cannot be avoided, the City shall consult with the USFWS and/or CDFW, as applicable, to determine appropriate mitigation for special-status plants, which may include but is not limited to the following measures: <ul style="list-style-type: none"> • Salvage portions of the habitat or plant populations that will 	Prior to Project construction	City of Elk Grove Planning Department	

MITIGATION MONITORING AND REPORTING PROGRAM

MM Number	Mitigation Measure	Timing/Implementation	Enforcement/Monitoring	Verification (date and Signature)
	<p>be lost as a result of implementation of the proposed Project.</p> <ul style="list-style-type: none"> • Transplant the plants that would be adversely affected by the proposed Project for either reestablishment after construction is complete or for planting in a new area in appropriate habitat. • Develop a propagation program for the salvage and transfer of rare, threatened, or endangered plant populations from the Project site before the initiation of construction activities. • Involve qualified biologists in the propagation and transport of rare, threatened, or endangered plant species. (Note: Propagation methods for the salvaged plant population must be developed on a case-by-case basis and must include the involvement of local conservation easements, preserves, and/or open space, where applicable). The propagation and transfer of individual plant species must be performed at the correct time of year and successfully be completed before the Project's construction activities eliminate or disturb the plants and habitats of concern. 			
3.4.13	<p>The City shall replace the loss of one elderberry shrub/stem at a 2:1 ratio through the dedication of mitigation credit(s) within a USFWS-approved mitigation bank, or through the payment of in-lieu fees to an approved valley elderberry longhorn beetle conservation bank that results in two conservation plantings of elderberry seedlings.</p>	<p>Prior to Project construction</p>	<p>City of Elk Grove Planning Department</p>	
3.4.14	<p>The City shall offset associated native species plantings at a 1:1 ratio through the dedication of mitigation credit(s) within a USFWS-approved mitigation bank, or through the payment of in-lieu fees to an approved valley elderberry longhorn beetle conservation bank that results in two conservation plantings of native</p>	<p>Prior to Project construction</p>	<p>City of Elk Grove Planning Department</p>	

MITIGATION MONITORING AND REPORTING PROGRAM

MM Number	Mitigation Measure	Timing/ Implementation	Enforcement/ Monitoring	Verification (date and Signature)
	associates.			
3.4.15	A preconstruction survey for western pond turtle shall be conducted within 24 hours of the onset of construction activities adjacent to Laguna Creek, Camden Lake, and/or Whitehouse Creek. The survey area shall include a 100-foot buffer of the area to be affected. If juvenile or adult turtles are found within the survey area, the individuals should be moved at least 500 feet downstream in suitable habitat. If a turtle nest is found within the survey area, construction activities shall not take place within 100 feet of the nest until the turtles have hatched, or the eggs have been moved to an appropriate location.	Prior to Project construction	City of Elk Grove Planning Department	
3.4.16	If clearing and/or construction activities would occur during the raptor nesting season (January 15–August 15), preconstruction surveys to identify active nests shall be conducted by a qualified biologist within 14 days of construction initiation. Surveys must be performed by a qualified biologist for the purposes of determining presence/absence of active nest sites within the proposed impact area, including construction access routes and a 250-foot buffer (if feasible). If no active nests are found, no further mitigation is required. Surveys shall be repeated if construction activities are delayed or postponed for more than 30 days.	Prior to Project construction	City of Elk Grove Planning Department	
3.4.17	If an active nest (excluding western burrowing owl) is located during preconstruction surveys, construction activities shall be restricted as necessary to avoid disturbance of the nest until it is abandoned or a qualified biologist deems disturbance potential to be minimal. Restrictions may include establishment of exclusion zones (no ingress of personnel or equipment at a minimum radius of 30 meters (100 feet) around an active raptor nest and a 15-meter (50-foot) radius around an active migratory bird nest) or	Prior to and during Project construction	City of Elk Grove Planning Department	

MITIGATION MONITORING AND REPORTING PROGRAM

MM Number	Mitigation Measure	Timing/Implementation	Enforcement/Monitoring	Verification (date and Signature)
3.4.18	<p>alteration of the construction schedule. Activities permitted within exclusion zones and the size may be adjusted through consultation with the CDFW and/or the City.</p> <p>Trees containing active migratory bird and/or raptor (excluding Swainson's hawk) nests that must be removed as a result of Project implementation shall be removed during the non-breeding season (September 1–January 1). Swainson's hawks are State and federally listed as threatened species; therefore, impacts to Swainson's hawk nest trees require regulatory authorization from the CDFW prior to removal.</p>	Prior to Project construction	City of Elk Grove Planning Department	
3.4.19	<p>If no burrowing owls are detected, no further mitigation is required. If active burrowing owls are detected, the City shall implement the avoidance, minimization, and mitigation methodologies outlined in CDFW's (2012) Staff Report on Burrowing Owl Mitigation prior to initiating Project-related activities that may impact burrowing owls.</p>	Prior to Project construction	City of Elk Grove Planning Department	
3.4.20	<p>The City shall mitigate for the loss of 0.081 acre of Swainson's hawk foraging habitat at a 1:1 ratio. Mitigation can be accomplished through the City of Elk Grove Swainson's Hawk Impact Mitigation Fee (Chapter 16.130 of the City Municipal Code).</p>	Prior to Project construction	City of Elk Grove Planning Department	
3.4.21	<p>Prior to the removal of any buildings or oak trees, a bat survey shall be performed by a qualified biologist between March 1 and July 31. If bat roosts are identified, the City shall require that the bats be safely flushed from the sites where roosting habitat is planned to be removed prior to roosting season (typically May to August) and prior to the onset of construction activities. If maternity roosts are identified during the maternity roosting season (typically May to September) they must remain undisturbed until a qualified biologist has determined the young bats are no longer roosting. If roosting is found to occur on-site, replacement roost habitat (e.g.,</p>	Prior to Project construction	City of Elk Grove Planning Department	

MITIGATION MONITORING AND REPORTING PROGRAM

MM Number	Mitigation Measure	Timing/ Implementation	Enforcement/ Monitoring	Verification (date and Signature)
	bat boxes) shall be provided to offset roosting sites removed. If no bat roosts are detected, then no further action is required if the trees and buildings are removed prior to the next breeding season. If removal is delayed, an additional survey shall be conducted 30 days prior to removal to ensure that a new colony has not established itself.			
3.4.22	If a female or maternity colony of bats are found on the Project site, and the Project can be constructed without the elimination or disturbance of the roosting colony (e.g., if the colony roosts in a large oak tree not planned for removal), a qualified biologist shall determine what buffer zones shall be employed to ensure the continued success of the colony. Such buffer zones may include a construction-free barrier of 200 feet from the roost and/or the timing of the construction activities outside of the maternity roost season (after July 31 and before March 1).	Prior to and during Project construction	City of Elk Grove Planning Department	
3.4.23	If an active nursery roost is documented on-site and the Project cannot be conducted outside of the maternity roosting season, bats shall be excluded from the site after July 31 and before March 1 to prevent the formation of maternity colonies. Non-breeding bats shall be safely evicted under the direction of a bat specialist.	Prior to and during Project construction	City of Elk Grove Planning Department	
3.4.24	If a giant garter snake is encountered in the project work area, construction will cease until the snake has been allowed to move away under its own volition.	Throughout Project construction	City of Elk Grove Planning Department	
3.4.25	Tightly woven erosion control matting (mesh size less than 0.25 inch) or similar material shall be used for erosion control and other purposes at the Project site to ensure that snakes are not trapped or entangled by the erosion control material. The edge of the material shall be buried in the ground to prevent snakes from	Throughout Project construction	City of Elk Grove Planning Department	

MITIGATION MONITORING AND REPORTING PROGRAM

MM Number	Mitigation Measure	Timing/Implementation	Enforcement/Monitoring	Verification (date and Signature)
	<p>crawling underneath the material. The use of plastic, monofilament, jute, or similar erosion control netting with mesh sizes larger than 0.25 inch that could entangle snakes will be prohibited.</p>			
3.4.26	<p>A survey shall be conducted for giant garter snakes within the project work area 24 hours prior to the onset of construction and any time activities are halted for more than two weeks thereafter.</p>	<p>Within 24 hours prior to Project construction</p>	<p>City of Elk Grove Planning Department</p>	
3.5.1	<p>In order to mitigate for the potential discovery or disturbance of any human remains, the protocol of California Health and Safety Code Section 7050.5(b) will be adhered to as follows:</p> <p>In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) or Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.</p> <p>If the remains are determined to be Native American, City policy would dictate that the procedures outlined in CEQA Section 15064.5(a) and (e) be followed.</p>	<p>Throughout Project construction</p>	<p>City of Elk Grove Planning Department</p>	

MITIGATION MONITORING AND REPORTING PROGRAM

MM Number	Mitigation Measure	Timing/Implementation	Enforcement/Monitoring	Verification (date and Signature)
3.12.1	Noise-generating construction operations shall be limited to between the hours of 7 a.m. and 7 p.m. in accordance with Elk Grove General Plan Noise Policy NO-3-Action-1.	During Project construction	City of Elk Grove Planning Department	
3.12.2	Construction equipment and equipment staging areas shall be located at the farthest distance possible from adjacent sensitive land uses.	During Project construction	City of Elk Grove Planning Department	
3.12.3	Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturer recommendations. Equipment engine shrouds shall be closed during equipment operation.	During Project construction	City of Elk Grove Planning Department	
3.12.4	When not in use, motorized construction equipment shall not be left idling.	During Project construction	City of Elk Grove Planning Department	